COMMUNITY FINANCING OF PUBLIC SECONDARY SCHOOLS AND ITS EFFECT ON ACADEMIC ACHIEVEMENT IN KISUMU COUNTY, KENYA

BY

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SCHOOL OF EDUCATION

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DECLARATION

Declaration by the Candidate.

This thesis is my original work and has not been presented to any other university for a degree.

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DEDICATION

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ABSTRACT

The constitution of Kenya 2010 provided for free and compulsory basic education as a human right to every Kenyan Child. Studies have shown evidence that increasing the provision of institutional materials is the most cost effective way of raising the quality of education. Free Secondary Education (FSE) policy was introduced in Kenya in 2008 with an aim of making secondary education affordable. The constraints on national budget; many governments have turned to parents, private sector, communities and well-wishers for new revenue sources. The purpose of this study was to analyze community financing of public secondary schools and its effects on academic achievement in Kisumu County, Kenya. The study was based in Kenya however Kisumu county was chosen for its below average KCSE mean score 4.08 low student: teacher ratio of 1:59, low poverty index 34% and 60% of its population live in impoverished communities in 2015. The study had five objectives. namely: to: examine: community financing of public secondary schools infrastructure and its effect on academic achievement ,to determine community financing of teaching and learning resources of public secondary schools and its effect on academic achievement., to determine community financing of public secondary schools transport and travel and its effect on academic achievement.to examine Community financing of human resources of public secondary schools and its effect on academic achievement and finally to determine community financing of public secondary schools lunch program and its effect on academic achievement in Kisumu County, Kenya. The study was done on the assumption that all public secondary schools in Kisumu county administer similar curriculum and funding controlled by the government. The conceptual framework shows the interrelationship between dependable variable and the independent variable's. It was guided by production function theory adopted from Psacharopolos (1981). A descriptive survey and co-relation research design were used in the study. The study population comprised of all the 214 public secondary schools in Kisumu County, 214 principals, 214 BOM chairpersons, 48 CBO chairpersons and the CDE. Stratified random sampling procedure was used to sample 64 schools from which 64 principals and 64 BOM chairpersons were selected. Simple random sampling was used to sample 16 CBO chairpersons. Data was collected through questionnaires for principals BOM chairperson, CBO chairperson, CDE and interview schedule for CDE. The data from questionnaires were analyzed using Statistical Package for Social Sciences (SPSS) computer programme, for descriptive survey and inferential statistics. The level of testing hypothesis was set at 0.05 level of statistical significance confidence. The major findings of the study indicated that funding in public secondary schools were inadequate. The communities; alumni, parents, CBOs and well-wishers do fund the schools. Pearson correlation (r) coefficient of community financing on academic achievement were; infrastructure .901, teaching and learning resources .792, transport and travel resources .878, human resources .879 and lunch program .907. The regression statistical model determined coefficients *a* on effect of independent variables on the dependent variable. The overall conclusion emanating from the findings in the null hypothesis is that: there is a relationship between community financing and academic achievement in public secondary schools in Kisumu County. The study recommends a well-coordinated programme to mobilize resources from the communities, such as transport and travel as provided by the communities to be enhanced, sensitization on the benefits of community financing for academic achievement and study findings be used for practice and policy formulation. Finally, further research studies to be carried out in more counties with varying socio-economic status to determine the strategy of community financing in order to enhance academic achievement.

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LIST OF ABBREVIATIONS AND ACRONYMS

BOM	Board of Management
CBE	Curriculum Based Establishment.
CBO	Community Based Organization
CDE	County Director of Education
CDF	Constituency Development Fund
CQASO	County Quality Assurance and Standards Officer
EFA	Education for All
GER	General Enrolment Ratios
FDSE	Free Day Secondary Education
IGA's	Income Generating Activities
KCPE	Kenya Certificate of Primary Education
KCSE	Kenya Certificate of Secondary Education
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNEC	Kenya National Examination Council
MOEST	Ministry of Education Science and Technology
NGO	Non-Governmental Organization
PQPSS:	Principal Questionnaire for Public Secondary Schools
PA	Parents Association
QASO	Quality Assurance and Standards Officer.
SCDF	Sub-County Director of Education
SDG's	Sustainable Development Goals.
SQ	Students Questionnaire
TSC	Teachers Service Commission

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Education is a crucial aspect of a person's life, according to Al-Shuaibi, A. (2014). Education provides knowledge, skills and inculcates values; in the training of instincts, fostering right attitude and habit. Education is a crucial aspect of a person's life. (Ayot & Briggs1992). It holds the key to both future success and a wealth of opportunities. The cost of secondary education has been steadily increasing, outpacing inflation in many countries. This includes tuition fees, but also indirect costs like books, uniforms, and transportation, this rise makes secondary education increasingly inaccessible for low-income families, hindering social mobility and perpetuating economic inequality. Even in countries with subsidized public education, rising costs can strain government budgets, potentially leading to decreased quality or limited access.

According to Psacharopoulos and Woodhall (1985) the major challenges to access in public secondary schools include; high cost, high levels of poverty, extra levies for parents, tuition and unfriendly environment especially for children from poor households including those with special needs. The responsibility of training a child always lies in the hands of parents (Olendo C, 2016).

Many governments believe that spreading the burden of educational spending will help to relieve the crisis. As a result, in recent years, there has been a renewed interest in self-help and community assistance programs. Some suggest that such initiatives can improve the impact of education in addition to giving resources. It is argued that people who directly pay for education and other services, even if only in little amounts, value those services more than when they are provided anonymously and supposedly without cost. Self-help projects can also encourage positive kinds of social solidarity. In the USA, parents of students attending Horace Mann School in Northwest Washington, D.C., contributed more than $470,000 of their own funds to

support the educational activities of the secondary school, according to the District of Colombia Schools, (2017). Horace Mann paid almost an additional $1,600 on per student in addition to public funds during the 2013–14 school year, with little under 290 learners enrolled. These funds, which represent 9% of the District of Columbia's average per-pupil spending, were used to hire new music and art instructors as well as classroom assistants to facilitate small-group instruction. The parent-teacher organization, or PTA, raised an additional $100,000 in parent gifts and more than $200,000 in membership dues during that school year. These funds were utilized for projects of a similar nature in the years that followed. With only 6% of pupils from low-income homes, Horace Mann is unexpectedly one of the wealthiest schools in the city (Washington D.C, 2017).

