

**CAPITATION GRANT AND TEXTBOOK STUDENT RATIO IN
PUBLIC SECONDARY SCHOOLS IN BUNGOMA SOUTH SUB-
COUNTY BUNGOMA COUNTY, KENYA**

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**A Thesis Submitted to the Graduate School in Partial Fulfilment for the
Requirements of the Degree of Master of Education in Educational Management
and Policy Studies of Kibabii University**

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DECLARATION

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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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance of Kibabii University a research thesis entitled “**Capitation Grant and Textbook Student Ratio in Public Secondary Schools in Bungoma South Sub-County Bungoma County, Kenya.**” This research thesis has been submitted for examination with our approval as University Supervisors.

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DEDICATION

To my almighty God for his unwavering blessings and protection, your name forever is lifted high.

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ABSTRACT

The Kenyan government spends part of Capitation Grant (CG): 54% of the tuition amount for purchase of textbooks in Public Secondary Schools in order to attain ratio of one textbook per student. From 2009 up to 2017 Public Secondary Schools had faced challenges in implementing the above policy. The study sought to establish the relationship between CG and Textbook Student Ratio in Public Secondary Schools in Bungoma South Sub-County, to identify the relationship between CG received towards textbook purchase and actual tuition Amount spent on purchase of textbooks in Public Secondary School, to determine the relationship between government policy on CG towards provision of textbooks and Curriculum diversity in Public Secondary Schools and to find out the effect of textbook 'Harvesting' and Donation on use of CG towards purchase of textbooks in Public Secondary Schools. The study was guided by Human Capital Theory (HCT). The study used descriptive survey design to carry out the study with both qualitative and quantitative approaches. The target population was 53 Public Secondary Schools comprising of 637 respondents. The sample size was 379 respondents comprising of one Sub County Director of Education (SCDE), 27 Principals, 159 HODs, 27 accounts Clerks' 27 Librarians, and 138 Students (Class secretaries). Yamane (1967) formula was used to get the sample size for the 159 HODs and 138 students/class representatives. Random sampling was used to recruit 159 HODs and 138 students (class representatives) while purposive sampling was used to recruit one SCDE, 27 principals, 27 accounts clerks and 27 librarians. The study used questionnaires and document analysis. Split-half reliability and coefficient alpha were used to ascertain reliability of the instrument. Validity of the instruments was conducted in 4 public secondary schools through piloting and any wanting instrument component was adjusted accordingly. The quantitative data collected was processed and analyzed using both descriptive; mean standard deviations and inferential statistics; ANOVA, tukey test and Pearson's correlation coefficient. The study established that CGs were not adequately utilized to attain the desired 1: 1 textbook student ratio due to divers' challenges. This may in the long run escalate through the 100 transition rate policy, Findings of this study indicate that insignificant amount of capitation grant funding was used towards textbooks over the years. The study recommends that, the MOE and school managers should come up with a robust CG policy for proper utilization of funds meant to purchase textbooks through enhancing monitoring systems for prudent management of the funds to avoid future high textbook student ratio and maintain the recommended ratio of 1:1.

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ABBREVIATIONS AND ACRONYMS

AACN	American Association of Colleges of Nursing
BECE	Basic Education Certificate on Examination
CG	Capitation Grant
CS	Cabinet Secretary
EFA	Education for All
FDSE	Free Day Secondary Education
HCT	Human Capital Theory
HODs	Heads of Departments
ICT	Information Communication Technology
KICD	Kenya Institute of Curriculum Development
KNBS	Kenya National Bureau of Statistics
MDGs	Millennium Development Goals
NACOSTI	National Commission for Science Technology and Innovation.
OECD	Organization for Economic and Co-operation Development
SCDE	Sub County Director of Education
SDGs	Sustainable Development Goals
SSA	Sub-Saharan Africa
UN	United Nations
PTA	Parents Teachers Association
TSR	Textbook Student Ratio

USA

United States of America

CHAPTER ONE

INTRODUCTION

1.1 Overview

The chapter covers; background of the study, statement of the problem, purpose, objectives of the study, hypotheses, significance and scope of the study, theoretical framework, conceptual frameworks and operational definition of terms.

1.1 Background of the Study

Globally countries are working towards making schooling in public secondary schools totally free for every child. Among the international policy documents such as the fourth Sustainable Development Goal (SDG) aim at ensuring that every child complete free and equitable secondary education (United Nations (UN) Summit, 2015).

In order to achieve sustainable development goals globally, quality education that entails appropriate teaching and learning resources which includes textbooks is key, one which allows every individual to acquire attitudes, skills, knowledge, and values required to shape a sustainable tomorrow. Great emphasis in this course is therefore in the provision of textbooks.

The international framework of education as articulated in Millennium Development Goals (UN Millennium Declaration, 2000) and Education for All (EFA) strategies puts emphasis on eradicating extreme poverty through education. Nations across the globe have a general consensus that poverty, inequality and national development is effectively attended to by developing human capital more so principles of developing human capital are anchored on good education (Dawuda, 2010). According to the world declaration on

the protection, survival and advancement of children, providing basic education and literacy to every learner is one of the many contributions that can be made to the development of the world's girls and boys (United Nations, 1998).

Through education, young children are empowered to take control of their lives and that of their nations in future.

Nations worldwide have strived to invest substantial financial resources in education through Capitation Grant (CG). According to United Nations (2015), enhancing education quality in low-income nations is an uppermost priority for the worldwide human development agenda where governments and donors spend over a hundred billion dollars every year on education (World Bank, 2017). Pajibo and Tamanja (2017) says that many African governments have embarked on allotting a significant amount of their earnings plus their external assistance to the area of education.

A Conference of African States that took place in Addis Ababa in 1961 reaffirmed that the most urgent and fundamental need for Africa as a continent was education and that it was a matter of key developmental preference to the entire world. In Ghana, many children were not attending school, for the reason that their parents were poor and could not pay fees and other levies schools were charging. This steered the introduction of the CG scheme in the year 2005 (Pajibo & Tamanja, 2017). Ngowi (2015) emphasizes that CG aimed at improving textbooks purchase by 40% in Tanzania. Provision of quality early childhood, primary and secondary education has been one of the key concerns of Kenyan government from independence up to date. National policy papers, including the Kenya Vision 2030, the Basic Education Act 2013 and the Kenyan 2010 Constitution look at education as a rudimentary human right, and pronounce that the right should be

compulsory and free for all. The Kenya government has endeavoured to achieve the above goal by starting free schooling in public secondary institutions by implementing Free Day Secondary Education (FDSE) policy in 2008 to hasten realization of universal access to basic education goal (Ministry of Education [MOE], 2008).

In order to guarantee 100% transition to secondary schools from primary schools, the government Kenya has relieved parents the burden of paying fees for instance buying of textbooks hence learners in public secondary school receives CG. In 2003, Kenya started implementing free primary education policy which brought about several challenges among them; huge number of pupil from primary schools were to transit to secondary schools. Pajibo and Tamanja (2017) assert that the commencement of CG scheme was very important and had led to an upsurge in enrolment in both primary and secondary schools, even though it brought about some challenges. This led to Odhiambo (2011) task force that re-emphasized access, relevance, equity and quality education as fundamental characteristic that had to define and steer structures of education training.

Among the recommendations of the task force was that the government had to keep on reducing the cost of education to households through employment of teachers, provision of learning materials, and grants to schools to cater for FDSE Capitation Grant is an amount of money given by the Kenya Government as a grant to every learner admitted into a secondary schools in line with the FDSE policy.

The policy states that every learner in Public Secondary Schools is to receive Ksh. 22,244.00 from previous Ksh.10,265.00 yearly to cater for tuition, medical insurance, activity fee, Strengthening of Mathematics and Science in Secondary Education, (SMASSE), Local Travel and Transport (LT & T), Electrical Water and Conservancy

(EWC), Personal Emolument (PE), Administration Costs, Maintenance and Improvement votes the policy is that every learner in public secondary school is allocated 4, 644 Kenya shillings annually as tuition fees (MOE, 2019).

Despite the fact that the CG is committed to this noble course, it's not clear whether investment in FDSE from 2009 to 2017 in public secondary schools was utilized fully for purchase of the textbooks. Every student was allocated 2, 430 Kenya shillings yearly which constituted 54 % of tuition amount towards textbook purchase in order to reach the governments recommended ratio of one textbook per student (MOE, 2008).

A study by the UNESCO (2016) revealed that in spite of Kenyan government providing every student with CG to cater for textbooks and other instructional materials, there were limited access to teaching and learning material across Kenya. This was a pointer to the fact that there were challenges in purchase of textbooks by public secondary schools over the years.

Nevertheless, ever since the inception of CG for FDSE in Kenya many studies done focused on effect and impact of capitation grant on enrolment rates, disbursement, management and its use more so not very clear on how CG has influenced textbook student ratio in Bungoma South Sub-County. This study focused on the influence of CG on textbook student ratio in public secondary schools in Bungoma South Sub-County, Kenya. Free DSE through provision of textbooks is seen as a possible strategy to increasing access to education and facilitating 100% transition for the poor.

Ngowi (2015) posits that secondary school education is an important route through which people gain skills that expand prospects to access good jobs. The 54 % of the tuition amount money from the CG was for purchase of textbooks in order to attain 1:1

Textbook Student Ratio (TSR), however, an audit report released in 2016 revealed that the government was losing up to 13 billion annually to textbook fraud (Audit Report, 2016). The Cabinet Secretary (CS) MOE had complained of some subjects having up to six textbooks from different authors and cited collusion between publishers, textbook sellers and principals of schools that lead to loss of public funds. More so in 2017 the then education cabinet secretary MOE had raised queries with managers of public secondary schools about implementation of FDSE and purchase of textbooks, and there was a general outcry from many of these schools about shortage of textbooks, which is an indication that there was a problem and TSR of 1:1 was wanting.

The textbooks purchased become the property of the school and could be used over a period of time by the subsequent classes. Price list was updated on annual basis to include other titles found suitable. The secondary education curriculum has total of 21 disciplines they include; Mathematic, Languages, Sciences, Humanities and Technical and Applied Sciences.

The total amount of money previously given to public schools annually towards purchase of textbooks had been about 18.9 billion shillings and the actual amount used to purchase textbooks was only 5 billion shillings a sign that textbooks were not being bought as expected by the government to fix the wanting TSR of 1:1 for all subjects like the neglected technical and applied sciences like Fine Art, Drawing and Design among others, set books and other relevant books.

The Kenyan government through MOE has therefore opted to facilitate the distribution of textbooks directly to public secondary schools from January 2018. At the moment, the approximate textbook per student ratio in public secondary schools is approximately 4

textbooks of the same subject per student. This is an implication that the government is oversupplying textbooks in some subjects hence subjecting tax payers to a punishment. This study therefore endeavoured to critically establish the relationship between CG and Textbook Student Ratio in Public Secondary School in Bungoma South Sub-County.

1.2 Statement of the Problem

Government of Kenya has tried to improve the quality of education to its citizens. As such, it has embarked on ensuring that adequate learning and teaching resources are provided to public secondary schools, among the measures taken was introduction of CG, as financial assistance to public secondary schools towards purchase of textbooks. The Kenyan government through capitation grant has been spending 54% of tuition amount for purchase of textbooks in public secondary schools in order to achieve textbook student ratio of 1:1 (MOE, 2008). However, more than 10 years since the inception of the policy in 2008 until 2017, public secondary schools had faced challenges in utilizing tuition amount meant for purchase of textbooks, this was due to a few dynamic factors such as: Changes in students population/enrolment due to 100% transition policy, human resource attributes towards purchase of textbooks; procurement/acquisition factors (attitude of management, lack of and poor storage of textbooks, lack of libraries, textbook loses and reading culture and high textbook market price, whereas the government provides CGs for purchase of textbooks, attainment of 1 : 1 textbook student ratio remained a mirage due to diverse the challenges. The study looked at factors that have impacted on attainment of textbook student ratio of 1:1 over the years. The study therefore endeavoured to established the relationship between CG and textbook availability in public secondary

schools to attain 1 : 1 ratio in Bungoma South Sub-County.

1.3 Purpose of the Study

The purpose of this study was to examine the influence of Capitation Grant on Textbook Student Ratio in Public Secondary Schools in Bungoma South Sub County.

1.4 Objectives of the Study

The following objectives guided the study.

- i. To establish the relationship between Capitation Grant and textbook student ratio in public secondary schools in Bungoma South Sub-County.
- ii. To identify the relationship between Capitation Grant towards textbooks and actual tuition amount spent on purchase of textbooks in public Secondary schools in Bungoma South Sub-County.
- iii. To determine the relationship between Capitation Grant policy towards provision of textbooks and curriculum diversity in public secondary schools in Bungoma South Sub-County.
- iv. To find out the effect of Textbook ‘Harvesting’ and Donations on use of Capitation Grant towards textbooks in public secondary schools in Bungoma South Sub-County.

1.5 Research Hypotheses

H₀₁ There is no statistically significant relationship between Capitation Grant and Textbook Student Ratio in Public Secondary Schools in Bungoma South Sub-County.

H₀₂ There is no statistically significant relationship between Capitation Grant towards textbooks and actual tuition amount spend on purchase textbooks in Bungoma Sub-County.

H₀₃ There is no significant difference between Capitation Grant policy towards provision of textbooks on curriculum diversity in Public Secondary Schools in Bungoma Sub-County.

H₀₄ There is no significant difference between textbook ‘Harvesting’ and Donation on use of Capitation Grant towards textbooks in public secondary schools in Bungoma Sub-County.

The hypothesis were tested at ($p \leq 0.05$)

1.6 Significance of the Study

This study generated information that may enable future school managers learn the best practices to maximize tuition money towards purchase of textbooks in achieving and maintaining textbook ratio of 1:1. Policy makers can be able to re-examine difficulties schools encounter in utilization Capitation Grant with a view of generating interventions to improve resource utilization at school level. The government will be able to balance the supply of textbooks across all the disciplines and be able to avoid oversupply, curb wastage and avoid dumping of textbooks in public schools. Donors will be able to know the area to donate extra relevant textbooks.

Parents will be able to query lack of textbooks in some schools that the 1:1 ratio is still wanting. Students will be able to maintain a textbook student ratio of 1:1 and avoid loses of textbooks.

1.7 Justification of the study

The Kenyan government spends a lot of taxpayers' money on education in order to enhance quality and relevant education to every Kenyan child (MOE, 2008). Due to budgetary constraints, other sectors of economy are underfunded to enable education sector get adequate budgetary allocation because of the importance the government attaches to education. Therefore, there is need to ensure that the scarce resources are adequately utilized. Capitation Grants for purchase of textbooks aims at boosting students learning so as to attain the education goals of the country. Through interaction of textbooks the learners are likely to develop entrepreneurial skills conserve the environment and lead a healthy lifestyle. More so little had been done to establish the exact number of textbooks being bought by public secondary schools. The education cabinet secretary of MOE had raised queries with managers of public schools that nine years down the line, there was still a general outcry in many public secondary schools about shortage of textbooks in technical and applied sciences, set books and other books an indication that there is a problem and the intended textbook student ratio of 1:1 is still wanting in spite of oversupply of sciences, languages and humanities textbooks. This study therefore examined the influence of capitation grant on Textbook Student Ratio in Public Secondary School in Bungoma South Sub County.

1.8 Scope of the Study

This study covered 27 Public Secondary Schools in Bungoma South Sub-County. Sample size was 379 respondents comprising of, one SCDE, 27 principals, 159 HODs, 27 accounts clerks, 27 librarians and 138 students (class representatives). The study focused

on use of Capitation Grant towards attainment of textbook student ratio of 1; 1 from 2009 to 2017 in Public Secondary Schools in Bungoma South Sub-County.

1.9 Limitations of the Study

The study being a human activity could not be possible without limitations. The study was affected by respondents not filling in all the questionnaire due to fear of giving their opinion on utilization of CGs this reduced the number of respondents. The researcher therefore assured them on confidentiality and assurance that the study was merely for academic reason to convince them to co-operate.

A number of schools were situated in inaccessible areas this hindered the ease of access. The challenge was solved by distributing questionnaires by means of post office box number and using research assistance. A few of the respondents were reluctant to disclose correct information required by the study, this was solved through explication of the usefulness of the research to the respondents.

The study adopted descriptive survey design which does not manipulate variables hence perceptions may be biased by the respondents' attitudes or prejudices for instance one SCDE can give a biased opinion.

1.10 Theoretical Framework

This research was guided by Human Capital Theory (HCT). The theory of HCT dates back to the seventieth century; about 1691, Sir William Petty had placed value on workers; he estimated the worth of human capital to show the power of England and estimated the cost of life lost in battle and other deaths. Farr (1853) asserted that the

present worth of a person's net future returns, which he described as earnings less living expenses, correspond to wealth in the same way as did physical assets. According to Olaniyan and Okemakinde (2008), the HCT can be viewed as the base for improving skills and knowledge capability which can essentially lead to improved work setting and eventually supporting entrepreneurial growth its therefore common knowledge CG funds given by the government and especially through purchase of textbooks is one way of improving skills of the learners for future improved knowledge, Contemporary formulation of HCT has underscored the importance of training and education as fundamental to involvement in the contemporary international economy.

Drastic change to the private more so public segments of the economy initiated over recent year in response to globalization need be based on HCT for it can be urged that, the overall economic performance of the Organization for Economic Co-operation and Development (OECD) countries, is progressively more directly based upon their knowledge stock and their learning competencies (Fray & Lundvall, 1996). Noticeably, OECD is making an effort to come up with new role of education in terms of human capital subject that is needed by globalized organizations.

With HCT, the foundation for nation's government structural policies frame work is the lifting up of skill levels by means of supplementary savings in education and training, employment plan together with immigration that is focused on enticing human capital that is superior. An individual's education is his/her future earnings, which comprises expenses in terms of direct expenditure on education and the opportunity expenses in terms of student's time. Human capital makes the person more productive and accrues

her/him future benefits, superior productivity, higher wages and other non-monetary paybacks to the society even the individual person.

The theory of HCT has been applied in public policy in many nations. This includes spheres such as investments in economic advancement, investment and education policy. This theory is therefore appropriate in justifying the government funding on education of its youth through Capitation Grant and specifically the subsidy towards purchasing textbooks. The rationality behind spending on textbooks is to empower learners with basic skills and knowledge that will translate to national and individual development.

Through education, society is transformed for common good. Through the provision of CG, the government aims at increasing schooling which will later reduce population pressure. Schooling holds children in school therefore delaying child bearing.

Numerous theories have clearly connected education to investment in developing human capital, the function of human capital in pecuniary development, innovation and productivity growth has repeatedly been alluded to as a the reason for government financial assistance to education sector. In modern HCT, every human performance is hinged on the monetary self-centeredness of person's working within competitively free markets.

Basically education has lately been re-theorized under HCT as a predominantly an economic symbol (Juma, Owino & Anyango, 2016).The government of Kenya is subsidizing education through buying of textbooks as learning and teaching resources, a sign that the government is committed to economic growth of the nation through capitation grant policy and ensuring every public secondary school student has a textbook.

Improving of the overall education levels of Kenyan students will go a long way in reducing poverty, and is an assurance of a sustainable economy in future. Education in itself is a human capital investment, healthcare notwithstanding, within this context education is key. Contemporary research work on human capital returns in Kenya indicates that capital returns increases when the levels are advanced. The Kenyan government commitment in provision of textbooks to public secondary schools through FDSE is consequently justified on the basis that development of human capital has huge social benefits, and will raise the demand for more equitable education accomplishment which is an essential human welfare indicator.

The HCT is very relevant to this study since it is anchored on the cost of the resources channeled to the education system, that is, CG towards textbooks provision of textbooks to public secondary schools is an investment by the government in human capital thus the knowledge and skills acquired through textbooks, prepares the students for future individual and national development in all aspects of life. When the scarce resources are adequately utilized towards purchase of textbooks, students learning is boosted which will in long run make them attain the education goals of the country. Through interaction with textbooks the learners are likely to develop entrepreneurial skills conserve the environment and lead a healthy lifestyle which is an investment to the government.