Horace Mann is not exceptional. Parents in Washington, D.C., and around the country are contributing hundreds of thousands and millions of dollars to offer more programs, services, and personnel to some of their districts' least needed schools. They are committing more money than ever before. According to a recent studies, PTA revenues have nearly quadrupled nationally since the mid-1990s, reaching over $425 million in 2010. PTAs contribute a tiny but rising portion of the financing for the nation's public school system. While the millions of dollars contributed by parents represent less than one percent of total school spending, the concentration of these resources in wealthy schools results in enormous benefits for a small number of already advantaged students (U.S. Census, 2013).

Hassan and Rasiah (2011) found in a Malaysian study that parents who are more affluent—as indicated by higher income and educational attainment—tend to invest more in their kids' education. Furthermore, as sufficient funding for education is likely to produce students with higher academic outcomes, it is crucial, especially for remedial classes (which require additional tuition) and books. Since they cannot afford to pay for additional tuition, most

illiterate parents in low-income homes fail to recognize their children's demands for homework and study time, which lowers their children's academic progress.

The financing of education in many African countries presents a complex and multifaceted challenge. Inadequate attention and investment in education financing hinder the realization of its full potential across the continent. Despite efforts such as the implementation of no-fee policies and reliance on external aid, disparities in education financing persist, exacerbating inequalities and impeding sustainable development goals. The study by Ukpong, Nseabasi, and Uneh (2019) underscores the crucial role of education in enhancing productivity and the need for increased government investment in the sector in Nigeria. Despite the recognized importance of education, the study found that the federal government's budgetary allocations to education received insufficient attention. Comparing these allocations to UNESCO's recommendation of allocating 26% of the total budget to education in developing countries like Nigeria reveals a significant shortfall. The study emphasizes the necessity for consistent increases in budgetary allocations to education, highlighting its pivotal role in national economic growth.

Education financing in Sub-Saharan Africa (SSA), including South Africa, faces significant challenges despite its crucial role in improving lives, reducing inequality, and fostering economic growth (Husson et al., 2018). While there are variations among SSA countries, the region as a whole lag behind in public financing for primary and secondary education, with a predominant focus on recurrent expenditure rather than capital investment. This poses a barrier to achieving sustainable development in education systems. Governments remain the primary source of education funding in South Africa and SSA at large (Husson et al., 2018). The implementation of no-fee policies, aimed at alleviating the financial burden on the poor, has been lauded (Branson & Lam, 2017). However, caution is warranted, as these policies may

inadvertently create dependency and have ambiguous effects on educational attainment and completion.

The studies by Elibariki (2014) and Gongera & Okoth (2013) discuss challenges in financing education in Tanzania and Uganda respectively. Elibariki (2014) found that schools in Tanzania have multiple ways to get teaching materials, but these methods are unreliable. Government grants often arrive late and incomplete. Parents, communities, and donors can provide materials, but this isn't always enough. Gongera & Okoth (2013) focus on Uganda's secondary education. Uganda is making strides towards universal primary education, but secondary education costs more. The government can't afford to pay for everything, so they're looking at options like charging tuition fees or allowing more private schools. Funding for Ugandan secondary education comes from the government, households, local communities, and international donors.

Community provision often starts at a time when government resources are not available. Most communities prefer government with their greater resources to provide all the facilities, instructional materials and teachers for their schools but when the funds are short communities may decide to bridge the gap so that their children do not suffer (Bray, 2013)

Every Kenyan has the constitutional right to education and training under Articles 43(1)(1), 53(1)(b), 54, and 55(a) of the 2010 Kenyan Constitution. The Government is also required by the Constitution to guarantee comprehensive, equitable, high-quality education and to encourage possibilities for lifelong learning for all. The Kenyan government formally began the Free Secondary Education Policy in early 2008 in response to many Kenyan pupils who had completed primary school but were unable to attend secondary school due to school fees. The new strategy was based on the notion that all academically prepared pupils should have access to secondary school (Ohba, 2009). The implementation of free tuition secondary school education, increased enrolment hence the need for more resources in secondary schools

(Getange, 2013). This necessitated other forms of funding such as community financing to supplement. The Kenya government has provided tuition funding, infrastructure; other provisions such as boarding fee, transport, lunch, human resources has been left for the parents, community, well-wishers and private sector to provide (Republic of Kenya 2008, 2020).

A study done by Nyakoe (2020) on influence of government funding on Academic achievement of public schools in Nyamaiya division, Nyamira county, Kenya found that 38.7% of students reported benefiting from government tuition and bursaries. Conversely, 55.4% indicated they had not received such benefits. A significant 76.7% of students claimed their academic performance improved due to government subsidies for secondary education. Principals noted that government funding has facilitated access to education for students from economically disadvantaged backgrounds, significantly improving enrollment rates in day schools. Despite positive outcomes, principals highlighted challenges such as insufficient funding, irregular disbursement, and issues with the management of funds by Boards of Management (BOMs). The findings indicated a positive correlation between government funding and academic achievement in secondary schools, underscoring the need for sustained financial support and better management practices to maximize educational outcomes. This research highlights a significant gap in understanding the role of community financing in relation to these findings, suggesting further exploration into how local financial contributions can complement government efforts to improve academic achievement in secondary education.

Studies in Kenya have shown that government funding delays and are insufficient to sustain secondary schools towards achieving quality (Munuhe, 2014; Khaemba, 2014; Muthoka, 2023). Getange's (2005) study in Kisii County on alternative sources of funding for secondary education revealed a correlation coefficient of 0.447 at the 0.05 level of significance regarding the quality of secondary school education. Given the constraints on national budgets and the necessity to prioritize investment decisions in education, many governments have turned to

communities for new revenue sources. Kenya has a long and rich history of community involvement in education finance at all levels, stemming from the dynamic self-help organization Harambee, which supports most of Kenya's grassroots development activity. In education, the unassisted Harambee secondary school sector has shown the most diligent commitment between communities and government. However, a more recent policy move has resulted in the transfer of all capital expenditures related with structural and curriculum reform, particularly to the primary level. Despite providing education to a large proportion of the school-age population, fundamental problems remain about the quality and equality of community-funded institutions (Mukalai, 2022).

In the studies there increasing evidence that increasing the provision of institutional materials in the most cost effective way of raising academic achievement. In Kisumu County, in 2017, the County had a below average KCSE mean score of 4.025 (D+) compared to the average mean of 6 (C), the county had low teacher: student ratio 1:59 compared to the required 1:45 and absolute poverty index of 41% compared to the national poverty index of 34% contributing 1.7% to the national poverty index in 2016/17.Kisumu county had the second highest HIV prevalence in the country at 17.4% with an incidence of 6.9 cases per 1000 person-years[17](Republic of Kenya, 2018).These had an influence on community financing on secondary education that related to school inputs.

When pursuing higher returns on educational investment, the total amount of financial resources is not the only determining criterion. More crucial is whether the expenditure is yielding the expected returns. Given that Kenya’s educational expenditure is increasing yearly, determination of the effects of public support to secondary education will establish the extent and effectiveness of community financing. The study is therefore salient as it can provide the basis for restructuring public support within secondary level of education so as to enhance efficiency and effectiveness in allocation of resources in education sector. The aspect of returns

to investment in education can be assessed by determining the effects of community financing on academic achievement; which is the focus of this study.

Table 1.1 shows the trend in academic performance in KCSE 2015-2019 Nationally and neighboring counties. This is an illustration of academic achievement over a five-year period.

Table 1.1: ***Trend in Academic Performance (KCSE) Nationally and Neighbouring Counties2015-2019***

County	2015	2016	2017	2018	2019	Average
Vihiga	5,218	3.652	3.474	4.242	4.532	4.219
Nandi	5.981	4.120	4.311	4.542	4.914	4.774
Homabay	5.191	3.753	3.701	3.981	4.311	4.187
Nyamira	5.669	3.95	3.420	4.045	4.134	4.243
Siaya	6.849	4.030	4.750	4.840	5.012	5.094
Kisumu	5.546	4.340	4.025	4.147	4.49	4.510
Kericho	4.830	3.630	3.408	3.711	3.982	4.114
National	**4.805**	**3.980**	**3.743**	**3.892**	**4.634**	**4.209**

Source: Ministry of Education(M0E) – Nairobi 2020.

The trend in KCSE mean scores in the neighbouring counties between 2015 – 2019; comparatively high KCSE mean scores in Kisumu County may be attributed to additional resources from community financing in public secondary schools.

Table 1.2 Presents the mean scores for the Kenya Certificate of Secondary Education (KCSE) examinations over a five-year period from 2015 to 2019.

Table 1.2*: Trend in Academic performance in KCSE 2015 – 2019 -Kisumu County*

Year	Grade in KCSE and the mean Score Score												Mean
	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	
2015	180	456	805	1352	1723	1854	1854	1895	1696	1273	486	21	6.352
2016	0	119	311	504	701	1107	1478	2044	2588	3359	3029	343	4.378
2017	2	91	231	392	649	904	1256	1853	2640	3827	3843	575	4.025
2018	13	138	269	429	712	972	1425	2217	3030	4256	3829	381	4.147
2019	25	372	372	713	1100	1329	1922	2481	`3154	3986	3618	378	4.494

***Source: Regional Director of Education – Nyanza (*2022)**

From table 1.2, KCSE performance 2015 to 2019, shows there is a noticeable fluctuation in the mean scores. In 2015, the mean score was highest at 6.352, followed by a decrease to 4.378 in 2016. The mean score further decreased to 4.025 in 2017, followed by a slight increase to 4.147 in 2018. However, in 2019, the mean score notably increased to 4.494.

1.2 Statement of the Problem

In the developed world, community participation in educational development remains a vital instrument for transferring resources from the society to the institution of training. The transfer of resources from the community to the beneficiary schools has traditionally been through disintegrated approach as each interested group would initiate community development strategies influencing academic achievement in secondary schools. In Kisumu County however these strategies have not achieved the desired results; a possible reason for these failures is attributed to the lack of community participation and empowerment.

From the proceeding analogy, it is important to determine the effectiveness of community financial support to the secondary sector of education. Such information provides the basics and the starting point for restructuring of community financial support to this sector. This study examined community financing of public secondary schools andits effect on academic achievement in Kisumu County, Kenya.

1.3 Purpose of the Study

The purpose of this study was to determine the effect of community financing of public secondary schools and its effects on academic achievement in Kisumu County, Kenya.

1.4 Objectives of the Study

The following are the objectives of this study:

i. To examine Community financing of school infrastructure and its effects on academic achievement in Kisumu County.

ii. To determine the effect of Community financing of teaching and learning resources on academic achievement in Kisumu County.

iii. To determine the effect of Community financing of school transport and travel on academic achievement in Kisumu County.

iv. To examine financing of school human resources and its effects on academic achievement in Kisumu County.

v. To establish the effect of Community financing of lunch program on academic achievement in Kisumu County.

1.5 Research Hypotheses

Specifically, the following null hypotheses were addressed;

H_O1 There is no statistically significant relationship between community financing of school infrastructure and academic achievement in Kisumu County.

H_O2 There is no statistically significant relationship between community financing of teaching and learning resources and academic achievement in Kisumu County.

H_O3 There is no statistically significant relationship between community financing of transport and travel and academic achievement in Kisumu County.

H_O4 There is no statistically significant relationship between community financing of human resources and academic achievement in Kisumu County.

H_O5 There is no statistically significant relationship between community financing of lunch programme and academic achievement in Kisumu County.

1.6 Assumptions of the Study

The following assumptions were made;

i. Community participates in financing secondary school education in Kenya.

ii. Community participates in the management and decision making in secondary school education.

iii. School heads, community Sub-County Director of Education, Board of Management and community members will cooperate and provide reliable response.

iv. All public secondary schools in Kisumu County offer a similar curriculum.

1.7 Significance of the Study

The significance of this study lies in the fact that currently the effectiveness of public financial support for secondary education is an issue of concern given the challenges of increased enrolments, inadequate resources, quality of teaching and learning and inadequate policy framework in the management of community financing of secondary school education.

The study is therefore significant as it aims to:

i. Provide information that would assist educational planners and economists to create a balance between cost- sharing and equity towards access to secondary school education.

ii. Contribute to the baseline data on community financing of secondary school education in Kisumu County.

iii. The finding of this study will assist education policy makers in making informed decisions on the improvement of community financing of secondary school education.

1.8 Scope of the Study

The study focused on community financing on public secondary schools and its effects on achievement in Kisumu County. It is anticipated that reliable data were generated from both the schools and the local communities regarding community financing of secondary education.

1.9 Limitations of the Study

The major limitations were:

i. The study was done in one county due to limited time and financial resources available. The results of the study may be generalized for the other counties.

ii. The study is limited to the statistical methods and variables included in the study.

iii. Due to sensitivity of financial resources, some principals were reluctant to give financial information. This made the researcher to assure the respondents that the results will only be used for the purpose of the study.

1.10 Theoretical Framework

The Education Production Function (EPF) is an economic theory that describe the relationship between inputs (primarily by families, students, schools and community), and outputs in education system (academic scores, employment, character and attitude change) in education system. It is the effect of school resources and student outcomes. A variation of the school's input is most likely to have an effect on the output, (Psachoroupolos 1985).