1.11 Conceptual Framework

The conceptual framework below explains in detail how the various variables may affect Textbook Student Ratio in various secondary schools that are public in Bungoma County. In Figure 1.1, CG is independent variable while dependent variables are represented by

students' enrolment, student textbook ratio, curriculum diversity and textbook 'harvesting'/donation on the other hand, intervening variables are shown by procurement/acquisition factors such as attitude of management, storage of textbooks, library, shortage of teachers and reading culture.

The conceptual framework shows a direct relationship between independent variable and the dependent variables given that capitation grant affects students enrolment, student textbook ratio, curriculum diversity and textbook "harvesting" and donation. Nevertheless, lack of storage facilities, lack of libraries, shortage of teachers and reading culture must come into play. For instance, CG is based on students' enrolment. Tuition amount is allocated to every student for purchase of textbooks. The money spent on purchase of textbooks derives on the curriculum being offered by individual public secondary schools for instance Electricity textbooks cost more than Kiswahili textbooks. The CG affects the textbook student ratio of different subjects offered by public secondary schools. Textbook "Harvesting]" and Donations takes place in public secondary schools despite government CG towards purchase of textbooks, an indication that schools are facing challenges in utilizing CG.

There exists a link between theoretical and conceptual frameworks. The independent variable on the conceptual framework; CGs towards provision of textbook is considered an investment in human capital development for future returns. The study therefore endeavoured to establish the relationship between CG and Textbook Student Ratio in secondary schools that are public in Bungoma County.

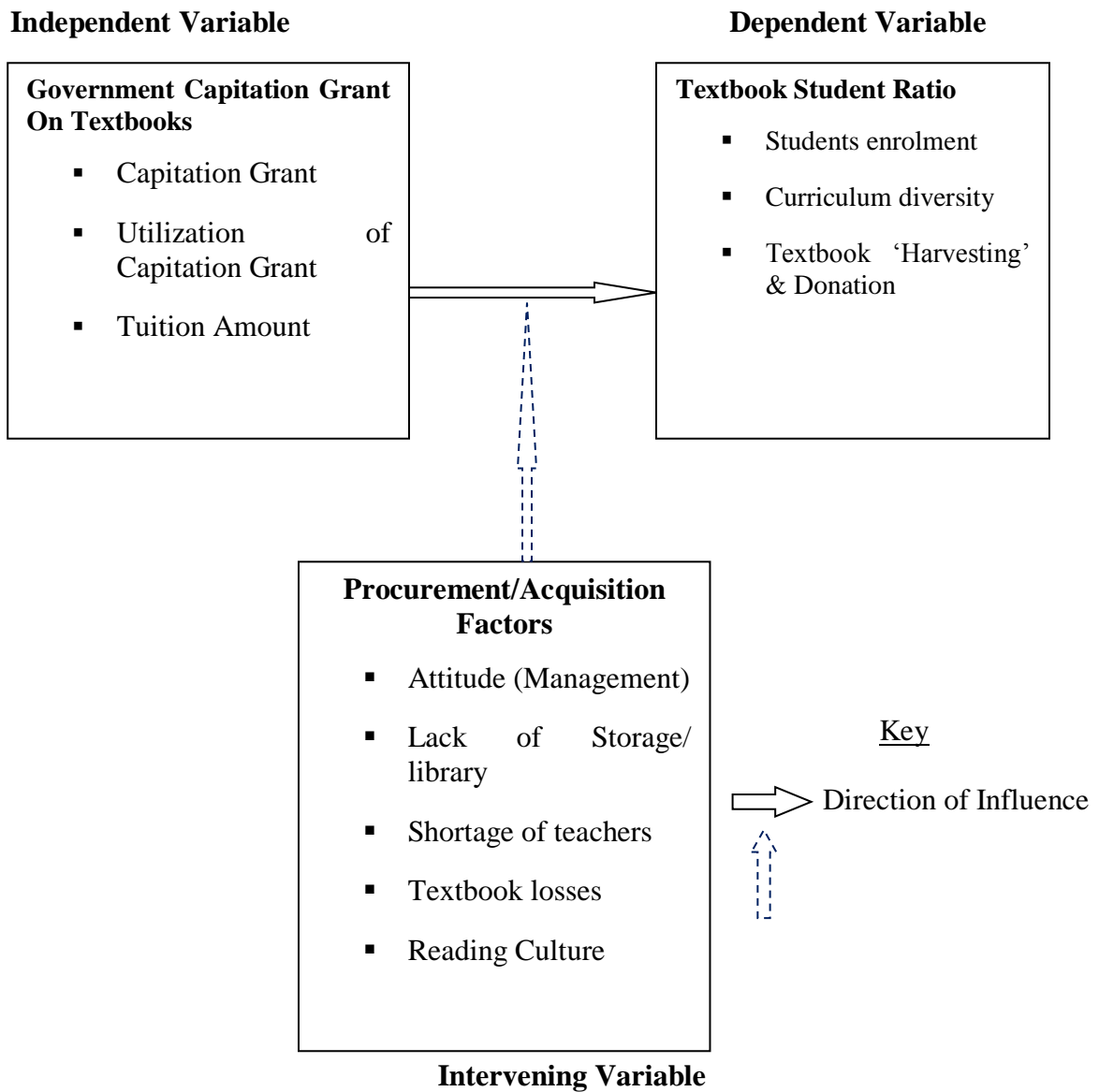


Figure 1. 1: Shows Conceptual Framework and the interaction of variables

Source: Researcher, 2019.

1.12 Operational Definition of Terms

Capitation Grant	Is the money given by Kenyan Government as a subsidy/Financial assistance to every student in public secondary schools towards purchasing textbooks.
Human Capital Theory	This is productive savings embodied in human persons, as well as ability, skills, ideals, health and locations, often resultant from spending on education, job training and medical care.
Public Secondary Schools	this is post primary schools that are owned by the government and run by the county education Boards under the State Department of Early Learning and Basic Education.
Textbooks	Are the teaching /instructional printed and bound artefacts used in secondary schools that are public for the formal study of a given subject as per Kenya Institute of Curriculum Development (KICD) guidelines.
Textbook Ratio	The ratio of textbook allocated per student in a given subject in secondary schools that are public.
Textbook Students Ratio	It is the intended government ratio of one textbook per student and the ratio of textbook per student in individual public school
Tuition Account	Is a vote head through which the government sends funds for purchase of teaching and learning materials including

textbooks from the CG.

Tuition Amount

Is the CG through tuition account meant for purchase of textbooks in public secondary schools.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter present related literature review which assisted researcher in gaining an insight into what the study had sought to investigate that is: CG, textbooks and Textbook Student Ratio more so the difference between Textbook Student Ratio and the amount spent on purchase of textbooks, the difference between CG that was received towards Tuition Account and actual amount spend on textbooks, effect of CG on the curriculum scope and lastly the effect of CG towards purchasing of textbook on textbook harvesting and donations in public secondary schools.

2.1 Concept of Capitation Grant

Capitation Grant refers to an amount of money that is given by the Kenyan government to every student enrolled in secondary schools that are public. It is given in form of tuition and operation account by the government. There is increasing proof in the United States (USA) that CGs can add to expanding capacity of school of nursing.

A research conducted by American Association of Colleges of Nursing (AACN), (2009) indicates that CGs has had steady effect on earlier nursing shortages and the enrolment of nurses increased. Progresa Programme in Mexico offered cash donations to families on condition that they take children to schools. Mexico had an upsurge in enrolment of all learners in grade 1 through 8, especially amongst girls who had completed grade 6. The researcher employed randomized order of programme phase-in, some African countries had adopted the CG policy following elimination of fees from schools. Among these

countries are, Ghana, Uganda, Tanzania and Kenya. In Ghana, a research project on tracking public resource leakage in education with a focus on CG, undertaken by the Ghana Center for Democratic Development (CDD-GHANA) and many other researchers carried out by the government, developmental associates, the civil society's cohorts and other participants in field of education, dedicated their energies largely on the impact, effects and outcome the policy had on completion and enrolment rates. Not many studies have been done on textbook per student ratio. For instance a study was conducted on the impact of CGs on access to primary Schooling in Ghana by Dawuda, (2010).

The main policy question that was voiced in the paper was, to what extent had the CG policy contributed to upsurge access to participation in primary education adequate enough that would enable Ghana attain its education linked to the MDGs and what lessons could be learnt from the Ghana experience of the CGs policy? The study also looked at extent to which CGs were equitably allocated. The result obtained from two indicators of five years before execution and five years later, were matched to assess the degree to which CGs affected student population outcomes. The result of the study were mixed , while the study showed that Ghana would miss the MDGs, the sign presented showed significant improved enrolment due to inception of CG program. The result indicated that the sharing of CG was less equitable and could lead to inequality in schools. The study suggested adjustment in the CGs distribution method was to embrace three components threshold grants, variable grants and bursary to children with special needs.

Another paper by Akyeampong, (2011) (Re) assessing the impact of school CGs on access to education in Ghana, examined the outcome capitation had on achieving the

goals. In particular, the degrees to which it influenced access for the poor and continue to make education more accessible. The paper concludes with tangible suggestions on expanding the impact of capitation on access to education in Ghana. The findings of the study showed that the inception of CG as a demand-side to a point intervention to improve access works up to a point.

Its success lies in attracting large groups of out of school children back into education. Osei et al., (2009) did a study on the effect of the CG on education outcome in Ghana. The objective was to evaluate how CG had impacted on the Basic Education Certificate on Examination (BECE) pass rates, gross enrolment ratios and gender differences in pass rates. The study found that; the CG had no significant impact on BECE pass rates in Ghana, no significant relationship existed between CG and gross enrolment and CG had not impacted on bridging the gap between BECE pass rates for male and female.

A study conducted between the years 2003 to 2007 at the University of Cape Coast that sort to evaluate the implementation of the CG policy of government and its sustainability used data from the Ghana Education Service from all 138 educational districts. The study examined the implementation bottlenecks of the policy objectives in selected basic schools in the Wa Municipality of the Upper West of Ghana. In Uganda the ministry of education pays CGs to basic schools and senior high schools based on fixed and variable grants.

2.2 Government Policy on Capitation Grant

Since the inception of EFA, many countries embarked on making basic education free for all children. UNESCO, the World Bank and research insights recommend that student-to-

textbook ratios ranges from 1:1 to 3:1. The government of Kenya had duly taken this into account in formulating and implementing the architecture of the FDSE in 2008. Being aware of the indispensable role of textbooks, the government has since 2008 to date been giving public secondary schools a significant portion of 54 percent of tuition account amount of the CG for purchase of textbooks.

However, the greatest paradox of our time has been that, after eight years of FDSE, most public secondary schools had not attained the expected one textbook per student ratio in public secondary schools. Instead, the average was anywhere between 3:1 and 5:1 and, in some cases, 10:1. This could not be reconciled with the billions of shillings spent every year on textbooks for students schooling in secondary that were public; hence the government's review of the book distribution policy that culminated in engagement of publishers of duly approved textbooks to send them directly to schools. The textbook flag-off at the Centre for Mathematics, Science and Technology Education in Africa (CEMASTEIA) by the President was a milestone in children's access to quality education regardless of class, gender or locality. The President said that, besides ensuring that learners get textbooks in six core subjects, the new approach has led to savings of Sh13 billion!. Kenyan situation is that each year MOE was paying CG of Ksh.10, 265.00 per student or for every student enrolled in Public Secondary School and the amount has been reviewed upwards to Ksh.22, 244.00 per student per year.

The CGs is meant to subsidize Tuition and schools operation accounts. This study focused mainly on influence of capitation grant on textbook student ratio in public secondary schools. The study critically examined the difference between Textbook Student Ratio and amount spent on purchase of textbooks, the difference between CG

received (tuition account money) and actual Tuition Amount Money spent on purchase of textbooks, CG towards purchase of textbook on the Curriculum Scope and Textbook 'Harvesting' and Donation on use of CG towards Purchasing of Textbooks.

2.3 Concept of Textbook Student Ratio

Textbook Student Ratio refers to the number of textbooks per student provided by the government in public secondary schools. According to Lenon, (2015), huge impacts has been caused by textbooks on education and indicate that 8 percent in secondary science of pupils in England are given textbooks compared to the 88 percent in South Korea and 92% in Taiwan. He observes that Asian countries are among the highest performing in the world according to OECD. On textbooks, the government of Philippine with the help of World Bank, which launched a project on textbook of US dollars 37 million in 1977 to 1978 in order to deliver an improved textbooks more so increase the textbook pupil ratio from between 1:10 to 1:2. In a sub sample survey done later, showed that slightly above half of all learners surveyed did not own a textbook.

In Chile, despite the government support in production of books, a 1971 report indicated every poor and remote village local that were very local had textbooks to sold (Heyenman, Fawell and Sepulveda- Stuardo, 1978). A survey carried out among school children recommended that students were much more positive in their attitude towards textbooks compared to teachers however when teachers asked learners to buy their own textbooks, a significant percentage stated that they could not afford to buy textbooks. The study therefore shows that the main challenge Chile had with respect to textbooks availability and utilization was teacher attitude towards textbooks and the inability of

poorer children to purchase textbooks. In conclusion, the study that there was a possibility that one most important steps that could be taken before free textbooks were given to public schools was to prepare teachers to use the textbooks. The study also revealed that those teachers who lacked experience were less likely to use textbooks compared to those with added teaching experience.

A survey study of 35 schools carried out on availability of current textbooks in Uganda found that in 2002, even the best and a good number of prestigious secondary schools in Uganda revealed that there was lack of basic textbooks in main subjects that is English and Math, likewise 11 schools surveyed in 2007 the basic situation remained the same. The most prestigious and expensive had enough textbook supplies for most of the subject in which students would eventually be examined. The average schools had very poor textbooks supplies and many schools had virtually no book at all. In 2012, as Chisholm, (2012) points out, a ‘storm of anger and outrage’ erupted in South Africa in response to the non-delivery of textbooks to many schools in one of its poorest provinces, Limpopo. Government was taken to court by a human rights watch organization (Section 27) and the judge ordered that textbooks must be in all schools by a specific date (15 June, the middle of the school year) and that a catch-up plan must be devised for certain categories of students. Government did not manage to deliver fully on the deadline by the 27 June and the saga continued.

The 2012 textbook drama was referred to by one journalist as ‘this crass piece of elementary inefficiency’ (Sparks, 2013). Why, South Africans wonder, in a society with very high social and economic achievements – with, for example, flourishing, sophisticated industries, an admirable public infrastructure (in some ways) and

prestigious institutes of higher learning – can something as simple, and as important, as adequate textbook delivery not be achieved. When one moves on from this specific South African case to look at textbook provision more generally, one is struck by how much research and analysis effort has gone into textbooks and: (1) The very strong consensus about the importance and indeed cost-effectiveness of text-books as an input to teaching (Boissiere, 2004; Majgaard & Mingat, 2012); School of education and development (2010) and (2) for most of Sub-Saharan Africa (SSA) the conclusions about textbook provisioning are quite negative. Most African education systems struggle with textbook provision. In a 2008 study on secondary education in Africa carried out by World Bank, (2008) found that mostly only the teacher would have a textbook (used to copy text onto blackboard for students), that in rural areas typically less than 20% of learners would have access to ‘core subject textbooks’ of the 19 countries the research was based on, schools in Botswana were having enough books and had achieved 1:1 ratio at all grades and in all subjects while the 18 countries that remained, there was an extremely short supply of textbooks for most secondary school learners. The consortium for the measurement of quality education data on grade 6 learners held in Eastern and Southern Africa , Ross, (2010) concludes that the general message was that textbook access levels for grade 6 pupils and that these access levels had tended to either stagnate or deteriorate in many countries between 2000 and 2007. These studies did not look at capitation and Textbook Student Ratio.

2.4 Capitation Grant and Textbook Student Ratio.

Psacharopoulos and Woodhall (1970) conducted a study in Philippine, the government with the assistance of World Bank launched a textbooks project in 1977 to 1978 which was worth US\$37 million to increase the ratio between textbook and pupils from 1:10 to 1:2, in the sampled schools and have improved textbook provision. 1 textbook per 1 pupil ratio which provided one textbook for every child, instead of one to be shared between two pupils which would have doubled the project costs. Therefore, this additional investment would not be justified on the ground of very simple cost –effectiveness analysis. Whereas the provision of Textbooks on a one textbook for every two learners basis seemed to be a highly valuable investment. In Sierra Leone the formal strategy has been to offer free textbooks in four core subjects (a set) to primary grade pupils minus charges to attain textbook pupil ratio of 1:1. The nation and its development partners have made labored to avail textbooks to schools, the only challenge being the Poverty Reduction Strategy Paper (PRSP); Government of Sierra Leone, (2005) had estimated that in 2004 the ratio of 1 set of textbooks to every 3 pupils in urban areas and 1 set to 6 pupils in rural areas could be reached (World Bank, 2007). A public expenditure tracking survey: comprising of district officers, head teachers and parents conducted in Tanzania by HakiElimu, (2011) looked at the effective accountability of implementation of primary education programs, the survey revealed that, CG received was as follows; Tsh..2.2 billion in 2007/2008, Tsh.2.6 billion in 2008/2009 and Tsh. 1,9 billion in fiscal year 2009/2010. The enrolment of pupils in the 6 districts was 442,334 in 2008, 447,614 in 2009 and 440,541 in 2010. The average actual amount of CG received per pupil for the six districts was as follows; Tsh.4, 909 (2007/2008), Tsh.5, 811 (2008/2009) and Tsh.4,

297 (2009/2010). The CG that was supposed to reach district level was; 4.4 billion (2007/2008), 4.5 billion (2008/2009) and 4.4 (2009/2010) with a deficit of, 2.2 in 2007/2008, 1.9 in 2008/2009 and 2.5 in 2009/2010 an implication that 50% of CG that was disbursed in 2007/2008, 42% in 2008/2009 and 57% in 2009/2010 did not reach the pupils. From the above information we find that CG that was distributed to schools by the central government did not correspond with pupil enrolment. It was also found that 58 of the schools that were involved in the study did not spend all the CG in 2009/2010 fiscal year. 25% of the CG received by 24 schools was not spent.

It was discovered that some requirements such as textbooks were not purchased a sign that lack of proper use of CG was undermining the development of education in Tanzania. Concerning the textbooks that were purchased, there was no relationship between the price indicated on receipt and the number of textbooks purchased. More so the number of textbooks purchased in 24 schools the average price of textbook indicated that was misuse of CG from the national government, the textbook student ratio stood at one textbook for 5 pupils an indication that Tanzania had a long way to go in achieving the 1:1 ratio.

A study by Ngowi, (2015) on examining impact of unreliable government disbursement of CG on academic performance in public secondary schools, involving head teachers as respondents and using qualitative data analysis technique found out that; CG helped improve quality in some areas and not others, its provision was insufficient and was delayed and reached schools late that made it hard for schools to implement plans on time and maintain sustainability. It was also discovered that there was little improvement in teaching and learning process in public secondary schools because of CG. The study

further revealed that the management of CG is the responsibility of the head of the schools with the help of the school committees. It was observed that there were some limitations occasioned by lack of skills in financial management among members. The study recommended that the government increase the CG amount in budgetary allocation to make it more sustainable and adequate. Likewise members of the school committees were to be trained especially in financial management of funds given to schools.

Osei et al., (2009) looked at effects of CG on education in Ghana; how CG was impacting on key education outcomes, and how the CG policy was contributing to the achievement of MDGs, the key education indicators used were; gross enrolment proportions at the higher junior level, pass rates for national examination at the higher junior schools and the gap in the academic performance of girls plus boys, the study employed econometric estimation model to assess how CG affected the variables. District level data for the period 2005 to 2007 across the country was used. The study found out that CG had no significant effect on the key education outcomes. It was concluded that although the results were not consistent with prior expectations, the study concludes that CG single handedly could not deliver on crucial education outcomes in achieving the MDGs.