The concept of the education production function theory applies the principles of production theory to the field of education, aiming to understand the factors that influence educational outcomes and the efficiency of educational systems (Hanushek, 2007). Leigh and Simmons (1975), examined how inputs such as resources, teaching methods, and school policies interact to produce educational outputs, typically measured in terms of student achievement, attainment, and other indicators of learning. Inputs in education production function theory encompass various factors contributing to the educational process, including physical resources

(such as school facilities, textbooks, and technology), human resources (such as teachers' qualifications and experience), financial resources (school funding and expenditure), student characteristics (such as socioeconomic status and prior academic achievement), and institutional factors (such as class size, curriculum, and teaching methods). Outputs represent the educational outcomes or achievements produced by the educational system, such as measures of student learning outcomes (such as standardized test scores, grades, and graduation rates), cognitive skills development, non-cognitive skills (such as social and emotional

competencies), and long-term outcomes (such as employment opportunities and earnings potential).Hanushek states that The education production function theory can inform decisions about resource allocation across schools and districts, helping to prioritize resources towards those with the highest return on investment. It also assists in comparing the cost-effectiveness of different educational programs or interventions, enabling policymakers to identify the most efficient strategies for improving educational outcomes. Furthermore, the theory might identify possible inequalities in the educational system, motivating initiatives to remedy resource disparities. This theory is especially useful for descriptive studies of human capital building and normative research into optimum educational resource allocation. Understanding the link between school inputs and a measure of school output, such as achievement scores, allows policymakers to make educated decisions regarding resource allocation and educational policies, resulting in more efficient resource allocation and improved student outcomes. Psachoropoulos (1985) illustration of a simple production function model for the inputs in education as;

$A=f(I, T_l, T, H\ L \ldots)$ Where

A = KCSE Achievement

I = Infrastructure

T_l = Teaching and learning resources

T = Transport and Travel

H = Human resources

L = Lunch and so on.

Theory conceives the schools as enterprise in which raw materials (students) and other inputs (Teaching and learning resources, lunch programme, infrastructure and human resources) are combined to produce certain outputs. It is a measure of the inputs to a school and students characteristics measure of the school output. Education at whatever level is costly and

investment in value claims a substantial share of national resources in most countries. Besides the direct costs, there are private and social costs that are incurred whenever investments are made in education to assess the efficiency of an education system, one must have knowledge of the effectiveness and quality of the variables that are used in the education process.

1.11 Conceptual Framework

This overall community definition embraces, among others, geographic community, ethnic racial and religious groups, sex and age, common occupations and experiences, shared family concern or shared philosophy. It will be obvious from these examples that an individual may simultaneously belong to a number of communities or perhaps communities within communities; whereas in many communities both membership and activities are voluntary while in others they are compulsory.

Community financing entails provision of infrastructures such as Classrooms, toilets, teaching, and learning materials and paying teacher's salaries. This is to be manipulated to bring about change in the dependent variable that is academic achievement of secondary schools in Kisumu County, but other extraneous variables may influence the outcome of the independent variables. It is conceptualized that community financing has improved infrastructural development, teaching and learning materials, transport, human resources and lunch program.

The study employed production function that postulates that the outcomes are a function of inputs to the education process. The independent variables measured in monetary value included; school infrastructure, teaching and learning resources, transport and local travel, human resources and lunch program. In this study KCSE mean scores were used as measure of the academic achievement as reflected in the dependent variable on the conceptual framework. The intervening variables; school culture, government policy, teachers service commission will be used to explain the causal links between the two variables in figure 1.1:

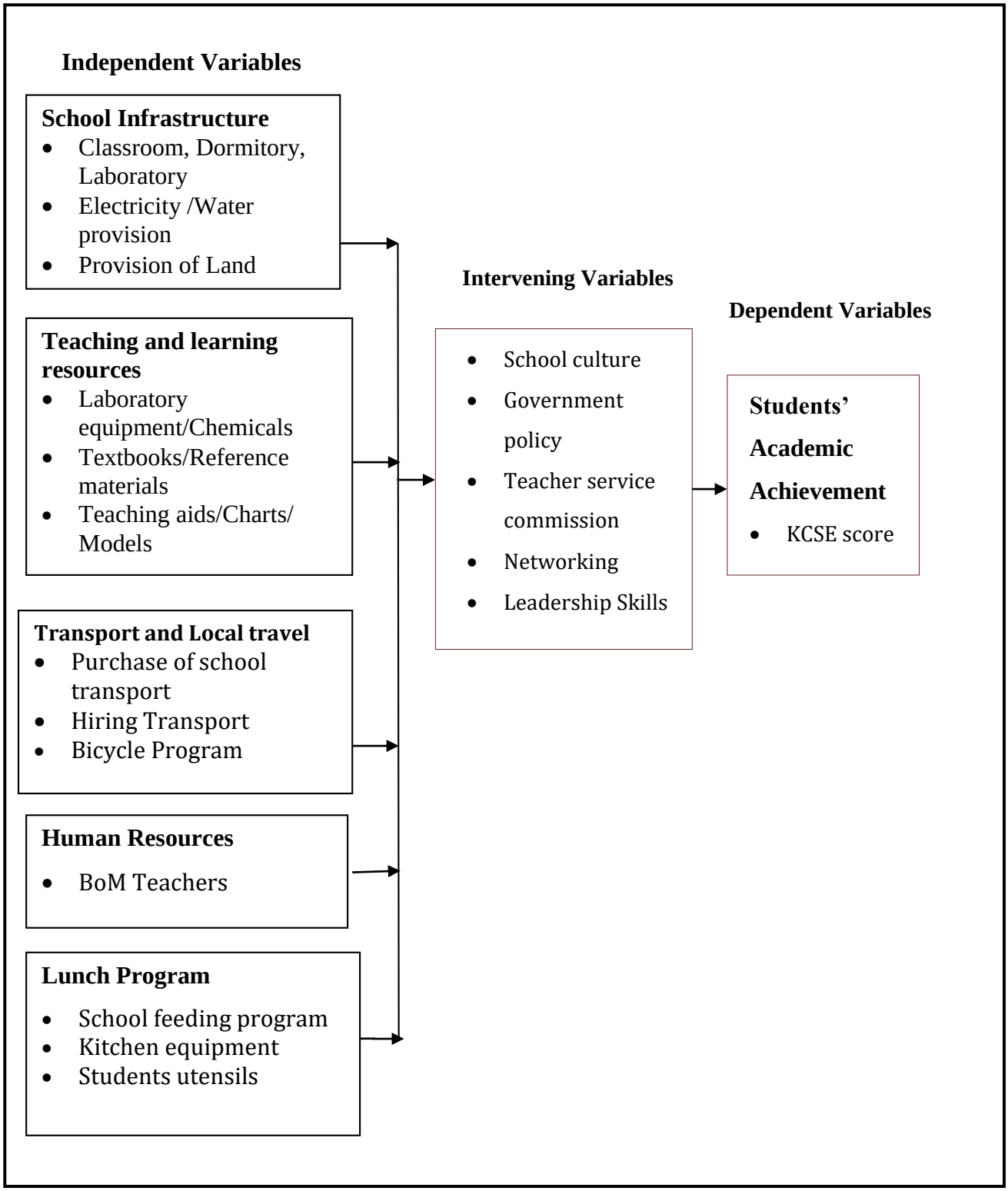

Figure 1.1: *Conceptual Framework showing the relationship between community financing and academic achievement.*

Source: Adopted from Psachoropoulos and Woodhall (1985) Model.

The study vests on the assumption that educational sector is as productive process where inputs such as infrastructure, training and learning resources; human resources contribute to output, in this context academic achievement at KCSE. Even though the production function is derived from the statistical relationship there is need to understand the results of estimating a production function since an increment in the input community resources contribute to the output; education resources, (Psacharopoulos and Woodhall 1985).

External pressures can also have an impact on the way schools operate. A society's wealth and attitude toward education have an impact on the quality of educational resources and their administration inside schools (Getange, 2013). The study conceptualized the financing of educational inputs as a partnership between the government, parents and the community. The outcome of the community financing is joint responsibility between stakeholders,

Figure 1.1 shows the conceptual framework on which this study was based. It identifies the various forms of community financing; infrastructure, teaching and learning resources, transport and local travel, human resources and lunch program and the output being students' academic achievement (K.C.S.E .Mean score). The intervening variables that have an effect on the output include school culture, government policy, teacher service commission, networking and leadership skills.

1.12 Key Operational Terms

As used in the study the following terms were adopted to mean as follows:

Academic Achievement: Means scores attained at Kenya Certificate of Secondary School Education (K.C.S.E.)

Community: An entity that is socially bonded by a shared cultural identity, lives within specified physical borders, and shares a common interest in the area's resources.

Community financing: refers to when a community (individuals, non-profit organizations and social enterprises) raises funds to support local Schools or educational initiatives. This can involve boarding fees, fundraising events, or even in-kind contributions like materials or labor.

Educational financing: The mechanism used by the government and organizations to raise money for formal education's capital and operating costs through taxation, tuition, and charitable donations

Equity: An equal opportunity to participate in education.

Human resource: Skilled, semi-skilled and unskilled personnel in the school

Infrastructure: Land. buildings and other learning facilities.

Lunch programme: Provision of students meals.

Public Schools: Schools that are managed, maintained and funded by the government.

Quality of Education: Desired knowledge and skills acquired at secondary school education level measured in KCSE means Grades

Quality Grades: Refers to Grade C Plus and above.

School finance: Any form of income to a learning institution.

Secondary education: Learning provided in school after primary education certificate and comprises form one to four.

Stakeholders: Incorporate those who are affected by the success or failure of an educational system both directly (parents, teachers, and students) and indirectly (government, local business leaders, etc.)

Transport and travel: All forms of students movement in and out of school

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents theoretical and empirical literature with specific focus on community financing of education, role of resources in learning and academic achievement. The gap in literature is examined in relation to the present study.

2.2 Community Financing on Infrastructure of Public Secondary Schools and its Effect on Academic Achievement in Kisumu County

School infrastructure includes school buildings, playgrounds, public amenities, libraries, labs, and other facilities that provide a healthy learning environment (Tanzania Institute of Education, 2013). School infrastructure is critical to the teaching and learning process. According to Yusuph (2019), school infrastructure allows students to study comfortably, improves academic achievement, and increases student and teacher participation in the teaching and learning processes. According to Jumna, S.(2011), examination performance is linked to the level of teaching and learning in schools. She observes that pupils from low-income families score badly in exams because they tend to reside in locations where schools are severely underfunded. An attitude of helplessness may be instilled in children at a young age, leading them to believe that attending school is a waste of their time.

Owoeye and Yara (2018) similarly related student performance to the availability of suitable physical facilities, citing a survey of 51 primary schools in Botswana utilizing judgmental and purposive procedures, as well as questionnaire and interview data gathering methods used in the study. The study discovered that pupils fared much better on academic assessments when they had proper classrooms, desks, and seats. The study also discovered that school buildings are an important input to the educational system, underlining that while they do not educate, their usage may encourage or impede learning.

According to Yangambi's (2023) study, the findings derived from teachers' responses to specific assertions related to teaching, learning, and student achievement, as well as those concerning school infrastructure, indicated a consensus with very high approvals. The study emphasized the crucial role of the school environment and infrastructure in achieving educators' ultimate goals: enhanced performance, student success in school, and overall success in everyday life. The statistically significant observations highlighted that school infrastructure is not merely a factor but a necessary condition that should be carefully considered when establishing educational facilities for students. The study suggested that attributing students' underperformance solely to teachers and principals without recognizing the pivotal role of school infrastructure may be misguided. According to Mugabe's (2017) study on Learning Resources and Academic Performance of Learners in Selected Secondary Schools in Mbarara Municipality, Mbarara District, Uganda, the majority of respondents believe that learning resources have an impact on children's performance, such as supporting students with learning difficulties, developing independence in students, assisting children in mastering skills, and improving learner proficiency.

Bakwai, B., Oduwaiye, R. O., & Muhammad, U. (2016) conducted a study that focused on community participation in funding infrastructural projects in basic schools within the North-west Zone in Nigeria. The results indicated a widespread belief among respondents that community contribution was high or very high, reflecting the growing recognition of community involvement in national and international policies. The funded projects encompassed various initiatives, with water source development, repair of students' seats, and doors/windows being the most common. Project financing amounts varied, with nearly half of the respondents reporting contributions of less than N200,000. The overall estimated cost of these community-funded projects reached N342,229,200, averaging N154,714 per school. The findings underscored the longstanding tradition of local communities initiating educational

infrastructure projects to address critical issues such as inadequate schools and overcrowding, emphasizing the significant role communities played in shaping and improving educational facilities.