A study that investigated influence and challenges of the CG on education delivery in basic schools in Ga West Municipality of Ghana was conducted by Pajibo and Tamenja, (2017). The study employed descriptive survey involving teachers, head teachers and parents as targeted population, purposive, stratified and simple random sampling techniques were used to collect data. Questionnaires and documentary sources were used to collect relevant information. The study revealed that the inception of CG policy was

found to be relevant and had led to increase in enrolment in all basic schools. The increase in enrollment brought about several challenges which included; inadequate furniture, classrooms, textbooks, teachers, high pupil teacher ratio and other learning and teaching materials. The researchers recommended an addition in quantum of the CG for every pupil and direct payment into the accounts of schools in order to minimize delays occasioned by disbursement every year.

A mixed-method study was conducted by Milligan et al., (2017) on textbook availability and use in Rwanda basic schools. The study aimed at addressing the gap whether textbooks are actually used and if not why not? The study found out that textbooks are infrequently used due to inconsistencies in availability for every learner and perception of the accessibility and quality of those books. The above researchers made a conclusion and suggested that the implementations for textbook development, distribution and use in Rwanda and pointed to the need for greater understanding of the complexities of how textbooks can be used as effective learning and teaching materials for all.

2.5 Capitation Grant towards Textbooks and actual Tuition Amount spent on purchase of Textbooks.

Neumann, (1980) observed that in Philippines and Indonesia a printing and distribution project worth 138 million textbooks financed by the World Bank proved that much attention was given to production and distribution of textbooks and not how effective they could be used more so how relevant they were to classroom needs. Vo Thuy, (2012) while looking at how much the USA government devoted to send an American child to a public school, he found that it costed \$ 10, 615 on average annually. He says New York

and District Colombia spends over \$ 18, 000 while Utah spends just over \$ 6, 000 per pupil. Benefield, (2014), in a study on how much the USA spends on education, found out that a quarter of the respondents thought that the state spends less than \$4,000 per student on school. The real number was well over \$ 10, 000 and Pennsylvania spends almost three quarters that is \$ 3, 000 more per student than the national average. In order to amplify the Benefieelds findings, Nelson, (2015), says USA spends more than \$ 600 billion on schools. When compared with other developed countries the USA spends more per student every year. In 2011, \$ 15, 171 was spend per student while the average in the Organization of Economic Co-operation & Development it was just \$ 9, 313. At primary level the USA spends \$ 11, 193 for each pupil and \$ 12, 464 at secondary level per student. Switzerland, Norway, Luxembourg and Australia spends slightly more than the USA. In Canada spending per student from 2005/2006 to 2014/2015 increased from \$10, 339 to \$ 12, and 646. A study in the USA by Zoo, (2017) indicate that textbook costs went up to 812% in the last 35 years translating to an average cost of public school district textbook per student per year at \$ 250. He says the textbook costs have skyrocketed faster than medical services at 575%, new homes at 325% and consumer price index at 250%. He says textbook industry is estimated to be worth anywhere between \$ 7 and \$ 10 billion. Rapp, (2008) in his work titled ‘The end of Textbooks’ says, the textbooks that students are caring are costing a lot of money. It’s observed that elementary school textbook costs \$ 100 as a result the four major textbook publishers rake in more than \$ 4 billion every year.

Read et al., (2017) conducted a study about school libraries, textbooks, and provision of information and communication technologies for secondary schools in SSA states

revealed that there is significant difference among stations on the average price of approved and recommended textbooks and other basic reference books like atlases and dictionaries. The difference in price was extreme with an average textbook price 4 to 5 times higher in some countries than in others. Tanzania and Kenya seem to have the lowest average secondary textbook prices. Uganda, Cote d'Ivoire, Cameroon, and Lesotho have greatest average secondary textbook price among the Sub-Saharan Countries. Uganda had a high quantitative textbook requirement and high average price per unit than many of the other countries surveyed and as a result the total cost of a typical set of specified textbooks is higher than in other countries. A policy brief by Tanzania government in 2010 on CG for education; 'when it will make a difference' for primary education development programs, showed that 40% or Tsh.4, 000 of the CG was meant for textbooks and teachers guides. From 2002 to 2009, the CG dropped significantly as follows: 2002 was Tsh.9, 666, 2003 - Tsh.9, 855, 2004 - Tsh.9, 871, 2005 - Tsh.9, 739, 2006 - Tsh.10, 075, 2007 – Tsh.7, 520 2008 – Tsh.6, 817 and 2009 was Tsh.6, 078. The price of textbooks went up as shown in table 2.1 below.

Table 2.1: Textbook part vs the Actual cost of textbooks for class 5 in Tanzania.

Books Required (standard 5)	Price of Textbook in Tsh.
Mathematics primary book for class 5	4, 900
Civics primary book for class 5	4, 800
Geography primary book for class 5	4, 800
History primary book for class 5	4, 900
Kiswahili primary book for class 5	5, 200
Vocational skills primary book for class 5	4, 900
Science primary book for class 5	4, 500
English Primary book for class 5	4, 900
Actual cost of a set of Textbooks for class 5	38,900
Textbook part (40 percent) of the CG	4, 000
Book part as percentage of Actual need	10.2 percent

Source: Government of Tanzania Budget (CG) for fiscal year 2009/2010

Textbook price list from Ben & Company Limited of Tanzania. The table indicates high textbook prices by some suppliers, this highlights on the challenge managers were facing in utilization of CGs.

2.6 Capitation Grant towards purchase of Textbook on Curriculum Diversity.

A research work conducted in Chile about the attitude of teachers' and usage of textbooks in private and public schools. It also looked at the effect of teacher training also the experience, degree of subject differences and use of textbooks were undertaken. The findings showed that inexperienced teachers were less likely to use textbooks than those

with experience while inexperienced could use textbooks to overcome their lack of experience. The survey further revealed 78 percent of teachers who participated in the study did expressed ambivalent or negative attitudes on use of textbooks and a significant differences between subject areas was noted. It was also found that Teachers of Mathematics and Science were less likely to use textbooks, and the proportion of teachers who “never” used textbooks was much higher in science at 46 percent, mathematics 33 percent more than English at 4 percent or a language. In its conclusion, the study suggested that teachers were to be prepared to use textbooks before being provided for them. (Psacharopoulos and Woodhall, 1970). A survey among schools pupil recommended that learners were to have an attitude that is positive toward textbooks than teachers, but when teachers suggested that students to buy their own textbooks, a significant proportion of them testified that they could not afford to buy textbooks. It was found that a half of all students ‘respondents who participated in the study didn’t own a textbook, in spite of the Chile government subsidizing production of textbooks, a report in 1971 indicated that even in very poor and remote villages, textbooks for sale were in local kiosks (Heyneman, Sepulveda-Stuardo and Farrell 1978). The above study concentrated on usage of textbooks. Roza, M., (2010) in his book on education spending in recent decades, says in the USA education leaders were after focusing resources on main subjects including; History, Mathematics, Science and Reading however electives, extracurricular, activities and activities and sports tend to have a higher per spending. She says extracurricular activities and sports receive higher per-pupil funding because teachers are paid well and fewer students participates. Those that are not core electives comprising of Gymnastics, Art, Music, and shop got higher per-pupils spending because

they tend to have fewer students per class than required main subjects mentioned above. Roza (2010) says that funds meant to electives, extracurricular, activities and sports assist spending in the poorest schools eventually goes to schools in well-established schools neighborhood. Roza (2010) concludes by saying that there is need to isolated the function of resources allocation, setting standards and defining accountability from function of making choices about resources utilization.

A study Read et al., (2017) conducted on school libraries, textbook and provision of information communication technologies (ICT) for secondary schools in Sub-Saharan Africa showed that there are significant disparity in the textbook requirements needed to meet basic secondary school curriculum specification in the 19 countries studied for the review from a low of textbooks for 6 subjects to a high of textbooks for 14 subjects for junior secondary It was noted that some nations which lacked national approved textbooks lists, could have a significant variations in basic textbook listed for use in different schools in the same country. In 2007 Kaduna one of the Nigerian State, when it came to joining instructions, all students were to have their own personal copies of one of the approved 4 major textbooks Math, Social Studies, English and Integrated science and recommended to possess their own copies of textbooks for Religious Education (either Christian or Islamic) Physics Business Studies and Health Education, Local Language (Hausa, Yoruba or Igbo), Agriculture, Science, Introductory Technology, Home Economics and Fine Art. A policy brief by the Tanzanian government on CG for education indicated that 40 percent of the CG or Tanzania shilling 4, 000 was intended for textbooks and teachers' guides that covered for several subjects in primary schools. The subjects included; History, Geography, Civics, Mathematics, Kiswahili, English,

Science and Vocational Skills. This research endeavored to find out the relationship between CG towards textbooks and the Curriculum Scope.

2.7Effect of textbook ‘Harvesting’ and Donations on the use of Capitation Grant towards purchase of textbooks.

Portland Public Schools (PPS) in Portland, Oregon USA conduct children’s book harvesting. In November 2013, the children’s Book Bank, and 29 PPS schools Parents Teachers Associations (PTAs) teamed up to collect new and used books for the first city-wide children’s Book Harvest. Together, Portlanders donated 30,000 books, surpassing goal of 25, 000! Every student in the five schools in the read together research action project chose eight books each to take home and create a personal library. A total of 17,601 books were distributed. In 2014, 29 schools and PTAs, along with the PPS central office, hosted book drives during the children’s Book Harvest from November 3 through November 26. By December, more than 18,000 books had been counted and more were coming in. Discover Books, which warehouses gently used books, contributed an additional 5,000 books to the 2014 Children’s Book Harvest and pledged to donate another 5,000. Organizers also hoped to announce in January 2015 the other two schools that were to receive donated books in addition to the five schools in the research action project. World Factbook, (2010) carried out a study on provision of textbooks for schools together with libraries in Africa, it established programson textbook donation can improve literacy rates in Africa. It also provided that studies in Africa have confirmed the importance of textbooks and libraries on academic achievement. There are no studies on why public secondary schools engage in textbook ‘harvesting’ and donations. While the

value of literacy, library books textbooks have been shown, the concern of English language books donated from the USA is a separate matter that requires close examination. There are many opinions in favor of English-language donated books. English is currently a formal language in 19 African countries statements of support according to Nhlapo, (2008) says it came from the highest levels, such as that indicated by the South African ambassador to the USA who had praised book shipment from the USA said that the impact of book donation could not be articulated in words, but the books would benefit both the young and old, those who could read but aspire to do so and those who can read and love to do so.

According to Brock-Utne, 2001a, 2001b; Prah, 2003; Bunyi, (1999) those Opposing donation programs for English-language textbook have established that such English-based educational programs could not increase educational advancement in Africa. Notwithstanding the criticisms that English language books offer an unsatisfactory education, due to shortage of availability of books in local languages and because the majority view was that English-language education provided additional opportunity, millions of USA school and library books continue to be shipped to Africa every year (Books for Africa, 2010).

2.8 Attitude of Management

A study by Ngowi, (2015) looked at impact of unpredictable government disbursement of CG on educational performance in secondary schools that were public pointed to the fact that managing of CG was the obligation of the principals of schools working hand in hand with the Parents Association (PA) and Board of Management (BOM). It was

observed that there were some limitations due to lack of required financial skills in managing of CG among some members the PAB and BOM. The study recommended that PA and BOM need to be trained in managing of schools CG funds. The study employed qualitative data analysis technique, data was presented in a narrative form with direct qualitative from respondents who were principals.

2.8.1 Textbook Storage/Library

A Study on future of print collections and library storage facilities in the North America by (Payne, L., 2017) reviewed storing facilities design and the use. The researcher found out that high density library storing facilities was shifted into the mainstream from collection section in academies libraries, and for the academic library communities to save the collective capacity in order to develop a broader systematic approach to maintaining collection within the institution. The study suggested that arrangements for libraries to make use of storage facilities including striving to achieve print copies of selected journal titles, implementation of “Last Copy” library policy of storage relocations at shared facilities, identifying and disclosing the facility’s stored; journal/book holding, relevant access and conservancy policies.

Marques, (2018) in his study on developments in academic libraries space: from book boxes to learning commons. The review aimed to present and discuss developments related to how librarians were redefining academic libraries, buildings and space aligned to contemporary pedagogical students learning styles and needs. The researcher postulates that top management in university and academic libraries had to play a more significant part within the academic background by reorganizing library space or building

new once which will be aligned with the new pedagogical and contemporary students learning preference styles.

2.8.2 Textbook Losses

A Study by Cohen, (2019) on books of college libraries changing into wallpapers show that university libraries and the world are seeing precipitous decline in the use of the books on the shelves. About 15 million books in Yale's extensive university library system has failed to link the important association between education and books. The study found out that there was a 64 percent decline in the number of books borrowed by undergraduates from library in a period of ten years. In the university of Virginia one of the greatest public university in the world, 238,000 books were checked out during the school year 10 years ago and the number shrunk to just 60,000. In 2007 to 2018, University of Virginia circulated 525,000 books but in 2018, they were only 188,000 books implying that nearly 1,000 fewer books being checked out on daily basis.

2.8.3 Teacher Shortage

The USA schools were struggling to replace teachers of special education, science and mathematics because it was not possible to maintain teachers in the above areas due to low salaries, reduced budgets and high students' loans. California which has the largest number of public school students in the USA, 80% of the district reported a shortage of qualified teachers in 2017 and 2018. A survey by the Guardian newspaper on teacher shortages worsening in majority of USA states, revealed that out of 41 states that answered to the survey, the majority 28 (68 percent) admitted facing shortage of teachers.

A study by Mlangeni, et al., (2015), investigated shortage of Agriculture teachers' in secondary schools in Malawi. The study used interview questionnaires that were semi structured. The study showed there was a greater shortage of teachers of Agriculture in almost all secondary schools were 41 out of 58 sampled in the survey had underqualified or unqualified teachers representing 76 percent. The shortage was attributed to high attrition rate among Agriculture teacher at 60 percent.

Burrows and Cooper, (1992) investigated the theft and loss from United Kingdom libraries. The study was a national survey it showed that 85% of libraries had suffered at least one known incidents of intentional book mutilation, while 90% of libraries reported at least one incident of book theft. Half of the libraries had reported between 200-1000 volumes stolen.

2.9 Gaps in Reviewed Literature

Governments across the globe have continued subsidizing purchase of textbooks through CG in public schools. Osei et al., (2009) looked at the effect of CG on relationship between CG and enrolment rates, the study showed that there was no significant effect between CG and enrolment although enrolment went up in the years that followed. The final investigation indicated that capitation had no significant evaluation, outcomes in Ghana. The researcher used econometric estimation model, they evaluated the impact of CG on enrolment, the Basic Education Certificate Examination (BECA) pass rates and instead, what was more significant was the fraction of trained teachers. Sudden over enrolment had put pressure on existing facilities in school and lowered the quality of education. Public expenditure tracking survey conducted in Sierra Leone in 2004, tracked

the distribution of textbooks from the ministry of education discovered that all books were shifted from the education ministry central stores to the mode of obtaining and distribution of primary schools textbook. The study revealed that there was a problem of moving the textbooks from the district and zone offices to the schools, roughly 10 percent of the books did not reach the schools. Whereas the study looked at impact of CG on enrolment, my study looked at CG and textbook student ratio. The researcher used econometric model while this study used descriptive survey design.

A study carried out by the American Association of Colleges of Nursing (AACN), (2009) revealed that CGs for school shad stabilizing result on past shortages of nurses and the enrolment of nurses increased. A paper by Akyeampong, (2011) re-assessed the impact CGs on educational access in Ghana, examined the result capitation had on attaining access to education. In particular, the level to which it had impacted on access for the poor and remains to make learning more accessible.

A study by Osei at el., (2009) looked at the effect of CG in Ghana on education outcomes, the study employed econometric model to measure how capitation affects enrolment and performance of boys and girls. It found out that CG effect on rate of passing was not dissimilar for the three regions of Ghana which were disadvantaged. There was no substantial impact on the linking of the gap between the Basic Education Certificate Examination (BECE) pass rates for boys and girls. The findings of the study showed that CG alone could not deliver on important educational outcomes as enshrined in the MDGs. A study conducted in Ghana on CG impact on education quality indicators revealed that there was no significant influence of the capitation grant on enrolment.

Whereas the study looked at CG on education outcomes for instance pass rates in Ghana, this study focused on CG and textbook student ratio in Bungoma South Sub-County.

Pajibo, et al., (2017) looked at the influence and challenge of the CG on provision of education in basic primary and secondary schools in Ghana. The study used descriptive survey. The findings showed that the introduction of CG plan was found to be very important and had led to an increase in enrolment in basic schools. A study on influence of CG on parents to send their kids to school, found out that 94% of the respondents said that there had been certain influence while 6% said it had no influence. On the state of accommodation, 70 percent of those who participated in the study showed that the classroom accommodation state after starting CG had some influence. Critically the commencement of the CG caused the classroom state to be poor, apparently due to the big over enrolment of students in the classroom. The above study looked at influence and challenges of CGs, this study focused on CG and textbook student ratio.

A study by Ampratwum and Armah, (2010) looked at tracking CG in primary schools that were public in Ghana. He studied the utilization of the CG at the schools that benefited and assessed the robustness of the accountability and transparency actions for the suitable and resourceful utilization of the grant. The study revealed that level of seepages of the grant went across both able as well as disadvantaged schools. Over again, researchers established that distribution of the CG to schools were not well-timed as required by the CG implementation policies. Finally, study suitably conclude that schools that had operative Parent Teacher Associations (PTA) and school management committees utilized CG funds more commendably or for the wished-for purposes than those with weak PTA and school management committees. Basic school enrolment since

the introduction of the capitation grant has been on the rise. Basic school enrolment figures for the six surveyed districts showed growth rates of 13 percent and 17 percent respectively to learning is connected to advanced echelons of knowledge plus skills that are essential for involvement in the society that is progressively more knowledge-based and the broader worldwide community. Whereas the above study looked at tracking of CG in public primary schools and that PTA had used CG funds commendably, this study focused on CG and textbook students' ratio in public secondary schools and its findings revealed that managers had faced challenges in utilizing CG towards purchase of textbooks. .

A study to explain whether CG, bursaries and scholarships had an influence on persistence and academic excellence in university carried out in Ontario, USA; Dooley, Payne, and Robb, (2013). The study employed ex-post facto design, in which data from two universities in Ontario were employed in analyzing the association between financial aid, entrance, awards and success in university. Inferential statistics inform of simple regressions analysis was adopted to bring out relationship between the two variables. The study revealed that new admissions (first-year) bursaries plus scholarships at the two universities have only modest effects on graduates grades and credits earned and generally no relationship with degree completion and persistence among graduates as a whole. The study used simple regression analysis, which had controlled set of controls for the variables associated with both awards, financial and persistence. While the above study used regression analysis this study used descriptive survey design, Mohammed, (2010) conducted a study on impact of CG on access to basic primary education in Ghana. The researcher used case study, the data was taken from three

sources: Ghana education management information system, the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute of statistics and World Bank World Development Indicators.

The analysis was done by observing indicators related to access to education as well as Georgia association of realtors' national assessment resource and out-of-primary school learners using indicators related to participation including gender parity index, net enrolment rate, gross enrolment rate and primary completion rate. The results showed that CG had to some extent contributed to greater access to primary schooling in Ghana even though, not enough to allow Ghana to achieve education-related MDGs target deadlines. All indicators measuring participation in education and access improved considerably after the implementation of the CG policy. However the above reviewed literature showed that it had a methodological weakness because of its overreliance on secondary sources of data and a case study research design which does not give the provision of generalization and application of the data to other areas.

Whereas the above study looked at impact of CG on access to basic primary education in Ghana. The researcher used case study while this work focused on CG and textbook student ratio and employed descriptive survey design.

A study done by Ngowi, (2015) on influence of unpredictable government release of CG on education performance in public secondary institutions case of Kinondoni District in Tanzania this study involved 10 respondents; heads of institutions. It employed qualitative data analysis technique. The study showed that provision of CG to schools was inadequate and was delayed; responsibility of management of CG was of the heads of institutions collaborating with school committees. It was showed that there were some

limitations due to lack of skills and knowledge in financial management by some members.