Oparaji, I. C., Itoya, J., Asiegbu, E. C., Ogbo, R. N., &Igbokwe, I. C. (2021) conducted a study revealing significant correlations between school-community financing and various dimensions of school infrastructure development. The involvement of school host communities in funding school operations, facilitated through entities like Parent-Teacher-Associations, resulted in the construction of classroom structures in public secondary schools. This addressed the need for spacious classrooms, positively impacting the teaching and learning process due to the growing student population. Moreover, there was a notable relationship between school-community financing and the provision of hostels within schools, mitigating the insufficient hostel space and enabling students to reside on the school premises, thereby fostering a conducive learning environment. The research also highlighted a connection between school-community financing and the development of office accommodations for teachers, addressing the deficit in office spaces for the teaching staff. Lastly, the study indicated a significant relationship between school-community financing and the provision of sports facilities, underscoring the importance of sports in education. Financial support from various groups, including alumni associations and development partners, played a crucial role in enhancing sports facilities in schools.

In the past, parents' engagement in education was defined by volunteers, primarily women, who helped in the classroom by chaperoning kids and raising funds. Today, the old paradigm has been replaced with a far more inclusive approach: school-family-community collaboration. These individuals engage in goal-oriented activities related to student progress and academic success. Kenyan secondary schools' infrastructure development is funded by a variety of entities, including the government, Members of Parliament (MPs), and non-governmental

organizations. For instance, the government allocated Ksh 8.2 billion to expand infrastructure in secondary schools to facilitate the 100% transition policy. MPs and the state have also partnered to raise Ksh 6.76 billion for infrastructure development, including laboratories, classrooms, and workshops for technical subjects. Additionally, NGOs such as the Big Girls Foundation support schools with high needs for basic infrastructure and realize their projects on-site with local partners (Standard Media, 2020).

According to cost-sharing policy in Kenya, communities and parents have the obligation for establishing physical structures and acquiring instructional materials. According to Republic of Kenya (1988), most parents were unable to cover these expenses, resulting in many pupils being unable to attend school on a regular basis. To lessen the financial strain on parents, the government implemented free day secondary funds in all public schools. Since the implementation of free day secondary education, the Kenyan government has funded a significant portion of the school budget, including tuition, repair and maintenance, local transportation, and travel. Parents are now responsible for other expenditures such as paying salaries to non-teaching personnel, instructors on BOM services, and school expenses that enhance learning. However, the importance of successful parental participation in their children's education, in addition to funding school expenditures, has largely gone unnoticed in Kenya (Ngaroga, 2006).

Akungu (2014) study revealed that, the Free Day Secondary Education (FDSE) program is a beneficial and worthwhile project since it has extended secondary education access for many kids who previously missed out on possibilities in boarding secondary schools. However, according to Akungu's research, there are issues with the software. In Akungu's study, teaching and learning materials (TLM) were available, but physical facilities were inadequate, undersized, and in bad shape. There was also a scarcity of leisure facilities and a severe shortage of human resources. An review of physical facilities revealed an overstretch, with instructors

reporting that these conditions had a detrimental impact on pupils' performance in the Kenya Certificate of Secondary Education (KCSE). While teaching and learning resources were generally competent, they were not widely disseminated, especially in obligatory topics. Given the annual growth in school enrollment, human resources became a major problem, resulting in poor curricular monitoring and execution. The survey also found that the government's finances for free secondary education were insufficient and frequently delayed. According to 66.7% of school head teacher responses, this circumstance pushed schools to purchase products on loan or postpone specific initiatives.

Lumuli (2009) established while carrying out research in internal efficiency measures in promotion of access and completion rates in public secondary schools in Bungoma District established that provision of adequate physical facilities at all levels including classrooms, laboratories, libraries, playing fields among others go a long way in creating conducive environment that promotes effective learning and teaching. The former study looked at access and completion rates in secondary schools in Bungoma district. The current study will find out the influence of physical facilities on the quality education in secondary schools level.

Gogo (2002) while carrying out research on impact of cost sharing on access, equity and quality of education in Rachuonyo district concluded that materials used in construction of schools building and type of buildings determines the level of cleanliness. He further stated that well equipped clean and orderly classrooms creates a favourable learning environment. While this study was relevant, it did not look at physical facilities in secondary schools which the current study does.

Wambua(2011) while carrying our research on impact of school infrastructure on access and provision of quality secondary education in the former Kisumu Municipality, concluded that access is pegged on a number of available space in secondary schools and that therefore is the

guiding principle during form one selection. Due to the limited number of schools, almost half of the pupils completing primary schools lacked opportunity to enroll in secondary schools. The study found that improved academic achievement was associated with more adequate classroom sizes, improved locker spaces, proper stocking of libraries, adequate science laboratories, adequate computer laboratories, adequacy of sanitation facilities, adequate water supply, adequate toilet facilities, improved participation in co-curricular activities and adequacy of co-curricular facilities. For instance, of the 11 schools in the study, 8 (72.73%) got the average mean scores of below 4 points, 2 (1 &.18%) had between 4 and 6 points while 1 (9.09%) school had over 6 points in KCSE. The one school that attained over 6 points had adequate classrooms, libraries, laboratories and water supply. On the other hand, among the 8 schools that had attained the low grades of below 4 points in KCSE, 6 (75%) had inadequate classrooms, 4 (50%) did not have libraries, 4 (50%) schools had adequate water in the school and 4 (50%) schools had inadequate co - curriculum activities. She concluded that the increased enrolment was not in tandem with available infrastructure and this may have negative impact on the quality of education. The current study looks at community financing of infrastructural materials and their effect on academic achievement. It also explores the quality of physical facilities in secondary school which the former study did not do. It further looks at their status.

The literature extensively discusses the importance of school infrastructure in facilitating effective teaching and learning processes, emphasizing factors such as physical facilities, materials, and overall conducive environments. However, a noticeable gap exists in the current literature concerning the specific role of community financing in school infrastructure development and its effect on academic achievement. While the studies touch upon government and non-governmental organizations' contributions, there is a lack of detailed exploration into the community's direct involvement and financial support in enhancing school infrastructure, a critical aspect that may significantly influence the quality of education. The literature

suggests that government funds and external support may be inadequate or delayed. Community financing can fill these resource gaps more promptly, ensuring that necessary infrastructure improvements are not hindered by bureaucratic or financial constraints.

2.3 Community Financing on Teaching and Learning Resources in Public Secondary Schools and its Effect on Academic Achievement in Kisumu County

Teaching and learning resources, according to Amadioha (2009), are several communication channels that teachers may utilize to help students understand what they are being taught more clearly. They are a diverse collection of resources that may be utilized to increase students' vicarious experiences throughout a teaching-learning process. According to Mayama (2012), the whole impact of a process or service's characteristics on either its performance or the client's or customer's perception of that performance constitutes quality education. It involves an emphasis on internal processes and outputs, such as the decrease of waste and increase of productivity, rather than only being a feature of a final good or service. The measurement of an individual's educational outcome can be done using either labor market variables (earnings, access to more training, better job quality) or educational variables (years of schooling completed, marks at each level, literacy/numeracy scores, probability of transitioning to further education). The sum of these factors determines a person's human capital, which is mostly based on the amount and caliber of information acquired.