A study carried out in England investigated whether CG had influence on learners from low, income families (Sue, Andrew, Arthur and Neil, 2006) mixed methods study design was used. Drawing on qualitative data and quantitative data, the study conveyed disparities in the ways in which two institutions managed their CG, and its effects on the learners. Descriptive statistics was used to analysis the results; the study established that at the two institutions, students from institutions that utilize CG well were more likely to carry on with their studies as compared to students from schools that incorrectly implement their CG. Interview results further recommends that learners who received bursary were determined to succeed and well-motivated. Whereas the above study focused on unpredictable government release of CG on education performance in public secondary institutions case of Kinondoni District in Tanzania this study focused on CG and textbook ratio in Bungoma South Sub-County.

A research done in Tanzania, analyzed the impact of library books and text upon reading comprehension and fluency upon learners in Tanzania (Plonsiki, 2009). The study employed comparative study that combined a mixed method design. A mixed method triangulation design was applied in order to secure maximum data for analysis purpose. The results of the study showed that there was some noteworthy difference in students' reading comprehension achievement score and fluency. The study found that the intervention of English language books influenced increased reading comprehension scores. When reviewing the above studies, they indicated that no study looked at CG and textbook student ratio in the public secondary schools, this present study filled this gap

by focusing on how CG through tuition account amount influence textbook student ratio in public secondary schools in Bungoma County.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines procedures and strategies that were used in conducting this study – the study design and area, target population, sample size and sampling procedure, data collection instruments, validity and reliability of instruments. It also discusses the data collection procedure, ethical consideration as well as procedures for analyzing data.

3.1 Research Design

This study used descriptive survey design to obtain information both quantitatively and qualitatively. Best and Khan (2000) indicate that descriptive research design is a suitable design for evaluating education policies and programs. Mutai (2001) explains that a descriptive survey involves finding out what people are doing, thinking and then gathering information. The use of descriptive design involved observing and describing the situation without manipulating the variables. The mind of a human being cannot obtain full import of huge quantity of a raw data: descriptive statistics are consequently very essential in reducing the data to controllable form. This survey method allowed gathering of data from a large sample population and generate findings that represented the whole population at a reduced cost (Saunders, Lewis & Thornhill, 2009).

3.2 Study Area

Bungoma South Sub-County is part of Bungoma County which is located in the former western province of Kenya. Its major towns of Bungoma County include Bungoma town,

Webuye and Kimilili. Bungoma County has a population of 1,375,063 people as per 2009 censuses (Kenya National Bureau of Statistics (KNBS 2015) and covers an area of 2,069 km². The total numbers of public secondary schools are 305 and enrolment in these schools stands at 400,407 students.

The main tertiary institutions are; Kibabii University, Kibabii Diploma College, Nabongo, Pamus, West Kenya Teachers Training College (TTC), Sangalo Institute of Science and Technology, Sacred Africa, District Centre for Early Childhood Education (DICECE) Resource Centre /College among others and commercial colleges. Administratively, the central government units include; Bungoma South, Bungoma East, Bungoma Central, Bungoma West, Bungoma North, Bumula, Webuye West, Mt. Elgon, Cheptais and Kimilili Sub-Counties. This research work was based in Bungoma South Sub-County since the study area is situated within the headquarters of Bungoma County and the schools had faced challenges in utilization of the tuition account money for purchase of textbooks in line with MOE policy of 1:1 textbook student ratio. The study therefore endeavoured to establish the relationship between CG and Textbook Student ratio.

3.3 Target Population

Target population refers to the individuals to be studied in a study (Mugenda & Mugenda, 1999). According to Borg and Gall (1989), target population is a group of individuals, every event, number or objects to which the researcher wishes to generalize the findings of research. Target population was 53 Public Secondary Schools of different categories in Bungoma South Sub-County comprising of 637 respondents; 1 (SCDE), 53

Principals, 265 HODs , 53 Accounts Clerks', 53 Librarians, and 212 Students (Class Secretaries) were targeted by the study. Bungoma South Sub-County had utilized the CG towards purchase of textbooks, more so it had the highest number of public secondary schools with relatively higher enrolment this made it the best location for the study.

3.4 Sample Size and Sampling Procedure

3.4.1 Sample Size

According to Kombo & Tromp, (2006) sample size is a finite portion of statistical population whose properties are studied to get information about the entire. The sample size was 379 respondents comprising of 1 (SCDE), 27 Principals, 159 HODs, 27 Accounts Clerks', 27 Librarians, and 138 Students (Class Secretaries).

Yamane (1967) formula was used to sample the HODs and Students/Class Secretaries..

Yamane formula

$$n = \frac{N}{1 + N(e)^2}$$

N = Target population

n = Sample Size

e = (0.05) level of precision

Table 3.1: Summary of Sampling Framework

Category	Target Population (N)	Sample Size (n)	Percentage Sample Size (%)
SCDE Bungoma South	1	1	100%
Principals	53	27	5%
HODs	265	159	60%
Accounts Clerks	53	27	50%
Librarians	53	27	50%
Students (Class Secretaries)	212	138	65%
Total	637	379	60%

3.4.2 Sampling Procedure

Orodho and Kombo, (2002) sees sampling as a method that involve choosing a number of objects or people from a population such that the chosen set comprises components that represent the characteristics found in the whole set. Bungoma South-Sub County had 53 Public Secondary Schools that comprised a target population of 637. Yamane (1967) formula was used to get the sample size for the 159 HODs and 138 students/class representatives. Simple random sampling was used to recruit HODs and students'/class secretaries' purposive sampling technique was used to recruit one SCDE, 27 principals, 27 accounts clerks and 27 librarians. The study divided members of public secondary

schools into sub groups for sampling that comprised of SCDE, Principals, HODs, Accounts Clerks, Librarians and Students (Class Secretaries).,

In simple random sampling method, the samples yielded study data that was generalized to a bigger population, the method also permitted the researcher to apply inferential statistics to analyze data and gave equal chance of selection for each element of the population and it's a procedure in which all the persons in the definite population had an equal and independent chance of being selected as a number of the sample. This provided a sample framework that was unbiased and current, including only public secondary schools that received the CG from MOE were sampled for study. Public Secondary Schools were being funded by the government to buy textbooks through CG; this made it a good target for the study. Principles are school managers and administrators who were then charged with spending the CG. Head of Departments (HODs) are the ones who were making departmental textbooks requisitions.

The Accounts Clerks were involved in the procurement process. Librarians receive and store the textbooks while students (class prefects) knew the exact copies of textbooks that were given per class by subject teachers. The SCDE office has the statistics concerning CG, head teachers and student's enrolment in secondary schools that are public within Bungoma South Sub-County. Yamane, (1967) formula was employed to get the sample size.

3.5 Data Collection Instruments

This study used two research instruments to collect data namely questionnaires and document analysis. Six set of questionnaires were employed to get information from the SCDE, principals, HODs, accounts clerks, librarians and students (class secretaries). The documents analyzed were circulars for FDSE from 2009 – 2017 obtained from the SCDE office.

3.5.1 Questionnaires

The questionnaires took the form of statements and questions which were given to the respondents to answer by writing. Kombo and Tromp, (2013) says that respondents are those who respond to or reply to, the research instrument. The kind of data collected by use of questionnaires was primary data. Questionnaires were used since they enabled the researcher to reach out to a lot of respondents. Closed-ended questions are also easier to analyze since they are in a direct usable form (Mugenda and Mugenda, 2003).

They are easier to give out as each item is followed by alternate responses and they are inexpensive to use in terms of money and time, they are easy to create since the researcher does not have to struggle to come up with right response category, they stimulate a person to think about his/her feelings or intentions and to convey what he/she considers to be the respondent's responses. It also gives an insight into his feelings, background, interests, hidden motivation and decisions.

Closed-ended questions were constructed with 'YES' or 'NO' responses and the likert rating scales of five-answer response category going from 'strongly Agree', 'Agree', 'Undecided', 'Disagree' to 'Strongly Disagree' was used. Numerical scale was also used.

Mugenda and Mugenda, (2003) suggest that, numerical scale can help minimize the subjectivity and makes it possible to use quantitative analysis. Moreover, the questionnaires were divided into various sub-sections that sought to collect primary data on the various research focus areas. Questionnaires targeted data from SCDE, Principals, HODs, Accounts Clerks, Librarians and Students (Class Secretaries).

3.5.2 Document Analysis

Document analysis concerns making reference to relevant literature to the study in order to get secondary data. Documents analyzed were; the public secondary schools FDSE circulars from 2009 – 2017, they gave information about CG utilized by Public secondary schools over the years.

Other documents included, circulars on textbooks tis gave information on the number of textbooks in Bungoma South Sub-County, various files, reports on Public Secondary schools, journals enabled the researcher generate information on FDSE , Acts, newspapers and other related to CG and TSR. Document analysis gave the information on quantitative plus qualitative data about the CG policy Vis a Vis student's enrolment in the studied secondary schools in Bungoma south Sub-County. The data collected using document analysis was secondary data. Respondents targeted for document analysis were; SCDE, principals and accounts clerks.

3.6 Validity and Reliability of Research Instruments

This study endeavored to ensure correctness of data so that it really represents the phenomenon under study. This was done through validity and reliability. According to

Slater and Eadson (2013) a questionnaire is a measurement instrument and therefore needs to have inbuilt validity and reliability.

3.6.1 Validity

According to Kothari (2004) validity refers to quality that a process or research instrument or tool used in research is correct, accurate, true, meaningful and right. Mutai (2000) suggest that validity of an instrument shows how perfectly the study instrument measures what it is intended to measure. Validity shows how correctly the data to be collected in the study would denote the variables of the research and whether the data is true reflection of the variables then, inferences based on such data would be meaningful and accurate. Content validity was used where by Items from each study objectives were formulated and discussed with peers.

After the supervisors opinion the feedback was analyzed and informed decisions made about the effectiveness of each item. Validity of the instruments was conducted in 4 public secondary schools through piloting and any wanting instrument component was adjusted accordingly to improve the instrument. It is important to realize that the research instrument that was used in this study yielded data that have two components; the true value or score and an error component.

3.6.2 Reliability

According to Mugenda and Mugenda, (1999) reliability is the degree to which a test regularly measures whatever it intends to measure. Reliability is therefore the extent to which a study instrument yields consistent results or data from repeated trials the data

collected from pilot study was tested for reliability of the research instruments using the split-half reliability method. In research study, reliability coefficient can be calculated to show how reliable data is (Mugenda and Mugenda, 2003). This involved administering instrument once. Split-half reliability and coefficient alpha were used to ascertain reliability of the instrument.

The instruments were divided into 2 halves; first half odd numbered items while the second half had even number items. The halves formed two different sets of questionnaire items which were scored separately. Spearman correlation coefficient was used to find the reliability of the instrument, and the correlation between the two halves indicated high internal consistence. The study reliability showed a coefficient of 0.6 an indication that the items related highly amongst themselves and any r value of 0.6 and above was good enough for the instrument to be acceptable being reliable.

3.7 Data Collection Procedure

The researcher got a letter of introduction from Kibabii University (KIBU); sought for license from National Commission for Science, Technology and Innovation (NACOSTI) to conduct this study, the researcher approached County Commissioner/County Director of Education (CDE) and school administrators for permission to collect data. The instruments were personally administered to the respondents who were sensitized about the exercise. Necessary clarification was provided and the research instruments were collected immediately they were filled.

3.8 Data Analysis

The collected data was examined for completeness. Mugenda and Mugenda (2003) assert that quantitative data converted to numerical codes, represents the attributes or measurement of variables. The objectives shown below were analyzed; To ascertain the relationship between Capitation Grant and Textbook Student Ratio, in public secondary schools, to identify the relationship between Capitation Grant towards textbooks and actual Tuition amount money spent to buy textbooks in the secondary schools that participated in the study to determine the relationship between government policy on CG towards provision of textbooks and Curriculum diversities in public secondary schools and to establish the effect of Textbook ‘Harvesting’ and Donations on use of CG towards textbooks in public secondary schools.

The quantitative data gathered from fully and clearly filled questionnaires and analyzed documents was counted, edited, coded and tabulated/subjected to descriptive statistics for calculation of frequency, mean, sums and percentages and results presented in figures, tables, graphs and charts. The qualitative data which was gathered from the questionnaires especially with open-ended answers was edited, organized, categorized and presented in form of discussion. These gave the researcher a better way of discussing the findings, drawing conclusions and making recommendations. The researcher used statistical package for social science (SPSS) to analyze data. The study used inferential statistics techniques; t-test was used to test differences within groups and chi-square to test association of variables in a sample. Pearson moment correlation technique was used to test the associations between capitation grant and textbook student ratio for objective one and the correlation between capitation grant and actual tuition amount spent on

purchase of textbooks. One way ANOVA was used to test the differences in tuition amount spent on purchase of textbooks per subject and the Capitation Grant. A multi Comparison Tukey test was used to test differences on tuition amount spent on various subjects.

3.9 Ethical Considerations

Since the subjects of this study were people, attention was given to ethical issues. Kombo and Tromp (2013), points out that researcher whose subjects are animals or people need consider the conduct of their research and give consideration to the moral issues related. The researcher observed confidentiality especially from the information given. On questionnaires. Information given by the respondents was not passed to third party. Respondent's names were not written on the questionnaires. The respondent's consent was sort before administering the questionnaires. The researcher did personal identification before the respondent's and explained the mission of the research. More so the researcher got permit from NACOSTI, permission from County Commissioner and County Director of Education Bungoma County and School Principals of public secondary schools Bungoma South Sub County.

CHAPTER FOUR

RESEARCH FINDINGS, INTERPRETATION AND DISCUSSIONS

4.0 Introduction

The chapter comprises of the questionnaire return rate, background information, research findings, interpretation and discussions. The research findings hinged on objectives of the study which were:

- i. To establish the relationship between Capitation Grant and Textbook Student Ratio in public secondary schools in Bungoma South Sub-County.
- ii. To identify the relationship between Capitation Grant towards textbooks and actual tuition amount spent on purchase of textbooks in public secondaryschools in Bungoma South Sub-County.
- iii. To determine the relationship between government policy on Capitation Granttowards provision of textbooks and Curriculum diversity in public secondary schools in Bungoma South Sub-County.
- iv. To find out the effect of textbook ‘Harvesting’ and Donations on use of Capitation Grant towards textbooks in public secondary schools in Bungoma South Sub-County.

4.1 Instruments Return Rate

Instruments return rate refers to the proposition of research instruments returned after being administered to the respondents. In this case, questionnaires were administered to the respondents. The questionnaire return rate is summarized in table 4.1below.

Table 4.1: Questionnaire Return Rate

Types of instrument	Number administered	Number returned	% return rate
SCDE questionnaire	1	1	100%
Principals Questionnaire	27	25	92%
Heads of Departments Questionnaire	159	143	90%
Librarian Questionnaire	27	24	88%
Accounts Clerks Questionnaire	27	25	92%
Students (Class Rep) Questionnaire	138	110	79%
Total	379	328	90%

The data in table 4.1 shows that the one questionnaire administered to SCDE office was returned translating to 100 percent return rate, 92 percent of questionnaires administered to the school principals were returned. Efforts were made to ensure that the school principals filled-in and returned their questionnaire. The data in all schools on students' enrolment and the number of public secondary school teachers on permanent basis and contract was needed, therefore, there was need to make effort to get all the research instruments.

The return rate of questionnaire administered to heads of department was 90 percent, the return rate of research instruments administered to librarians was 88 percent, the return rate of questionnaire dispensed to accounts office was 92 percent, and the return rate for students' questionnaire was 79 percent this was due to some respondents from 7 schools failed to fill questionnaires thus only students in 20 Public Secondary Schools in

Bungoma South Sub-County filed the questionnaires well. According to Mitchell & Carson, (1989), survey response rate ought to be calculated as the number of returned questionnaires divided by the total sample, who were sent the survey initially.

Out of 379 questionnaires that were administered, 328 were returned making the instrument return rate of 90 percent. Mugenda and Mugenda (2003) suggest that questionnaire return rate above 80 percent is considered representative enough. In this research the return rate of 90 percent was very sufficient for the research. The high questionnaire return rate was attributed to the following; questionnaires had been distributed by researcher himself to the SCDE office and picked after a short period of time. Questionnaires for principals were filled instantly, who later gave the other respondents; HODs, librarians, accounts office and Students (Class Secretaries) directly and internally. High levels of loyalty lead to a higher number of respondents.

According to Andrea (2015), surveys distributed internally (i.e. to employees) generally have a much higher response rate than those circulated to external audience. The respondents took less time; 5 minutes to fill their questionnaires and returned them to the principals and later picked by the researcher. This concurs with Andrea (2015) who suggests that surveys ought to take 5 minutes or less to complete. Although 6-10 minutes is suitable, those that take longer than 11 minutes are likely to result in lower respondents return rate.

4.2 Background Information of the Public Secondary Schools

4.2.1 Category of Public Secondary Schools

The study established background information on the category of public secondary schools within Bungoma Sub-County that participated in the study. The results are illustrated in figure 4.1 below.

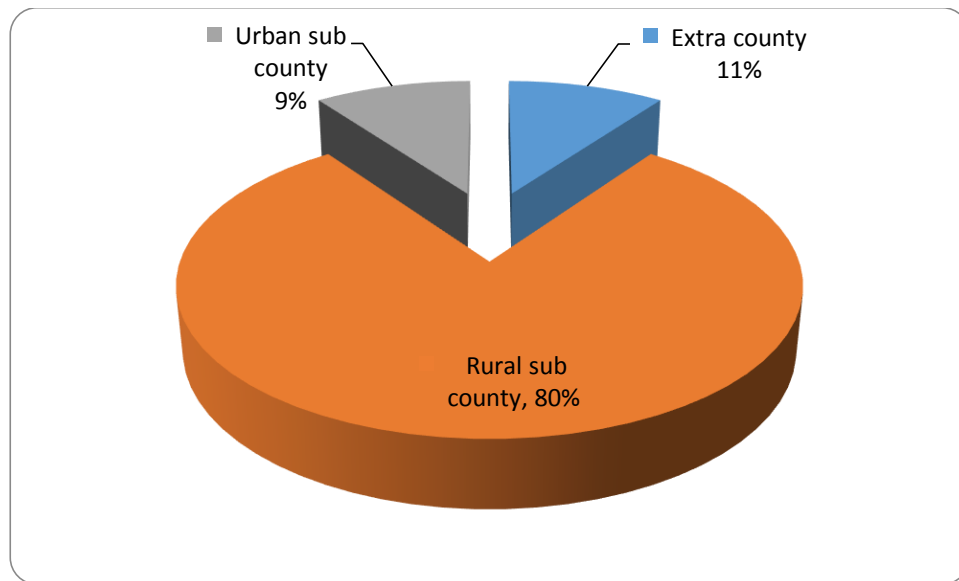


Figure 4.1: Category of Public Secondary Schools in Bungoma South Sub-County.

Figure 4.1 indicate that 80 percent of schools that participated in the study were from rural sub county Public Secondary Schools situated in the rural zone, 9 percent of the schools that took part in the study were sub county public secondary schools found in the urban zones while 11 percent of the schools that took part in the study were extra county secondary schools that are public. The study revealed that majority secondary schools that participated in the study were in the category of rural sub county public secondary schools located in the rural zone. The reason for this was that, day schools in rural areas are funded by the National Government Constituency Development Funds (NGCDF) and

the FDSE. Many public secondary schools were started in order to cater for huge number of primary pupils who were finishing standard eight because of free primary education. The pupils needed to transit to secondary schools. This concurs with Mohammed (2010) who in his study showed that CG had to some extent contributed to more access to education in primary schools.

4.2.2 Age of the Public Secondary Schools since establishment,

The study sought to establish the background information on the age of public secondary schools that were involved in the study. The results are illustrated in figure 4.2.

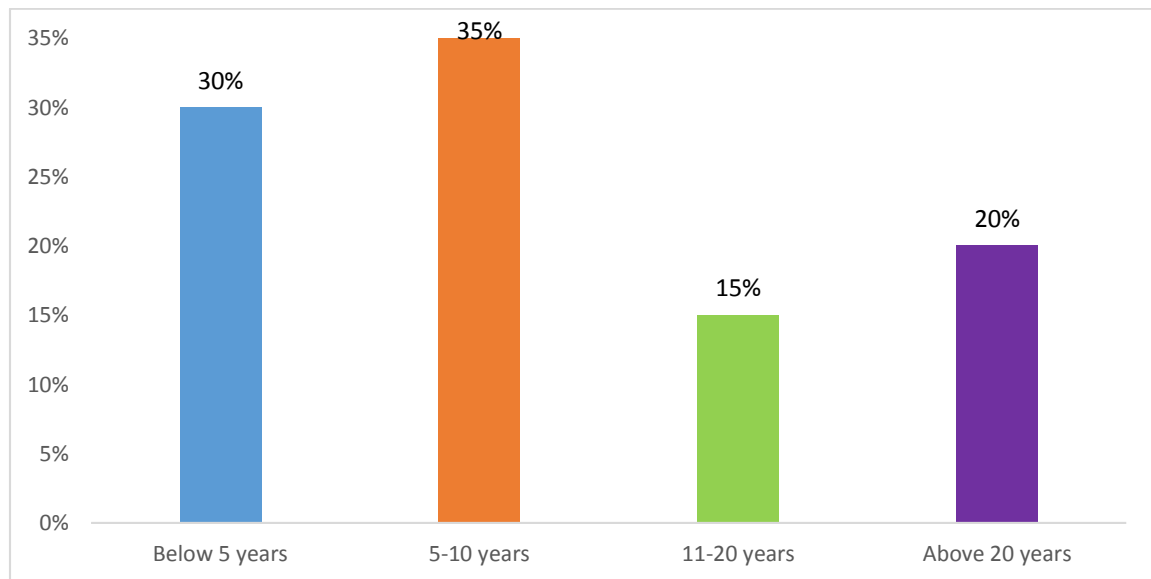


Figure 4.2: Age of the Public Secondary Schools since establishment.

Figure 4.2 shows that public secondary schools which are between 5 and 10 years old are the majority at 35 percent while those that are below 5 years are at 30 percent implying that majority of the public secondary schools, over 60 percent, are below 10 years of age. Public secondary schools that were 11 years to 20 years old constituted 15 percent and public secondary schools that are above 20 years old constituted 20 percent. The results

indicate that greater part of the public secondary schools were below 10 years old since they were established, this was attributed to the government policy of 100% transition to secondary from primary schools and the provision of NGCDF.

The inception of Universal Primary Education (UPE) had led to higher transition rates to secondary schools. Because of large numbers from primary schools, the government was compelled to start FDSE which led to mushrooming of schools to cater for huge numbers of pupils from primary schools' program started by the Kenyan government in 2003 using CG had led to high enrolment rates to starting of many public secondary schools countrywide. This is in congruence with Amratwum and Armah-attoh(2010) who found out that enrolment in basic school since the introduction of the capitation grant has been on the rise.

More so the FDSE Grant led to mushrooming of schools to cater for huge numbers of pupils from primary school's program started by the government in 2003. The inception of free primary education in 2003 lead to over enrolment; many pupils from primary schools transited to secondary schools, this is congruent with Pajibo and Tamanja (2017) who found out that the introduction of CG plan was found to be very relevant and had led to an increase in enrolment in basic schools. This compelled the Kenya government to start many schools under the policy of 100 percent transition.

4.2.3 Average Enrolment of Public Secondary schools

The study sought to establish the background information on the average population per public secondary schools that were involved in the study. The results are illustrated in figure 4.3 below

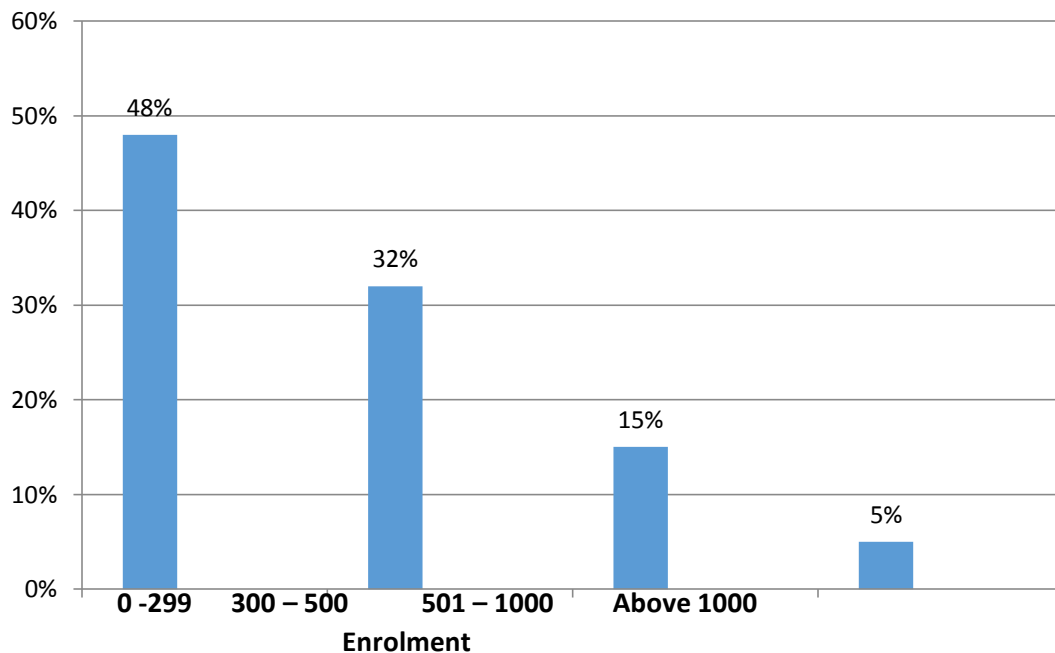


Figure 4.3: The Public Secondary School Enrolment

Figure 4.3 shows that majority of the public secondary schools that participated in the study, 90 percent have an enrolment of below 500 students. Public secondary schools which have a population of below 300 students are the majority at 48 percent; 13 schools, while public secondary schools with student's population of above 1000 were least at 5 percent.

Public secondary schools with a population of 300-500 students' population constituted 32 percent of the respondents while those with population of 501-1000 students'

population constituted 15 percent. The inception of free primary education in 2003 lead many pupils from standard 8 to transit to secondary schools, this is in congruence with Pajibo and Tamanja(2017) whose findings revealed that the introduction of CG plan was very relevant and had led to an increase in enrolment in basic schools. This compelled the Kenya government to start many schools under the policy of 100 percent transition to secondary schools.

4.3 Capitation Grant and Textbook Student Ratio in Public secondary schools

Objective number one of the study was to ascertain the relationship between Capitation Grant and textbook students' ratio in public secondary schools.

4.3.1 Capitation Grant and Textbook Student Ratio in Public secondary school.

This study endeavoured to establish CG and textbook student ratio in public secondary schools, and was achieved by determining the number of students available in public secondary schools and the subjects that were being offered. The findings are summarized in table 4.2 below.

Table 4.2: Capitation Grant and Textbook Student Ratio in Public Secondary Schools

Capitation Grant per student textbook Purchase Per year	Students Enrolment of Sampled Public Sec. Schools	Capitation Grant	Textbooks available in schools	Subjects offered from 2009 - 2017 by the Public Sec. Sch.	The expected textbooks per Subject	Average Textbook per Students
2430	980	2,381,400	4789	14	13720	0.34905
2430	370	899,100	623	12	4440	0.14032
2430	600	1,458,000	1850	13	7800	0.23718
2430	343	833,490	1145	11	3773	0.30347
2430	240	583,200	1238	11	2640	0.46894
2430	362	879,660	1233	12	4344	0.28384
2430	487	1,183,410	1156	12	5844	0.19781
2430	350	850,500	2050	12	4200	0.4881
2430	280	680,400	720	11	3080	0.23377
2430	1400	3,402,000	10400	15	21000	0.49524
2430	102	247,860	398	12	1224	0.32516
2430	760	1,846,800	1065	14	10640	0.10009
2430	300	729,000	390	14	4200	0.09286
2430	205	498,150	595	12	2460	0.241887
2430	203	493,290	487	12	2436	0.19992
2430	200	486,000	540	11	2200	0.24545
2430	200	486,000	430	11	2200	0.19545
2430	200	486,000	330	13	2600	0.12692
2430	444	1,078,920	4562	14	6216	0.73391
2430	228	554,040	627	11	2508	0.25
	8254	20,057,360	34628	247	107525	
	Average pupil Per book					0.28547

Source: MOE 2017

Table 4.2 indicates the enrolment of student in public secondary schools that participated in the study was 8254 students; Ksh.2, 430 of the CG was supposed to cover the cost of textbooks per student. CG towards textbooks based on enrolment in the sampled school was Ksh.20, 057,220 translating into Ksh.180, 514,980 from 2009 to 2017.

Total number of 34,628 textbooks were in schools in the year 2017. Most schools were offering an average of 12 subjects because the majority of the sampled schools were from rural settings and they offered only 12 subjects minus technical subjects which are thought to be so expensive. This information was used to calculate the average textbook student ratio per subject which was 0.28547 (3.51 students per textbook per subject) this is in congruence with Piper and Muganda (2012) who asserts that in spite of schools getting approximately US\$ 7 for every child per year for purchase of textbooks and other teaching and learning materials, the average textbook student ratio was 1:3 for schools from rural areas and even those public schools near urban areas. This was below the government recommended textbook student ratio per subject at 1:1 ratio. (1 text book per student per subject) an indication that textbooks were not being bought.

From the information in the table above, it indicates that a huge amount of capitation grant towards textbooks was not utilized to purchases textbook the reasons cited were the schools did not have effective boards to effectively monitor and utilize tuition amount money meant for purchase of textbooks. More so enrolment had gone up and some students had not received CG due to late submission of enrolment data to the MOE. Nevertheless, purchased textbooks had not met the government recommended ratio implying that there was a significant difference between the capitation given by the government and the textbook student ratio from 2009 to 2017. This was due to late release

of the money by the ministry and also poor record keeping of exact textbooks purchased by schools over the years. This concurs with Ampratwum and Armah-attoh (2010) who established that disbursement of the CG to beneficiary institutions were not timely as required by the CG execution strategies.

Huge amount of CG towards textbooks was not utilized to purchase textbook the reasons cited were that schools did not have effective boards to effectively monitor and utilize tuition amount money meant for purchase of textbooks. This concurs with Armah-attoh (2010) who found out that schools with effective PTA and school management committees use CG funds more effectively or for the intended purposes than those with weak PTA and school management committees.

Ngowi (2015) also concurs by saying that there are some drawbacks due to lack of skills in financial management by some management committee members. The study revealed that boarding public secondary schools have the highest number of textbook students' ratio at 2.73 students per textbook per subject. The highest number of textbooks in boarding public secondary was attributed to a well elaborated school textbook policy on borrowing/distribution and collection of textbooks they left for home for half terms and during holidays.

4.3.2 Relationship between Capitation Grant and the Textbook Student Ratio

Hypothesis for the first objective was that:

H₀₁: There is no significant relationship between capitation grant and textbook student ratio in public secondary schools in Bungoma County.

To test for the H_{01} , the study used Pearson moment correlation coefficient. The findings of the Pearson moment correlation between CG and textbook student ratio were as shown in table 4.3 below.

Table 4.3: Correlation between capitation grant and textbook student ratio

		Textbook student ratio
Capitation Grant	Pearson Correlation (r)	-0.760**
	p-value	0.000
	N	20

**, Correlation is significant at the 0.01 level (1-tailed).

Findings from table 4.3 above indicate that there was a significant strong negative relationship between capitation grant and textbook student ratio ($r = -0.760$, $p\text{-value} = 0.000 < 0.05$); we therefore reject the null hypothesis and conclude that an increase in the capitation grand resulted to a decrease in the textbook-student ratio over the years. This was an indication that managers were finding challenges in utilizing CG meant for purchase of textbooks. This concurs with Ngowi (2015) who says that there are some limitations due to lack of skills in financial management by some management committee members.

4.3.3 Boarding and Day Public Secondary Schools, School Age and Textbook Students' Ratio

4.3.3.1 Textbook Students' Ratio in Boarding and Day Public Secondary Schools.

The study analyzed the effect of boarding schools and management of textbooks. It also studied the textbook student ratio in boarding and day public secondary schools, the results are shown in table 4.4.

Table 4.4: Textbook Students' Ratio in boarding and day public secondary schools.

Category of School	Mean	N	Std. Deviation
Boarding	.3668	4	.14826
Mixed Day and Boarding	.2757	9	.12972
Day	.2588	14	.18016
Total	.2855	27	.15833

Table 4.4 shows that boarding public secondary schools have the highest number of textbook students' ratio at 0.3668 (2.73 students per textbook per subject). The highest number of textbooks in boarding public secondary was attributed to a well elaborated school textbook policy; borrowing/distribution and collection of textbooks. The lowest number of textbook per students' ratio was in day schools at 0.2588 (3.9 students per textbook per student). Since day scholar leave for home every evening some leaves with textbooks and some leave their textbooks in class and classmates leading to textbook theft and losses. Public mixed day and boarding had a textbook student ratio of 0.2855 (3.5 students per textbook per subject) which was attributed to losses and theft due to

poor care, lack of libraries and proper storage facilities. These concurs with Burrows and Cooper, (1992) who showed that 85% of libraries had suffered at least one known incidents of intentional book mutilation, while 90% of libraries reported at least one incident of book theft. Half of the libraries had reported between 200-1000 volumes stolen. This is also in congruence with Cohen, (2019) whose study indicated a decline in number of books at Yale University over the past ten years due to book theft and losses.

4.3.3.2 Age of schools and textbook students' ratio in Public Secondary schools.

The study analyzed the effect of the school age and management of textbooks. It also studied the textbook student ratio in secondary schools that are public with different ages; the results are shown in table 4.5.

Table 4.5 Age of schools and textbook students' ratio in public secondary schools.

Age of school		Std		Std	Minimum	Maximum
	N	Mean	Deviation	Error	M	M
Below 5 yrs	6	.2105	.10262	.04589	.09	.35
5-10 years	10	.2941	.1305	.03768	.20	.49
Above 10 years	4	.3350	.24019	.09806	.10	.73
Total	20	.2855	.15833	.03540	.09	.73

Table 4.5 shows that schools that have existed for years above 10, have the highest number of textbook students ratio at 0.3350 (3.0 students subject per textbook per subject). The highest number of textbooks was attributed to receiving of more capitation

grant towards textbooks over the years and high enrolment rates from 2009 to 2017. This is in congruence with Pajibo and Tamanja (2017) who assert that the introduction of CG plan was very relevant and had led to an increase in enrolment in basic schools. The lowest number of textbook student ratio was in schools that have been existence for less than 5 years at 0.2105 (4.75 students per textbook per subject). Schools which have been in existence for between 5 to 10 years had a textbook student ratio of 0.2941 (3.40 students per textbook per subject).

4.4 Age of School since establishment, Category and Textbook Student Ratio

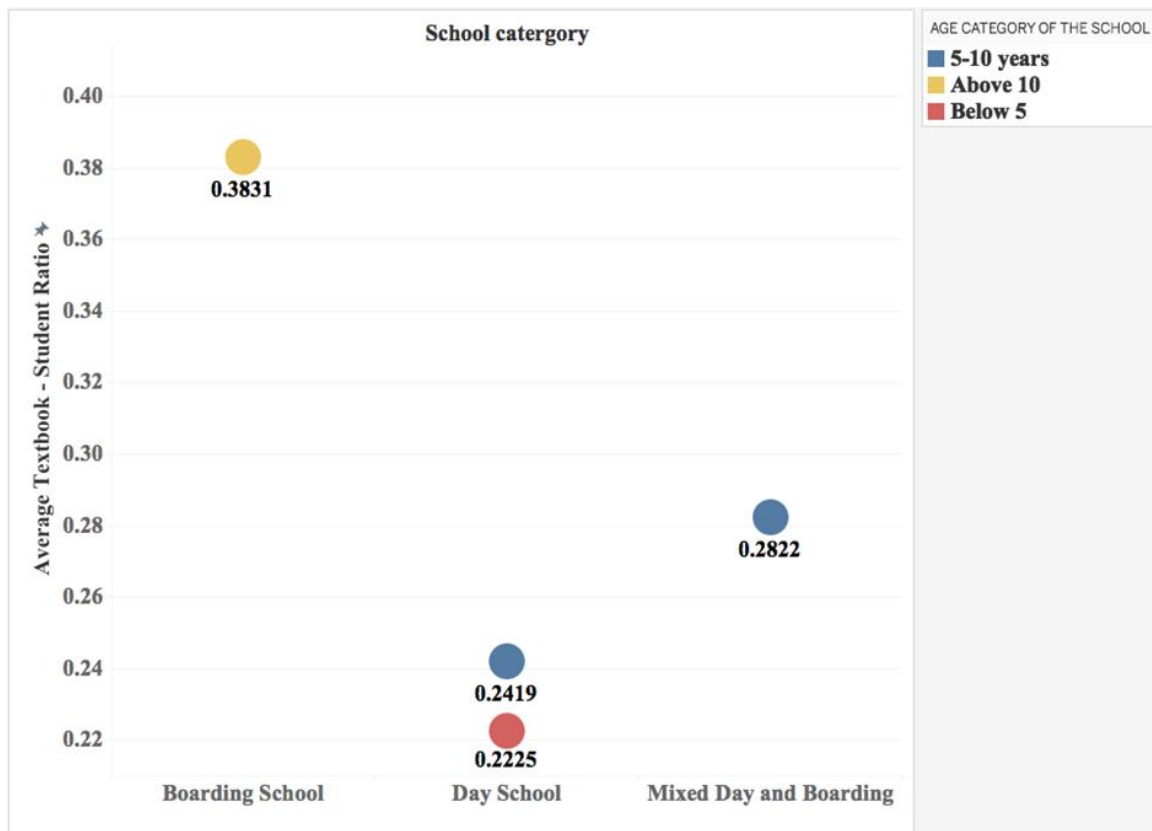


Figure 4.4: Distribution of Textbook Student Ratio across age and category of Public Secondary Schools.

Figure 4.4 shows that public boarding secondary schools that were involved in the study were above 10 years old, had an average textbook student ratio of 0.3831 (2.610 students per textbook) while mixed day and boarding that had been in existence for 5 to 10 years have textbook student ratio of 0.2822 (3.544 students per textbook). Public day secondary schools that had been in existence for 5 to 10 years have a textbook student ratio of 0.2419 (4.133 students per textbook) while those day schools that were below 5 years have the highest textbook student ratio of 0.2225 (4.494 students per textbook). Boarding schools that had been in existence for more than 10 years had a slightly low textbook student ratio of 2.610 students per textbook an implication that boarding schools had strived to purchase more textbooks and had libraries for proper storage and good care of textbooks over the years and had minimized losses compared to mixed day and boarding that was in existence for 5 to 10 years that had a textbook student ratio of 3.544 students per textbook which is attributed to lack of proper storage and lack of libraries.

Public day secondary schools that had been in existence below 5 years and 5 to 10 years had the highest textbook student ratio of 4.494 and 4.133 student per textbook respectively. This high textbook student ratio was attributed to textbook losses, lack of proper storage facilities and poor care. Findings showed that many public secondary schools did not have libraries and books were stored all over; in principal's office, stores, staff rooms and in make shifts as storage facilities leading to textbook losses and theft. This is in congruence with Cohen, (2019) whose study indicated a decline in number of books at Yale University over the past ten years due to book theft and losses. This agrees with the study of Burrows and Cooper, (1992) who investigated the theft and losses from United Kingdom libraries and found out that 85% of libraries had suffered at least one

known incidents of intentional book mutilation, while 90% of libraries reported at least one incident of book theft.