Okongo, Ngao, Rop, and Wesonga (2015) study revealed that, availability of teaching and learning resources is important in enhancing curriculum delivery, meeting the needs of learners with special requirements, and improving pupil enrollment and retention. In public primary schools, a variety of instructional resources are employed to teach students. If used wisely, instructional resources may be created locally or imported and can increase the effectiveness of a class. The categories of instructional resources are categorized as follows by Okogbuo (2000): Images, schematic buildings, projectors, instructors, charts, actual items, books,

newspapers, magazines, booklets, handouts, clock faces, colored objects, puppets, models, and chalkboards are examples of visual resources. Audio materials include dramatization, radio, CDs, and tape-recording cassettes. Television, video recording, sound tracked movies, slides, movies, multimedia, computers, and DVDs are examples of audio-visual resources. Charts, image boards, number cards, tracing paper, matching cards, puzzles, picture books, reading boards, cartoon books, and stacking toys are examples of graphic resources. Along with other actual items like periodicals, flags, posters, plants, water, images, graphics, sand, money, and seeds.

A school and a student can benefit greatly from the adequate and efficient utilization of resources (Fisher, 1995). When working with students who struggle in math and science, teachers should not only aim for mediocrity but rather strive for excellence by making sure that sufficient and efficient teaching tools are used. According to Orodho, Waweru, Ndichu, and Nthinguri (2013), having enough instructional materials, such as textbooks, helps students grasp the material by allowing them to follow the teacher's presentation of the lesson. The teacher's primary obligation is to guarantee that his or her class has appropriate resources (Edgington, 1998). The availability and sufficiency of a diverse set of instructional tools can pique the interest and actively engage learners with learning difficulties in mathematics (Herward, 2009).

Although governments are the primary funders of education, particularly basic education, in many countries, communities also play an important role. According to Gross, J., Haines, S. J., Hill, C., Francis, G. L., Blue-Banning, M., and Turnbull, A. P. (2015), school-community partnerships play an important role in successful schools, often providing supports and resources to meet staff, family, and student needs that are not typically available through school. Community partners gain from their ties with schools, including learning about the inclusive culture.

Allegretto, S., García, E., & Weiss, E. (2022) found that education financing in the US mostly comes from state and local resources, with the federal government providing just a small portion of overall income. Most assessments of primary school financing metrics—equity, adequacy, effort, and sufficiency—raise major concerns about whether the current system is meeting the aim of delivering a solid education equally to all children at all times. Districts in high-poverty regions, which serve a higher proportion of pupils of color, get less money per student than districts in low-poverty areas, which educate primarily white students, exposing the system's unfairness. School districts are not investing enough to meet the national average test results, which is a set standard for determining adequacy, especially those in high-poverty regions.

A research conducted in Tanzania by Elibariki, N. (2014) found that while primary schools in Tanzania have a number of measures in place to increase the availability of teaching and learning materials, the majority of these methods lacked effectiveness and dependability. The tactics included household donations, material help from donors, development funds and capitation, as well as support from local government bodies (Councils). Usually, the capitation money was only partially received by the schools and was delayed. Numerous participants expressed a favorable opinion of the significance of the nearby community, parents, and private enterprises in providing educational institutions with resources for instruction. As a result, all parties involved acknowledge their part in providing material assistance to schools. The results showed that parents, the local community, and private businesses were all sufficiently active in providing material and financial support for schools.

According to Sika, S.(2019) Education in Kenya is funded through a combination of public and private sources. Public funding is derived from government budgets, generated through general taxation, and specific educational taxes like the Industrial Training levy. On the other hand, private sources involve support from non-governmental entities, including direct funding

like school fees, as well as indirect support through endowments, gifts from NGOs and donors, and foreign aid. Notably, Kenya's Free Primary Education program serves as an example, benefiting significantly from foreign aid, such as World Bank loans and credit, bilateral assistance, and support from international agencies. This dual financing approach addresses the costs associated with education, ensuring a balance between public and private contributions to support the country's educational system.

Muthoka (2023) notes that in Kenya, the Ministry of Education's delay in disbursing capitation funds to schools and universities has left these institutions struggling to maintain their day-to-day operations. He further notes that the concept of "free education" in Kenya is far from the reality. Hidden costs, delayed funding, and unpaid debts have strained the education system, leading to a compromised learning environment. The result is a crisis that threatens the future of students and the institutions that serve them.

Thuranira, Ikiara, and Thuba (2022) study in Laikipia West Sub-County found that respondents expressed dissatisfaction with the adequacy of resources. The majority disagreed with statements about the sufficiency of teacher guides, availability of test books, and the provision of teaching aids. There was also disagreement regarding classroom congestion and occasional shortages of chalk during lessons. Principals noted challenges in resource provision by the Ministry of Education, citing insufficient classrooms, textbooks, and teachers. Correlation analysis revealed a positive and significant relationship between teaching-learning resources and pupils' academic performance, leading to the rejection of the null hypothesis. The results underscored the importance of adequate resources for the success of free primary education, supporting the view that learning resources positively influence student performance.

Othoo, H. A., Olel, M. A., &Gogo, J. (2019) study assessed the adequacy of teaching and learning resources by analyzing the student-to-textbook ratio and gathering teachers' views. The positive and significant correlation (regression coefficient of 0.879) indicated that a higher

quantity of teaching and learning resources corresponded to better academic performance. Additionally, the utilization of these resources positively correlated with academic performance (regression coefficient of 1.807), suggesting that optimal utilization led to improved results. However, the study found that teaching and learning materials were over utilized, and some, such as field trips and computers, were completely unavailable in most schools. This inadequacy and mismanagement of resources contributed to lower academic performance in the schools examined.

Similarly, the study conducted by Kimeu, Tanui, and Ronoh (2016) indicated that instructional resources such as chalkboards, chalk, students' textbooks, teachers' textbooks, classrooms, and laboratory apparatus and chemicals significantly influenced students' academic performance in the Kenya Certificate of Secondary Education (KCSE). The study concluded that students' academic performance was dependent on the availability of teachers' reference books and guides, students' and teachers' textbooks, charts, chalkboards and chalk, classrooms, and laboratory apparatus and chemicals as essential teaching and learning materials. Moreover, the presence of physical facilities like staff rooms, classrooms, dormitories, chairs, and laboratories in schools was found to have an impact on students' academic performance. The study also highlighted the significance of ensuring students had necessary materials for learning and revision in influencing academic performance positively.