4.5 Capitation Grant towards Textbooks and actual Tuition Amount spend on purchase of Textbook in Public Secondary Schools.

Objective two of the study sought to identify the relationship between Capitation Grant towards textbooks and actual tuition amount spend on buying of textbooks among the secondary schools that were studied. . To do so the study analyzed the average tuition amount money spent on textbooks purchases for the last 9 years and the current textbook student ratio. The results are shown in table 4.6.

Table 4.6: General tuition amount spent on the purchase of textbooks.

Year	Students Enrolment	Text books	Money spent on Textbooks (Ksh.)	Textbook/ Student	Tuition Amount per student (Ksh.)	% of Tuition Money to T/books	Government Recommended %
2009	4100	6142	3546081	0.15	864.90	19%	54%
2010	3490	7205	3694861	0.21	1058.70	24%	54%
2011	4755	8388	4564319	0.18	959.90	21%	54%
2012	5653	7946	4714750	0.14	834.03	19%	54%
2013	6594	9865	7968309	0.15	1208.42	27%	54%
2014	6773	9865	9344221	0.15	1379.63	31%	54%
2015	6524	12029	10831894	0.18	1660.31	37%	54%
2016	6829	14686	11310755	0.22	1656.28	37%	54%
2017	7551	18349	13446005	0.28	1780.69	40%	54%
Average		94475	69421195	0.18	1266.98	28%	

Data on table 4.6 shows that an average of 28 percent of the money that had been allocated to public secondary schools by the government went towards purchase of textbooks against the government recommended 54 percent, an indication that the CG (tuition amount money) towards textbook purchase was not fully utilized between the years 2009 to 2017 this is in congruence with Ampratwum and Armah-attoh, (2010) who says leakage of CG funds cuts across all schools and schools with poor school management systems don't use CG effectively for intended purpose . The highest allocation of the tuition amount money towards purchase of textbooks was in 2017 at 40 percent; Ksh. 13,446,005) while the lowest percentage was in 2009 at 19 percent; Ksh. 3,546,081). The high allocation in 2017 was attributed to the high enrolment rates from 2009 this is in agreement with Pajibo and Tamanja, (2017) who says inception of CG policy was found to be relevant and had led to increase in enrolment in all basic schools. Pearson correlation coefficient was used to analyze the relationship between the amounts of tuition money allocated to the purchase of textbooks over the years, the result are displayed in table 4.7.

4.6 Correlation between Tuition Amount allocated to the Purchase of Textbooks over the years.

Hypothesis for the second objective was that:

H₀₂: There is no significant relationship between capitation grant towards textbook and actual Tuition amount money spend on purchase of textbooks in public secondary schools in Bungoma County.

To test for the H_{02} , the study adopted the use of Pearson moment correlation coefficient. According to Lyndsay, (2009), a correlation coefficient of 0.5 and above indicates a strong relationship between two variables. The findings of the Pearson moment correlation between capitation grant towards textbooks and actual tuition amount money for purchase of textbooks is shown in table 4.7.

Table 4.7: Correlation between Capitation Grant towards textbooks and actual tuition amount for purchase of textbooks.

		Successive years (Time)	Tuition Money allocated for textbooks
Successive years (Time)	Pearson Correlation	1	.926**
	Sig. (2-tailed)		.000
	N	9	9
Tuition Money allocated for textbooks	Pearson Correlation	.926**	1
	Sig. (2-tailed)	.000	
	N	9	9
** Correlation is significant at the 0.01 level (2-tailed).			

The findings in table 4.7 above shows that there is a significant relationship between capitation grand towards textbook and actual tuition amount money spent on buying of

textbooks in secondary that are public in Bungoma County ($r = 0.926$, $p < 0.001$) at $\alpha = 0.05$); we therefore reject the null hypothesis and conclude that an increase in the CG resulted to increase in textbook student ratio over the years. Hence the purchase of textbooks could have not increased significantly. The study revealed that an average of 28 percent of the money that had been allocated to public secondary schools by the government went towards purchase of textbooks against the government recommended 54 percent. This is an indication that the CG; Tuition amount money towards textbook purchase was not fully utilized between the years 2009 to 2017 this is in congruence with Ampratwum and Armah-attoh, (2010) who indicate that leakages of CG cuts across all schools and say ineffective management don't utilize CG well.

The high allocation in 2017 was attributed to the high enrolment rates from 2009 this is in agreement with Pajibo and Tamanja, (2017) says CG led to increase in enrolment in all basic schools. The amount spent on textbooks has been on the rise over the years but is not in line with the government recommended 54 percent per child per year per, in 2017 40 percent was used to purchase textbooks against the government recommended.

4.7 Government Policy on Capitation Grant towards provision of Textbooks and Curriculum Scope in Public Secondary Schools.

Third objective of this study was to determine the relationship between government policy on CG towards provision of textbooks and Curriculum Scope in secondary schools that are public. To do so, the study analyzed the average tuition amount money used to purchase textbooks in various subjects from the year 2009 to 2017. In order to collect the data HODs, librarians, students, principals and school accountants were provided with

questionnaires on the amount of money that had been spent on purchase textbooks in different subjects, the results are displayed in table 4.8.

Table: 4.8 Average Tuition Money spent on various Subjects from 2009 to 2017

Subject	N	Mean Amount spent on the Text books	Std. Deviation	% of Tuition Money used to buy T/books	Government Recommended %	Text book Student Ratio	Government Recommended Ratio
Languages	8	16,308,000	1,094,016	43%	59%	0.38643	1
Math and Sciences	8	7,075,600	626,209	36%	59%	0.18541	1
Humanities	8	17,745,000	564,029	42%	59%	0.31573	1
Technical & Applied	8	5,037,900	435,796	37%	59%	0.25678	1
Total	32	46,166,500	1,093,477	96,600			

Table 4.8 shows that much of the money that had been allocated for textbooks from tuition account went to humanities subjects at Ksh.17,745,000; 38 percentage of the total amount used to purchase textbooks, followed by languages at Ksh.16,308,000; 35 percent, only 15 percent; Ksh.7,075,600 of the total amount was used to purchase mathematics and sciences textbooks which was attributed to the high prices of the mathematics and science textbooks that had an impact on the tuition amount given by the government. Likewise, were being compulsory subjects since all students take them, while 11percent Ksh.5, 037,900 of the total amount was used to purchase textbooks for technical and applied sciences subjects. The low percentage in the technical and applied science subjects was attributed to the low enrollment since very few schools and students take the subjects and the principals decried the high prices of technical and applied sciences textbooks expensive. Read, (2015) says that price policing can have a great impact on both unit cost and system costs, and without achieving a degree of price predictability can lead to regular teaching and learning material costs running out of control.

The highest student ratio per textbook was in Languages and humanities respectively at 0.38643 (2.58 students per language textbook) and 0.31573 (2.58 students per textbook). The highest student textbook ratio was attributed to suppliers, who supplied even non recommended titles and some not ordered for to clearer their stock that was not being purchased. The lowest student per textbook ratio was in Mathematics / Sciences and Technical and Applied sciences subjects respectively at 0.18541 (5.41 students per Mathematics/Sciences) and 0.25678 (3.9 students per Technical and Applied Sciences textbook). This had been however below the government recommended ratio Of 1:1 (1

textbook per student per subject). To analyze if there is a significant difference in the amount of tuition amount money spent on purchase of textbook per subject and the CG, a one way ANOVA test was done. The inferential statistics is shown in table 4.9.

Table 4.9: one way ANOVA table on significant differences in the tuition amount money spent on purchase of textbooks per subject and the Capitation Grant.

	Sum of		Mean		
	Squares	Df	Square	F	Sig.
Between	3.951E7	3	1.317E7	10.207	.000
Groups					
Within Groups	3.613E7	28	1290439.549		
Total	7.565E7	31			

The data in table 4.9 ($F=10.27$, $df = (3,28)$ $p < 0.01$) at $\alpha = 0.01$ provides statistically significant evidence that the mean amount of tuition money used to purchase textbooks for different subjects are not the same. To explore the specific difference on amount spent per subject, a multi comparison (tukey test) was ran on the data and displayed in table 4.9. The numbers of students in compulsory subjects dictate the number of textbooks to be purchased. Schools are likely to have more teachers in the compulsory subjects who will influence procurement of textbooks.

Table 4.10 A Multi Comparison (tukey test) on Tuition Amount spent on various Subjects.

(I) Subject	(J) Subject	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Languages	Maths and Sciences	2134.00000*	5.67988E2	.0004	583.2169	3684.7831
	Humanities	228.75000	5.67988E2	.977	-1322.0331	1779.5331
	Technical	2497.87500*	5.67988E2	.001	947.0919	4048.6581
Maths and Sciences	Language	-2134.00000*	5.67988E2	.004	-3684.7831	-583.2169
	Humanities	-1905.25000*	5.67988E2	.012	-3456.0331	-354.4669
	Technical	363.87500	5.67988E2	.918	-1186.9081	1914.6581
Humanities	Language	-228.75000	5.67988E2	.977	-1779.5331	1322.0331
	Maths and Sciences	1905.25000*	5.67988E2	.012	354.4669	3456.0331
	Technical		5.67988E2	.002	718.3419	3819.9081
		2269.12500*				
Technical and Applied	Language	-2497.87500*	5.67988E2	.001	-4048.6581	-947.0919
	Maths and Sciences	-363.87500	5.67988E2	.918	-1914.6581	1186.9081
	Humanities					
		-2269.12500*	5.67988E2	.002	-3819.9081	-718.3419

*. The mean difference is significant at the 0.05 level.

The post hoc test in table 4.10 show that there is a statistically significant difference on the tuition amount on mathematics/Sciences and Languages ($p = 0.004$) at $\alpha = 0.01$. There is a statistically significant difference on the tuition amount on Humanities and math/sciences ($p = 0.012$) at $\alpha = 0.01$. There is a no statically significant difference on the tuition amount on Humanities and Language ($p = 0.997$) at $\alpha = 0.01$ while there is a statically significant difference on the amount on Technical and Humanities ($p = 0.002$) at $\alpha = 0.01$.

The data in table 4.9 ($F=10.27$, $df = (3,28)$ $p < 0.01$) at $\alpha = 0.01$ provides statistically significant evidence that the mean amount of tuition money used to purchase textbooks for different subjects are not the same. We therefore reject the null hypothesis which states that, there is no significant difference between government policy on CG towards provision of textbooks and curriculum scope in public secondary schools in Bungoma County and state that there is a significant difference between government policy on CG towards provision of textbooks and curriculum scope in secondary schools that are public in Bungoma County.

4.8 To Establish the Effect of Textbook ‘Harvesting’ and Donation on use of Capitation Grant towards Textbooks in Public Secondary Schools.

Objective 4 of the study was to find out the effect of textbook ‘Harvesting’ and Donation on use of CG towards textbooks in public secondary schools. The researcher sought to find out if the schools had received any textbook donation in form of textbook ‘harvesting’; the results are shown in figure 4.5.

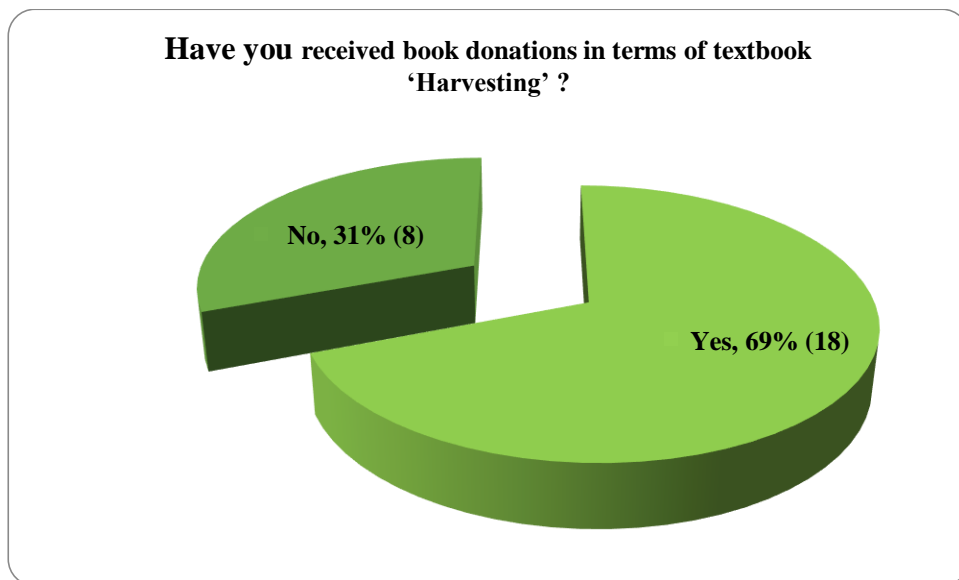


Figure 4.5: Textbook 'Harvesting' and Donations.

Figure 4.5 shows that 69 percent of the schools had received book donations in terms of textbook 'Harvesting' and they felt that this would improve their student textbook ratio. 31 percent of the public secondary school had not received any book donations. The researcher was interested to look at the factors that had led to book donation. A comparative analysis between public secondary schools with enrollment above and below 500 is displayed in table 4:11.

Table 4.11: Factors that led to the Textbook ‘Harvesting’ and Donation.

Factors	Public Sec. Schools with population below 500	Public Sec. Schools with population above 500	Mean	Mann Whitney U	P Value
Inadequate textbooks in the public secondary school.	1.1	3.7	2.12	2.46	.002
Delayed by the government to release Capitation Grant	4.1	4.6	4.3	10.01	.163
Pressure from school board of management	3.9	4.3	4.1	13.93	.075
Influence by neighboring public secondary schools	3.4	2.9	3.2	6.86	.063
Textbook losses	2.0	1.2	1.62	1.34	.004
Wider curriculum scope	2.3	2.5	2.4	5.67	.906
Lack of proper methods of textbook collection	4.2	2.3	3.0	1.76	.000

Key:SA = Strongly Agree A = Agree U = Undecided D = Disagree SD = Strongly Disagree

The data in table 4:11 shows that the major reasons for their quest for book donation was inadequate textbooks in the public secondary schools (mean = 2.12), textbook losses (mean = 1.62) and a wider curriculum scope (mean 2.4). Public secondary schools with enrolment of below 500 students had a bigger problem with the available number of textbooks as compared to schools with enrolment of more than 500 students (U = 2.46, $p = 0.02$). Delay by the government to release CG (mean = 4.3), Pressure from school

board of management (mean = 4.1) and influence by neighboring public secondary schools (mean = 1.32) had little effect on quest for textbook ‘Harvesting’ donation. Public secondary schools with enrolment of below 500 students did not have a challenge with textbook losses as compared to secondary schools that are public with a population of above 500 students had a challenge on proper methods of textbook collection from classes (mean 2.3) while public secondary school with enrollment of below 500 students did not have the challenge (mean = 4.2); $U = 1.76$, $p < 0.001$).). The study shows that the major reasons for their quest for book donation was inadequate textbooks in the public secondary schools (mean = 2.12), textbook losses (mean = 1.62) and a wider curriculum scope (mean 2.4). Public secondary schools with enrolment of below 500 students had a bigger problem with the available number of textbooks as compared to schools with enrolment of more than 500 students ($U = 2.46$, $p = 0.02$). Delay by the government to release CG (mean = 4.3), Pressure from school board of management (mean = 4.1) and influence by neighboring public secondary schools (mean = 1.32) had little effect on quest for textbook ‘Harvesting’ donation. The study revealed that major reasons for public secondary schools quest for book donation was inadequate textbooks in the public secondary schools, textbook losses and a wider curriculum scope. Public secondary schools with enrolment of below 500 students had a bigger problem with the available number of textbooks as compared to schools with enrolment of more than 500. Delay by the government to release CG this is in congruence with Ampratwum & Armah, (2010) who says, disbursement of CG to beneficiary institution were not timely as demanded by the CG implementation policy. It was also revealed that pressure from school board of

management and influence by neighboring public secondary schools had little effect on quest for textbook 'Harvesting' donation.

Findings of table 4.10 above indicate that there was a significant effect between textbook 'Harvesting' and donation on use of CG towards purchase of textbooks in public secondary schools. We therefore reject the null hypothesis that there is no effect between textbook 'Harvesting' and donation on use of CG towards buying of textbooks for secondary schools that are public and conclude that public secondary schools with enrolment of below 500 students had a bigger problem with the availability of textbooks compared to schools with enrolment of more than 500 students ($U = 2.46, p = 0.02$).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the study, conclusion, and recommendations as well as suggestions for further studies.

The research that was undertaken in order to: provide knowledge on the capitation grant and textbook ratio in Bungoma- South Sub-County, it presents a summary on the relationship/correlation found between the capitation grant and textbook student ratio, the difference between tuition account amount and the textbook student ration. Thirdly the relationship between capitation grant and curriculum scope and the relationship between textbook ‘harvesting’ and donation on capitation grant towards textbooks.

5.1 Summary of the Study

This study investigated capitation grant and textbook student ratio. The participants comprised of, 27 Principals 109 HODs, 26 Librarians, 20 Accounts Clerks’, and 169 Students (Class Secretaries); forming a sample size 352 participants of the sampled public secondary schools and a SCDE.

5.1.1The Relationship between Capitation Grant and Textbook Student Ratio in Public Secondary Schools.

The result indicated that textbook student ratio per subject was 0.28547 (3.51 students per textbook per subject), below the government recommended textbook student ratio of 1:1, table 4.2 The result further indicated that textbooks were not bought and that a huge amount of capitation grant towards textbooks was not utilized to purchases textbook,

implying that there was a significant difference between the capitation given by the government and the textbook student ratio from 2009 to 2017. It was therefore concluded that despite the governments good intention of funding textbook purchase through capitation grant to achieve a textbook student ratio of 1:1, the good intention was not significantly successful due to; long procurement/distribution processes, lack of proper financial management, lack of proper records and textbook policy in public secondary schools, textbook loss and damage due to lack of storage facilities, lack of library facilities and poor care of textbooks, lack of and weak implementation and monitoring systems, inadequate participation by key stakeholders, delays in disbursement of capitation grants, plus high prices and taxes on textbooks slowed down and discouraged principals to purchase textbooks that could meet the government requirement of 1:1 textbook student ratio. The study concludes that there is a significant strong negative relationship between capitation grant and textbook student ratio in public secondary schools ($r = -0.760$, $p\text{-value} = 0.000 < 0.05$); table 4.3. We therefore reject the null hypothesis H_{01} : There is no significant relationship between capitation grand and textbook student ratio in public secondary schools in Bungoma County.

5.1.2 General Tuition Amount spent on purchase of textbooks.

Findings of the study indicate that, only 28% of the tuition amount money that had been allocated to public secondary schools by the government went towards purchase of textbooks against the government recommended 54%. This is an indication that the capitation grant/tuition amount money towards textbook purchase was not fully utilized between the years 2009 to 2017, table 4.6.

There was a significant increase in amount used to purchase textbooks over the years ($r = 0.926$, $p < 0.001$) at $\alpha = 0.05$ table 4.7 show that there was a significant relationship between capitation grant towards textbook and actual tuition amount money spend on purchase of textbooks in secondary schools that are public in Bungoma County, we therefore reject the null hypothesis and conclude that an increase in the CG resulted to increase in textbook student ratio over theyears.

5.1.3 Relationship between Government Policy on Capitation Grant towards provision of Textbooks and Curriculum Diversity.

The highest student ratio per textbook was in Languages and humanities respectively at 0.38643 (2.58 students per language textbook) and 0.31573 (2.58 students per textbook). The highest student textbook ratio was attributed to suppliers, who supplied textbooks not recommended/approved by KICD and some not ordered for to clearer their stock that was not being purchased. The lowest student per textbook ratio was in Mathematics / Sciences and Technical and Applied sciences subjects respectively at 0.18541 (5.41 students per Mathematics/Sciences) and 0.25678 (3.9 students per Technical and Applied Sciences textbook) table 4.7. The post hoc test in table 4.8 indicate that there was significance difference on the tuition amount spent on the purchase of mathematics/sciences and languages ($p=0.004$) at $\alpha=0.01$.

The study shows that there was a significant difference in the amount of tuition money spent on purchase of textbook per subject and the CG ($F=10.27$, $df=(3,28)$, $p<0.01$) at $\alpha=0.01$ table 4.9 indicate a statistically significant evidence that the mean amount of tuition money used to purchase textbooks for different subjects are not the same. We

therefore reject the null hypothesis which states; there is no significant difference between government policy on CG towards provision of textbooks and curriculum scope in public secondary schools in Bungoma County, and state that there is a significant difference between government policy on CG towards provision of textbooks and curriculum scope in public secondary schools in Bungoma County.

5.1.4 Effect of Textbook ‘Harvesting’ and Donations on use of Capitation Grant towards textbooks.

The study shows that more than 65% of the schools had received book donations in terms of textbook ‘Harvesting’ and they felt that this would improve their student textbook ratio. 31% of the public secondary school had not received any book donations. The researcher was interested to look at the factors that had led to book donation. Public secondary schools with enrollment of below 500 students had a bigger problem with the available number of textbooks as compared to schools with enrollment of more than 500 students ($U = 2.46$, $p = 0.02$) table 4.11. Indicate that there was a significant effect between textbook ‘Harvesting’ and donation on use of CG towards buying of textbooks in public secondary schools. We therefore reject the null hypothesis that there is no effect between textbook ‘Harvesting’ and donation on use of CG towards buying of textbooks in public secondary schools and conclude that public secondary schools with enrolment of below 500 students had a bigger problem with the availability of textbooks compared to schools with enrolment of more than 500 students.

5.2 Conclusion

The study established that Capitation Grants were not adequately utilized to attain the desired 1: 1 textbook student ratio due to divers' challenges. This may in the long run escalate through the 100 transition rate policy.

The study further concludes that the amount of tuition amount money spent on purchase of textbook per subject need to be based on the enrolment per individual subject. In order to avoid over purchasing/supplies in some subjects and not others.

A policy on textbook 'Harvesting' and donation should be put in place so that Public Secondary Schools that have excess Textbooks can donate to schools that have not achieved the one textbook to student ratio in order to cover for shortfalls in some subjects like expensive textbooks for Electricity, Art and Design, Music, Drawing and Design and among others.

The study therefore concludes that, implementation policy on Capitation Grant for purchase of textbooks be strictly adhered to in order to fully achieve textbook student ratio of 1:1 across all subjects in spite of the government's 100% transition policy that has led to over enrolment in secondary schools that are public.

5.3Policy Recommendation.

Arising out of the findings, the following are the recommendations:

- i. The study recommends that, the MOE and school managers should come up with a robust CG policy for proper utilization of funds meant to purchase textbooks through enhancing monitoring systems for prudent management of the funds to avoid future high textbook student ratio and maintain the recommended ratio of 1:1.

- ii. In order to improve education outcomes and achieve meaningful implementation of MOE policies on textbooks, there is an urgent need to re-examine the spending patterns of the tuition amount money and to check the weak monitoring systems within the MOE and public schools in order to ensure good procurement procedures, proper record keeping/proper management practices of purchased textbooks are upheld.
- iii. The government through MOE should come up with a policy on balancing of the number of textbooks across the curriculum scope by having proper records of subject enrolment in all classes in public secondary school. Purchase/supply of textbooks be based on the number of students taking the individual subject to avoid over purchase or oversupply of textbooks in some subjects.
- iv. There is need for the government through MOE to design a policy to support capitation grant through textbook/book 'harvesting' and donation for expensive textbooks, set books & guides, Bibles, Quran, Life Skills books, Physical Education, Motivational books among others from organizations and foreign countries to enhance reading culture in public secondary schools.
- v. Since the government is striving to achieve the 1:1 textbook student ratio by supplying textbooks directly to public secondary schools, a portion of the tuition amount should be channeled through the maintenance & improvement vote head for putting up facilities; modern libraries and classroom storage system to avoid stocks of textbooks being dumped all over year in year out with no place to keep them; that can be susceptible to damage by termites, dampness and vandalism.

- vi. The fixed tuition amount money must be reconsidered. Equity and need factor should be the basis for calculation. As it is now, it might in the long run widen the social inequality gap because public secondary schools with higher enrolment will have more and will be able to meet other basic books than smaller schools.
- vii. The capitation grant policy on purchase of textbook should be re-examined to include clear guidelines on textbook storage, safety and use to avoid future overspendings and allow for construction of libraries to keep the textbooks in all public secondary schools by the government.

5.4 Suggestion for Further Study

The study suggested the following areas for further study:

- i. Further research be done on challenges public secondary schools face in management and storage of textbooks.
- ii. Further research be done on value added progress in academics and textbooks student ratio in secondary school that are public.
- iii. Further research be done on the relevance of other books on academic excellence.
- iv. Further research be conducted on management factors affecting proper utilization of capitation grant on provision of textbooks in public secondary schools.
- v. Further research needs to be done on the relevance of electronic textbooks in the twenty first century over traditional textbooks in teaching and learning.

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APPENDICES

APPENDIX I: QUESTIONNAIRE 1: TO BE COMPLETED BY PRINCIPALS

Dear Madam/sir

The purpose of this study is to determine the, “Capitation Grant and Textbook Student Ratio in secondary schools that are public in Bungoma County Kenya”. You are kindly requested to fill the questionnaire genuinely. The information obtained will be treated with utmost confidentiality and only used for the purpose of this study.

Kennedy Amadi

SECTION A: BACKGROUND INFORMATION

Please tick (✓) the suitable response in the brackets provided where possible.

1. Are you a male or female?(kindly tick ✓ one)

Male ☐ Female ☐

2. Which age range do you fall under? (kindly tick (✓) one)

i) 30 years and below ☐ ii) 31-36 years ☐ iii) 37-42 years ☐

ii) 43-48 years ☐ iv) 49-54 years ☐ v) Above 55 years ☐

3. What is your marital status?

i) Married ☐ ii) Single ☐

4. What is the Level of your education qualification?

i) Certificate ☐ ii) Diploma ☐ iii) Higher diploma ☐

iv) Degree ☐ v) Master's degree ☐

5. Please indicate your Designation _____

6. What is your job group?

Please specify _____ ii) 2-3 years iii) 4-5 years iv) 6-7 years Above 8 years

9. Which is the category of your school?

i) Extra County School ☐ ii) County School ☐ iii) Sub-County School ☐

iv) Urban Sub-County ☐ v) Rural Sub-County ☐

10. What is your school student population? Please fill in where applicable.

i) Girls ii) Boys

11. How old is the school?

i) Below 5 years ☐ ii) 6-10 years ☐ iii) 11- 15 years ☐ iv) 16-20 years ☐

v) 21-25 years ☐ vi) 26-31 years ☐ vii) Above 30 years ☐

12. What is the category of your school?

i) Boys Boarding ☐ ii) Girls Boarding ☐ iii) Mixed day ☐

iv) Girls day ☐ v) Boys day ☐

SECTION B: SPECIFIC INFORMATION

RELATIONSHIP BETWEEN CAPITATION GRANT AND TEXTBOOK

STUDENT RATIO.

Please tick (✓) the appropriate answer in the brackets provided where possible

13. Does the school receive Capitation Grant towards purchasing Textbooks?

Yes ☐ No ☐

14. How much Capitation Grant does your school use in purchasing textbooks?

i) Below 10 ☐ ii) 10-20 % ☐ iii) 20-30 % ☐

iv) 30-40 % ☐ v) Above 50 % ☐

15. What is the frequency of purchasing Textbooks in the school?

i) Annually ☐ ii) Twice a year ☐ iii) Thrice a year ☐

iii) Always ☐

16. How do you acquire books from the publishers? _____

RELATIONSHIP BETWEEN CAPITATION GRANT TOWARDS TUITION ACCOUNT AND ACTUAL TUITION AMOUNT MONEY SPENT ON PURCHASE OF TEXTBOOKS.

Please fill all the questions

17. What is the percentage of the Tuition Amount that goes towards purchasing Textbooks in your school? _____

18. What is the approximate amount in Kenya Shillings allocated for purchasing Textbooks in your school from the Tuition Account?

i) Below KES. 20,000 ☐ ii) KES. 20,000 - 40,000 ☐

iii) KES. 40,000 – 60,000 ☐ iv) KES. 60,000 – 80,000 ☐

v) KES. 80,000 – 100,000 ☐ vi) Above KES. 100,000 ☐

19. Is the current state of Textbook Student Ratio adequate?

Yes ☐ No ☐

20. Does your school have a clear policy on Textbooks?

Yes ☐ No ☐

If yes state the policy _____

CAPITATION GRANT TOWARDS PURCHASE OF TEXTBOOKS ON THE CURRICULUM SCOPE.

21. How many subjects does the school offer?

i) Below 12 subjects ☐ ii) 12-15 subjects ☐ iii) 16-19 subjects ☐

ii) Above 20 subjects ☐

22. Does the school offer Technical and Applied Sciences subjects?

Yes ☐ No ☐

If yes name them _____

**EFFECTS OF TEXTBOOK ‘HARVESTING’ AND DONATIONS ON THE USE
OF CAPITATION GRANT TOWARDS PURCHASE OF TEXTBOOKS.**

Please tick (✓) the appropriate answer in the brackets provided where possible

23. Does the school face shortage of Textbook?

Yes ☐ No ☐

If yes give reasons for your answer above _____

24. Has there ever been Textbook ‘Harvesting’ and Donation in your school?

Yes ☐ No ☐

If yes, what factors led to the textbook harvesting and donation

Factors	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Inadequate textbooks in the school					
Delay by the government to release Capitation Grant					
Pressure from school administration					
Influence by neighbouring schools					
Textbook loses					

Wider curriculum scope					
Lack of proper methods of Textbook collection from classes					

Others specify

25. How often does Textbook 'Harvesting' and Donation occur in your institution?

i) Once per term ☐ ii) Once per year ☐ iii) During AGM ☐ iv) Inconsistent ☐

26. When exactly is Textbook 'Harvesting' and Donation done in your school?

i) Starting of the year ☐ Middle of the year ☐ End of the year ☐

iv) Termly ☐ (v) Annually ☐

27. Who are the main target group during Textbook 'Harvesting' and Donation?

i) Parents ☐ ii) invited guests ☐ iii) Well-wishers ☐ iv) Politicians ☐

28. Is Textbook 'Harvesting' and Donation the best and easiest way of equipping the school library?

Yes ☐ No ☐

If yes, why _____

29. How can you rate textbook harvesting and donation programs in your school?

i) Excellent ☐ ii) Very good ☐ iii) Good ☐ iv) Average ☐

v) Poor ☐ vi) Very poor ☐

30. If your answer in 29 above is excellent, very good or good, what are the factors that have made textbook harvesting and donation a success?

- i) Support by teacher's ☐ ii) Co-operation and dedication among parents ☐
 iii) Awareness of textbook harvesting to parents, students and the community ☐

Others, please specify _____

If your answer in 29 above is average, very poor or poor, what are some of the factors hindering Textbook 'Harvesting' and Donation from being a success in school?

31. What are the main challenges faced during textbook harvesting and donation in your school? _____

32. State any other sources of Textbook 'Harvesting' and Donation in your school?

33. Do you ever receive Textbooks from well-wishers?

Yes ☐ ☐

If yes, mention some of the well-wishers who Donate Textbooks to your school

34. Kindly list areas (Subjects) where the school receives many Textbooks through Textbook "Harvesting" and Donations from well-wishers

35. Is Textbook "Harvesting" and Donation of any value to the school?

Yes ☐ ☐

Please give reasons

Thank you for your co-operation

APPENDIXII: QUESTIONNAIRE 2: TO BE COMPLETED BY HEADS OF DEPARTMENTS

Dear Madam/sir

The purpose of this study is to determine the, “Capitation Grant and Textbook Student Ratio in secondary schools that are public in Bungoma County Kenya”. You are kindly requested to fill the questionnaire genuinely. The information obtained will be treated with utmost confidentiality and only used for the purpose of this study.

Kennedy Amadi

SECTION A: BACKGROUND INFORMATION

Please tick (✓) the appropriate answer in the brackets provided where possible.

1. Are you a male or female? (kindly tick ✓ one)

Male ☐ Female ☐

2. Indicate your age bracket (kindly tick (✓) one)

i) Below 20 years ☐ ii) 20-24 years ☐ iii) 25-29 years ☐ iv) 30-34 years ☐

v) 35-39 years ☐ vi) 40-44 years ☐ vii) 46 and above ☐

3. What is your marital status?

i) Married ☐ ii) Single ☐

4. What is the Level of your education qualification?

i) Certificate ☐ ii) Diploma ☐ iii) Higher diploma ☐

iv) Degree ☐ v) Master's degree ☐

5. Please indicate your Designation _____

6. Indicate the job group you belong to. (Kindly tick ✓) one

i) J ☐ ii) K ☐ iii) L ☐ iv) M ☐ ☐

v) Job Group N ☐ vi) Job Group P ☐

7. How long have you worked in this Job group?

i) Below 5 years ☐ ii) 6-10 years ☐ iii) 11-15 years ☐ iv) 16-20 years

v) 21-25 years ☐ vi) 26-30 years ☐ vii) Above 31 years ☐

11. Which Department do you head? Please state _____

12. How long have you been a Head of Department?

i) 0-2 years ☐ ii) 2-3 years ☐ iii) 4-5 years ☐ iv) 6-7 ☐ v) Above 8 years ☐

SECTION B: SPECIFIC INFORMATION

RELATIONSHIP BETWEEN CAPITATION GRANT TOWARDS TUITION ACCOUNT AND ACTUAL TUITION AMOUNT MONEY SPENT ON PURCHASE OF TEXTBOOKS.

Please tick (✓) the appropriate answer in the brackets provided where possible

13. How much capitation grant does your school use in buying textbooks?

i) Below 10 ☐ ii) 10-20 % ☐ iii) 20-30 % ☐

iv) 30-40 % ☐ v) Above 50 % ☐

14. What is the frequency of purchasing textbooks in the school?

i) Yearly ☐ ii) Twice a year ☐ iii) Thrice a year ☐

iii) Always ☐

15. Do you do stock taking of Textbooks in your school?

Yes ☐ No ☐

If yes how often, Annually ☐ twice a year ☐

Others specify _____

16. Does the school face shortage of Textbooks?

Yes ☐ No ☐

If yes give reason _____

17. How do you acquire Textbooks from the publishers? _____

18. Can you ascertain the number of Textbook losses in your department annually?

i) Below 10% ☐ ii) 10-20% ☐ iii) 20-30% ☐ iv) 30-40% ☐ v) above 50% ☐

19. What is the frequency of purchasing Textbooks in your department?

i) Yearly ☐ ii) Twice a year ☐ iii) Thrice a year ☐ iv) Always ☐

20. Does your department have enough Textbooks?

Yes ☐ No ☐

If yes, state the approximate number per subject in the department _____

If No. give the reasons to why _____

21. Do you make requisition for Textbooks in your department?

Yes ☐ No ☐

If Yes, how frequently _____

22. Are you aware of the procedure of selecting & acquiring Textbooks in your department?

Yes ☐ No ☐

Briefly state the procedure _____

23. What percentage of the Tuition Amount does your department spent on purchasing Textbooks annually?

i) Below 10% ☐ ii) 10-20 % ☐ iii) 20-30 % ☐ iv) 30-40 % ☐ v) Above 50 % ☐

24. Do you do stock taking of textbooks in your school?

Yes ☐ No ☐

If yes, how often

Annually ☐ Twice a year ☐

Others specify _____

25. Does your school have a library?

Yes ☐ No ☐

If no, why _____

26. How do you acquire books from the publishers? _____

27. Can you ascertain the number of Textbook losses annually in percentage?

i) Below 10% ☐ ii) 10-20% ☐ iii) 20-30% ☐ iv) 30-40% ☐ v) above 50 ☐

28. Does the school face shortage of textbooks?

Yes ☐ No ☐

If yes give reasons _____

CAPITATION GRANTTOWARDS PURCHASE TEXTBOOKS ON THE CURRICULUM DIVERSITIES.

29. How many subjects does the department offer?

i) Below 2 subjects ☐ ii) 3-5 subjects ☐ iii) 6-8 subjects ☐

ii) Above 8 subjects ☐

State the subjects' _____

30. Fill the table below, please indicate the current number of Textbook per subject for the nine years in your department.

Subject	No. of Textbooks								
	2008	2009	2010	2011	2012	2013	2014	2015	2016
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									

31. Please indicate the number of students taking each individual subject per class in the table below.

Subject	Class/Form	No. of Textbooks
1.		
2.		
3.		
4.		

**EFFECTS OF TEXTBOOK ‘HARVESTING’ AND DONATIONS ON THE USE
OF CAPITATION GRANT TOWARDS PURCHASE TEXTBOOKS.**

32. Does your department face shortage of Textbooks?

Yes ☐ No ☐

If yes give reasons _____

33. Do you support Textbook ‘Harvesting’ and Donation practice in your school?

Yes ☐ No ☐

Give reasons for your _____

34. List areas (subjects) where the school receives many Textbooks through Textbook

‘Harvesting’ and Donations from well-wishers _____

Thank you for your co-operation.

APPENDIXIII: QUESTIONNAIRE 3: TO BE COMPLETED BY ACCOUNTS CLERK

Dear Madam/sir

The reason for conducting this study is to determine the, “Influence of Capitation Grant on Textbook Student Ratio in Public Secondary Schools in Bungoma South Sub-County, Bungoma Kenya”. Kindly fill the questionnaire genuinely. The information obtained will be treated with utmost confidentiality and only used for the purpose of this study.

SECTION A: BACKGROUND INFORMATION

Please tick (✓) the appropriate answer in the brackets provided where possible.

17 Are you a male or female?(kindly tick ✓ one)

Male ☐ Female ☐

18 Show the range your age falls under. (kindly tick (✓) one)

i) Below 20 years☐ ii) 20-25 years☐ iii) 26-30 years☐ iv) 31-35 years☐

v) 36-40 years☐ vi) 41-45 years☐ vii) 46 and above☐

19 What is your marital status?

i) Married☐ ii) Single ☐

20 What is the Level of your education qualification?

i) Certificate☐ ii) Diploma☐ iii) Higher diploma ☐

iv) Degree☐ v) Master's degree ☐

21 Please indicate your Designation _____

22 How long have you worked in this position?

i) Below 5 years ☐ ii) 6-10 years ☐ iii) 11-15 years ☐ iv) 16-20 years ☐

v) 21-25 years☐ vi) 26-30 years ☐ vii) Above 31 years ☐

SECTION B: SPECIFIC INFORMATION

RELATIONSHIP BETWEEN CAPITATION GRANT AND TEXTBOOK

STUDENT RATIO.

Please fill all the questions

1. How much of the Tuition Amount is allocated per student per year?

- i) Below 2 % ☐ ii) 2- 4% ☐ iii) 4-6% ☐ iv) 6-8 % ☐ v) 8-10% ☐ vi) Above 10% ☐

2. What is the percentage of Tuition Amount allocated per class every time

Textbooks are purchased?

- i) Below 5 % ☐ ii) 5-10 ☐ iii) 10-15 ☐ iv) 15-20 ☐ v) 20 and Above ☐

3. What is the amount allocated for purchasing Textbooks in the school from the Tuition Amount in Kenya Shillings?

- i) Below KES. 20,000 ☐ ii) KES. 20,000 - 40,000 ☐ iii) KES. 40,000 – 60,000 ☐
iv) KES. 60,000 – 80,000 ☐ v) KES. 80,000 – 100,000 ☐ vi) Above KES. 100,000 ☐

4. How much of the Tuition Amount, goes for purchasing Textbooks per student every time books are purchased?

- i) Below KES. 1,000 ☐ ii) KES. 1,000 – 2,000 ☐ iii) KES. 2,000 – 3,000 ☐
iv) KES. 3,000 – 4,000 ☐ v) KES. 4,000- 5,000 ☐ vi) Above KES 5,000 ☐

Thank you for your co-operation

**RELATIONSHIP BETWEEN CAPITATION GRANT TOWARDS TUITION
ACCOUNT AND ACTUAL TUITION AMOUNT MONEY SPENT ON
TEXTBOOK.**

Please tick (✓) the appropriate answer in the brackets provided where possible

5. Does the school receive capitation grant towards buying textbooks?

Yes ☐ No ☐

6. How much of the capitation grant does the school use in purchasing Textbooks annually?

7. What is the percentage of the Tuition account that the school allocates for buying textbooks every time Textbooks are bought?

i) Below 10% ☐ ii) 10-20 % ☐ iii) 20-30 % ☐

iv) 30-40 % ☐ v) Above 50 % ☐

8. What is the frequency of purchasing Textbooks in the school?

i) Yearly ☐ ii) Twice a year ☐ iii) Thrice a year ☐ iii) Always ☐

Thank you for your co-operation.

APPENDIXIV: QUESTIONNAIRE 4: TO BE COMPLETED BY LIBRARIANS

Dear Madam/sir

The reason for conducting this study is to determine the, “Capitation Grant and Textbook Student Ratio in secondary schools that are public in Bungoma County Kenya”. Kindly fill the questionnaire genuinely. The information obtained will be treated with utmost confidentiality and only used for the purpose of this study.

SECTION A: BACKGROUND INFORMATION

Please tick (✓) the appropriate answer in the brackets provided where possible.

1. Are you a male or female?(kindly tick ✓ one)

Male ☐ Female ☐

2. Show the range of age you fall under? (kindly tick (✓) one)

i) Below 20 years ☐ ii) 20-25 y ears ☐ iii) 26-30 years ☐

iv) 31-35 years ☐ v) 36-40 years ☐ vi) 41-45 years ☐ vii) 46 and above ☐

3. What is your marital status

i) Married ☐ ii) Single ☐

4. Are you a trained librarian?

Yes ☐ No ☐

5. Show the Level of your education qualification.

i) Certificate ☐ ii) Diploma ☐ iii) Higher diploma ☐ iv) Degree ☐

v) Master’s degree ☐

6. Does yours school have a library?

Yes ☐ No ☐

If No, where do you keep your Textbooks? _____

7. How long have you worked as a Librarian?

- i) Below 5 years ☐ ii) 6-10 year ☐ iii) 11-15 years ☐ iv) 16-20 years ☐
v) 21-25 years ☐ vi) 26-30 years ☐ vii) Above 31 years ☐

8. For how long have you been a librarian in your current station?

- i) 0-1 years ☐ ii) 2-3 years ☐ iii) 4-5 years ☐ iv) 6-7 ☐ v) above 8 years ☐

SECTION B: SPECIFIC INFORMATION

THE RELATIONSHIP BETWEEN CAPITATION GRANT AND TEXTBOOK STUDENT RATIO.

Please tick (✓) the appropriate answer in the brackets provided where possible.

1. Please indicate the total number of Students per year and Textbooks purchased by the school and the approximate amount?

Period	Total No. of Students	Approximate No. of textbooks in general	Approximate Amount
2009			
2010			
2011			
2012			
2013			
2014			

2015			
2016			
2017			

RELATIONSHIP BETWEEN CAPITATION GRANT TOWARDS TUITION ACCOUNT AND ACTUAL TUITION AMOUNT SPENT ON PURCHASE OF TEXTBOOKS.

Please tick (✓) the appropriate answer in the brackets provided where possible

2. Does the school receive Capitation Grant towards purchasing Textbooks?

Yes ☐ No ☐

3. What is the frequency of purchasing Textbooks in the school?

i) Yearly ☐ ii) Twice a year ☐ iii) Thrice a year ☐ iii) Always ☐

CAPITATION GRANT TOWARDS PURCHASE OF TEXTBOOKS ON THE CURRICULUM DIVERSITY.

4. Kindly indicate in the table below the approximate number of Textbooks in your subject area and the number of students in every class for the given years.

Subject	Approximate No. of Textbooks	No. of students								
		2008	2009	2010	2011	2012	2013	2014	2015	2016
English										
Kiswahili										

Mathematics										
Biology										
Physics										
Chemistry										
C.R.E										
I.R.E										
History										
Home Science										
Art and Design										
Agriculture										
Computer Studies										
French										
Business Studies										
Music										

5. In the table below indicate whether you have Textbook policy in your school and state what the policy says.

Area of policy	Response		What the policy say
	Yes	No.	
Procurement of Textbooks			
Storage of Textbooks			
Losses of Textbooks			
Replacement of lost Textbooks			
Utility of Textbooks			
Borrowing of Textbooks			
Reading culture of Textbooks			

**EFFECTS OF TEXTBOOK ‘HARVESTING’ AND DONATIONS ON THE USE
OF CAPITATION GRANT TOWARDS PURCHASE OF TEXTBOOKS.**

1. Do you ever receive Textbooks from well-wishers?

Yes ☐ No ☐

If yes mention some of the well-wishers who donate Textbooks to your school

2. Has there ever been Textbook ‘Harvesting’ and Donation in your school?

Yes ☐ No ☐

If yes, what factors led to the textbook harvesting and donation

Factors	Response	
	Yes	No
Inadequate textbooks in the school		
Delay by the government to release capitation grant		
Pressure from school administration		
Influence by neighbouring schools		

Thank you for your co-operation

**APPENDIXV: QUESTIONNAIRE 5: TO BE COMPLETED BY STUDENTS
/CLASS REPRESENTATIVES.**

Dear student,

The purpose of this study is to determine the, “Capitation Grant and Textbook Student Ratio in Public Secondary Schools in Bungoma County Kenya”. You are kindly requested to fill the questionnaire genuinely. The information obtained will be treated with utmost confidentiality and only used for the purpose of this study.

SECTION A: BACKGROUND INFORMATION

Please tick (✓) where appropriate

1. what is your gender(kindly tick ✓ one)

Female ☐ male ☐

2. How old are you?

i) Below 13 years ☐ ii) 14 years ☐ iii) 15 years ☐ iv) 16 years ☐

v) 17 years ☐ vi) Above 18 years ☐

3. Indicate your current class/form.

Specify _____

4. When did you join the school?

i) 2013 ☐ ii) 2014 ☐ iii) 2015 ☐ iv) 2016 ☐

v) Others specify _____

5. You have been a class representative for how long?

i) Below 1 year ☐ (ii) 1 year ☐ (iii) 2 years ☐ iv) 3 years ☐

(iv) 4 years ☐ (v) Above 4 year ☐

6. How many are you in the class?

i) Below 10 ☐ ii) 10 – 20 ☐ iii) 20 - 30 ☐ iv) 30 – 40 ☐ Above 40 ☐

SECTION B: SPECIFIC INFORMATION

RELATIONSHIP BETWEEN CAPITATION GRANT AND TEXTBOOK

STUDENT RATIO.

Please tick (✓) where appropriate

7. Are you given Textbooks in your class?

Yes ☐ No ☐

8. In the table below show the number of students and number of Textbooks in each subject in your class in the table below. .

Subject	No. of students taking the subject	No. of textbooks in the class
English		
Kiswahili		
Mathematics		
Chemistry		
Biology		
Physics		
Geography		
Business studies		
History		
C.R.E		

Computer		
Home Science		
Art and Design		
French		
Agriculture		

Please indicate any other subject that your school is offering and is not mentioned above. _____

9. Does the class make good use of the Textbooks given to you in class?

(i) Strongly disagree (ii) Disagree (iii) Undecided (iv) Agree (v) Strongly agree

10. Do you experience Textbook losses?

Yes () No ()

If yes estimate the numbers termly _____

11. Were you asked to buy some Textbooks during admission?

Yes () No. ()

If yes, which types of books did you requested to come with

Please indicate the titles _____

12. Which are some of the challenges you face concerning Textbooks

**EFFECTS OF TEXTBOOK ‘HARVESTING’ AND DONATIONS ON
CAPITATION GRANT TOWARDS PURCHASE TEXTBOOKS.**

1. Has there ever been Textbook ‘Harvesting’ and Donation in your school?

Yes ☐ No ☐

If yes, what factors led to the Textbook ‘Harvesting’ and Donation

Factors	Response	
	Yes	No
Inadequate Textbooks in the school		
Delay by the government to release Capitation Grant		
Pressure from school administration		
Influence by neighboring schools		
Textbook loses		
Many subjects being offered by the school		

Other factors

How often does Textbook ‘Harvesting’ and Donation place in your institution?

i) Once per term ☐ ii) Once per year ☐ iii) During AGM ☐ iv) Inconsistent ☐

2. When exactly is Textbook ‘Harvesting’ and Donation done in your school?

i) When the year starts ☐ ii) Middle of the year ☐ iii) End of the year ☐

iv) Termly ☐ (v) Annually ☐

3. Who are the main target group during Textbook 'Harvesting' and Donation?

i) Parents ☐ ii) invited guests ☐ iii) Well wishers ☐ iv) Politicians ☐

4. Is textbook harvesting the best and easiest way of equipping the school library?

Yes ☐ No ☐

5. How can you rate Textbook 'Harvesting' and Donation programs in your school

i) Excellent ☐ ii) Very good ☐ iii) Good ☐ iv) Average ☐

v) Poor ☐ vi) Very poor ☐

6. If your answer in 6 above is excellent, very good or good, what are the factors that have made textbook harvesting and donation a success?

i) Support by teacher's ☐ ii) Co-operation and dedication among parents ☐

iii) Awareness of textbook harvesting to parents, students and the community ☐

iv) Others, please specify _____

If your answer in 6 above is average, very poor or poor, what are some of the factors hindering textbook harvesting and donation from being a success in school? _____

7. What are the main challenges faced during Textbook 'Harvesting' and Donation in your school? _____

8. State any other sources of Textbook 'Harvesting' and Donation in your school? _____

9. Do you ever receive Textbooks from well-wishers?

Yes ☐ No ☐

If yes, mention some of the well-wishers who donate Textbooks to your school _____

10. List areas (Subjects) where the school receives many Textbooks through
Textbook “Harvesting” and Donations from well-wishers _____

11. Is Textbook “Harvesting” and Donation of any value to the school?

Yes ☐ No ☐

Please give reasons _____

Thank you for your co-operation.

**APPENDIXVI: QUESTIONNAIRE 6. TO BE COMPLETED BY SUB COUNTY
DIRECTOR OF EDUCATION.**

Dear Madam/Sir,

The purpose of this study is to determine the, “Capitation Grant and Textbook Student Ratio in secondary schools that are public in Bungoma County Kenya”. You are kindly requested to fill the questionnaire genuinely. The information obtained will be treated with utmost confidentiality and only used for the purpose of this study.

SECTION A: BACKGROUND INFORMATION

Please tick (✓) the appropriate answer in the brackets provided where possible.

1. You have worked as a director of education for how many years?
i) Below 1 year ☐ ii. 2- 3 year ☐ iii. 4-5 year ☐ iv. Above 5 years ☐
2. How many secondary institutions that are public in Bungoma South Sub-County?

How many students are there in secondary schools that are public Bungoma South Sub-County? _____

SECTION B: SPECIFIC INFORMATION

Please tick (✓) where appropriate

3. Do all secondary institutions that are public in Bungoma south sub-county receive
Capitation grant towards buying Textbooks from the government?

Yes ☐ No. ☐

If No. please give reasons

4. Which percentage of the Tuition Amount per school that goes towards purchasing of Textbooks in secondary school that are public in Bungoma South Sub-County?

5. Does the percentage meet threshold of MOE?

Yes ☐ No ☐

If not why _____

Thank you for completing the questions.

APPENDIX VII: RESEARCH AUTHORIZATION 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/19/53074/23994**

Date: **15th January, 2019**

Kennedy Amadi Omega
Kibabii University
P.O. Box 1699-50200
BUNGOMA.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “*Capitation grant and text book student ratio in public secondary schools in Bungoma County Kenya*” I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for the period ending **14th January, 2020.**

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.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Bungoma County.

The County Director of Education
Bungoma County.

National Commission for Science, Technology and Innovation is ISO9001:2008 certified

APPENDIX VIII: RESEARCH PERMIT


THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013


The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
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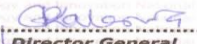
Serial No.A 22635
CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MR. KENNEDY AMADI OMEGA
of KIBABII UNIVERSITY, 166-50200
BUNGOMA, has been permitted to
conduct research in Bungoma County

on the topic: CAPITATION GRANT AND
TEXT BOOK STUDENT RATIO IN PUBLIC
SECONDARY SCHOOLS IN BUNGOMA
COUNTY KENYA

for the period ending:
14th January, 2020

Permit No : NACOSTI/P/19/53074/23994
Date Of Issue : 15th January, 2019
Fee Received :Ksh 1000



Director General
National Commission for Science, Technology & Innovation

.....
Applicant's
Signature


APPENDIX IX: PLAGIARISM CERTIFICATE

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**CAPITATION GRANT AND TEXTBOOK
 STUDENT RATIO I... By Kennedy
 Amadi Epm/mps/010/13**



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APPENDIX X: PUBLICATION REPORT

VOLUME 5, NOVEMBER, 2019

AJESS

ISSN: 2415-0770

The Relationship between Capitation Grant and Textbook Student Ratio in Public Secondary Schools in Bungoma County, Kenya

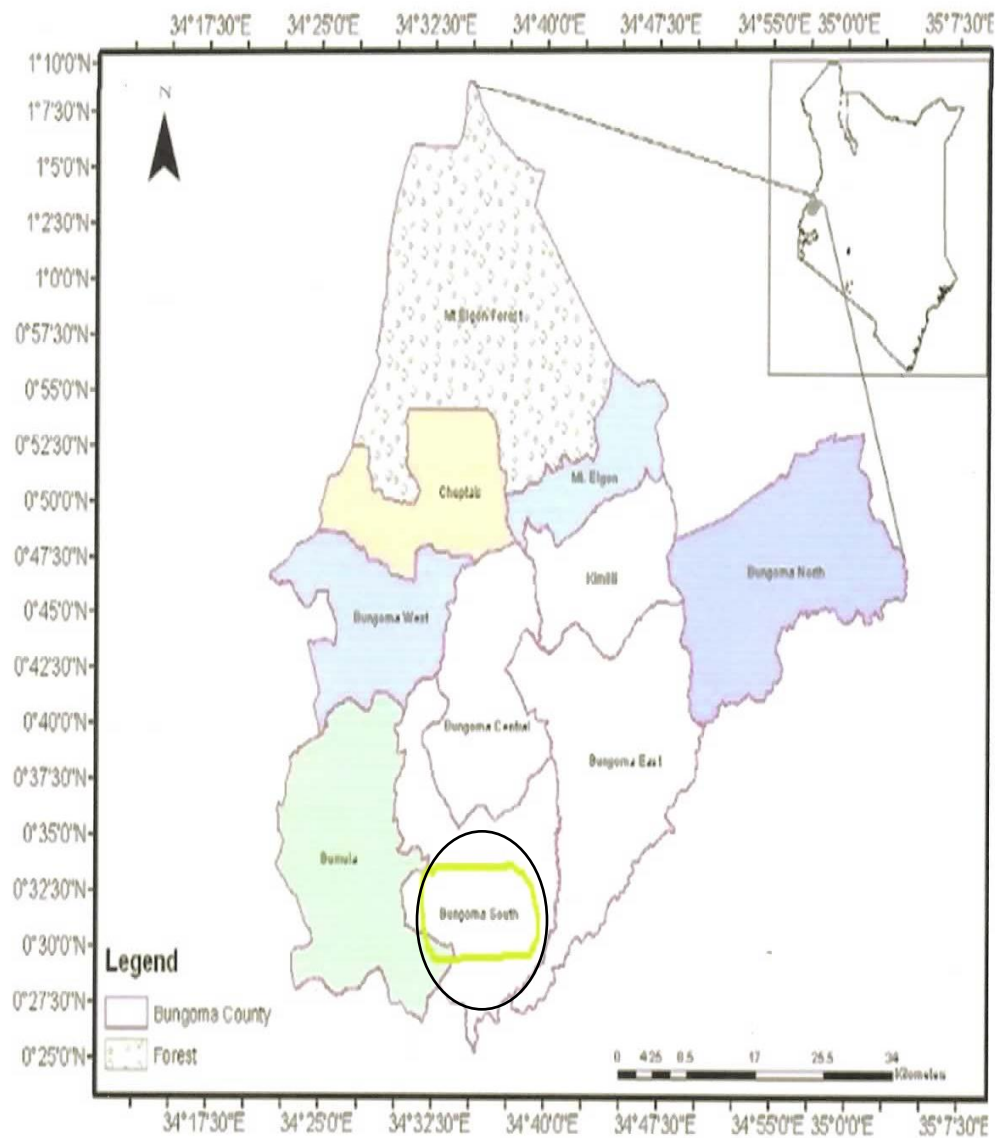
Omega Kennedy Amadi¹, Julius K. Maiyo² and Jotham Wasike³

1.1 Abstract

The Kenyan government spends part of Capitation Grant (CG): 54% of the tuition amount money for purchase of textbooks in public secondary schools in order to attain ratio of 1 textbook per student; Textbook Student Ratio of 1:1. From 2009 up to 2017 public secondary schools had faced challenges in implementing the above policy. The purpose of this study was to examine Capitation Grant and Textbook Student Ratio in Public Secondary Schools in Bungoma South Sub County. The objective of the study was to ascertain the relationship between Capitation Grant and textbook student ratio in public secondary schools in Bungoma South Sub County. The study used descriptive survey design to carry out the study and adopted both qualitative and quantitative approaches. The study targeted population was 29 public secondary schools comprising of 521 respondents. The sample size was obtained using Yamane 1967 formula. The sample size was 352 respondents comprising of 1 Sub County Director of Education (SCDE), 27 Principals, 109 HODs, 20 Accounts Clerks', 26 Librarians, and 169 Students (Class Secretaries). Simple random sampling was employed to recruit participants for the study where there was more than one participant. Purposive sampling was used to pick one SCDE from 11 SCDE from Bungoma County. The study used questionnaires, document analysis and oral interview to collect data. Reliability of the instrument was ensured by conducting a pilot study in 4 public secondary schools of each category which did not form part of the study. The study used test retest reliably acceptable level of $r = 0.6$. Validity of the instruments was ensured by pilot study. The quantitative data collected was processed and analysed using both descriptive; mean standard deviations, inferential statistics and Pearson moment correlation coefficient. The findings of the study indicate that there was a significant strong negative relationship between capitation grant and textbook student ratio ($r = -0.760$, $p\text{-value} = 0.000 < 0.05$). The study concludes that an increase in Capitation Grant meant for purchase of textbooks brought about by increased enrolment in most public schools lead to decrease in textbook student ratio over the years, however it did not hit the government intended ratio of one textbook per student (1:1). The study therefore recommends that, the MOE and school managers should ensure proper utilization of Capitation Grant towards purchase of textbook by enhancing monitoring systems for prudent management of the funds to avoid future high textbook student ratio.

Key Words: Capitation Grant, Textbook Student Ratio, Public Secondary Schools, Bungoma and Kenya

APPENDIX XI: MAP FOR BUNGOMA SOUTH SUB-COUNTY, BUNGOMA COUNTY



Source: Ministry of Lands and Physical Planning Bungoma County 2019

APPENDIX XII: LETTER OF INTRODUCTION

Dear Sir/Madam,

RE: REQUEST FOR COLLECTION OF DATA

I Omega Kennedy Amadi Reg. EPM/MPS/010/13, being a post graduate student of Kibabii University, hereby conducting a research study titled: Capitation Grant and Textbook Ratio in Public Secondary Schools in Bungoma County Kenya.

Kindly assist by filling in attached questionnaires. Information provided will be treated with strict confidentiality and purely meant for academic use. Do not include your name or unnecessary materials in the questionnaire.

A copy of the final report shall be presented upon your request.

Thanks for your corporation I advance.

Yours faithfully,

Amadi Kennedy Omega

Reg. EPM/MPS/010/13