The literature reviewed highlights the critical role of teaching and learning resources in the educational process, emphasizing their significance in curriculum delivery, student engagement, and academic performance. The existing research underscores the challenges faced by educational institutions, including delayed funding, inadequacy of resources, and the impact on academic achievement. Community financing promotes sustainable education systems by reducing reliance solely on government funding. Diversifying funding sources makes schools less vulnerable to budget fluctuations and economic uncertainties. There is a

notable gap in the understanding of how community financing of teaching and learning resources has effect on academic achievement in secondary schools. This study intends to fill this gap.

2.4 Community Financing of Transport and Local Travel of Public Secondary Schools and its Effect on Academic Achievement in Kisumu County

School bus transportation has grown in popularity across the world. In America and Latin America, for example, a higher proportion of pupils take school buses instead of public transportation. Transport is the process of transferring or shipping an object from point A to point B. It is the means of moving people, animals, and products from one site to another (Williams 2005). Starkey (2002) defines public transportation as a shared passenger transportation service open to the general public, as opposed to taxicabs or hired buses.

Truong, T. M. T., & Nguyen, N. T. (2023) states that the buying of school buses for schools is typically financed through a combination of sources, including government funding, local taxes, and sometimes private contributions. In the United States, school districts often receive state and federal funds to purchase school buses. Government funding, local taxes, and private contributions are the primary sources of financing for school buses in the United States. This funding is essential for ensuring that students have safe and reliable transportation to and from school.

Brushett (2005) study found that, when an individual or group of people, such as students, chooses to use public transportation, they benefit from cost savings. This is because they will pay a lower amount while other passengers participate. However, public transportation has several downsides that users should be aware of. These include time and schedule inconsistencies, limited coverage, and rather poor safety requirements. People who utilize

public transportation must consequently have a thorough understanding of the system and be prepared to face these problems.

According to Ball (2003), safe and dependable transportation is crucial to learner's academic achievement. It will ensure that learners arrive at school on time and start lessons on time. Unreliable transportation will cause pupils to arrive late for class and so miss early courses. A kid who arrives to school and class on time gains confidence since he or she attends all classroom activities. In many situations, pupils who arrive late to school lose confidence because they miss some of the teachings. Those without dependable transportation have a significant risk of arriving home late. Homework and private readings are stopped (Farber, 1998).

Hopson, L. M., Lidbe, A. D., Jackson, M. S., Adanu, E., Li, X., Penmetsa, P., &Abura-Meerdink, G. (2022) research literature points to the importance of transportation in its relationship with academic success, but this relationship is complex. There is a great need for methodologically rigorous research to better inform policy decisions affecting school transportation. Improving school transportation so that students have shorter, easier commutes is likely be needed in order to improve student academic performance and reduce achievement gaps, especially for students in rural, isolated areas.

Maday, Goodelle, and Moy (2023) study revealed a correlation between higher graduation rates and shorter distances to the nearest Chicago Transit Authority (CTA) train station. The findings suggested that public high schools with better accessibility to public transportation tended to exhibit improved graduation rates. Policymakers could use this information strategically, targeting transportation infrastructure investments in areas with lower graduation rates to potentially enhance student attendance and, subsequently, graduation rates. Proposed strategies included expanding CTA train stations, extending bus routes, and improving transportation reliability. Policymakers may also consider collaborations with transportation providers to

offer discounted or free passes, promote alternative options such as carpooling, biking, or walking, and develop comprehensive strategies addressing both academic and transportation needs in underperforming schools.

Edwards (2023) study on the impact of school transportation on student outcomes in Mitchigan, the findings revealed a significant decrease in the likelihood of chronic absenteeism for students eligible for school bus transportation, particularly benefiting economically disadvantaged students by up to four percentage points. Although there was no direct evidence of a causal relationship between district-provided transportation and student achievement, the study emphasized the crucial role of school buses in mitigating the negative impact of distance on attendance, especially for vulnerable students. Chronic absenteeism, addressed through school transportation, was highlighted as having substantial policy implications, impacting district budgets and school performance on state accountability systems.

Balabanian (2020) explored the impact of students' transportation on school performance in Abu Dhabi, with a focus on contrasting findings from Western countries. The study uncovered that distance to school and travel time exerted a negative influence on academic performance, indicating that parents tended to select schools near their residence to minimize commuting time. Notably, the choice of transportation mode did not show a significant impact on academic outcomes. The research also delved into the implications of transportation on students' stress levels, revealing that factors affecting performance did not significantly affect psychological well-being.

Ding and Feng (2022) the national survey data across China examining variations in child psychological well-being (PWB) and academic performance concerning commute duration and mode in urban, rural, and urban fringe areas, revealed a significant negative correlation between commute times and children's PWB and academic achievements, with variations

observed across different areas. Interestingly, children in urban fringe areas exhibited the longest average one-way commuting time but demonstrated a greater tolerance for longer commutes compared to those in city center and rural areas. The choice of travel mode also played a role, with walking positively associated with PWB in the city center, while bicycles and public transport positively impacted rural students' academic scores. Quantile regression results highlighted that students in lower quantiles of the PWB distribution tended to be more adversely affected by increased commuting time.

The majority of African cities' public transportation systems are ill-organized, making it impossible for young girls and boys to board. Pushing others to board public transportation takes a stronger individual (Alspaugh, 1998). According to Miller (2001), learners with disabilities should not use public transportation. Students with disabilities need to get extra support. It's possible that bus conductors and drivers, who operate in public transportation systems like buses, lack the necessary training to assist learners with special needs. The public transportation buses are doing business. There is little to no room or infrastructure available to accommodate those with disabilities. When seniors and students ride public transportation together, the latter group does not get special treatment in the event of a bus malfunction. Unlike special school buses, where authorities are more likely to respond when something goes wrong, this is not the case. While state regulations in certain nations regulate school bus safety requirements, public transportation is not subject to such restrictions (Alspaugh, 1998).

School buses are more convenient for learners since they always run on regular schedules, according to Khayesi (1999). Students' pick-up points are decided upon in advance. It is possible to modify the pick-up location for a student in the event that a family moves. Normally, students don't have to go a great distance to catch the school bus. Students are picked up by busses from the school and dropped off near their houses after school.

However, Mlagara (2016) state that, the public transport system has a notable impact on the academic performance of primary school students who relied on these buses in Dar es Salaam. The investigation brought to light that the existing transport system involved privately owned buses operating without a regular time schedule, resulting in irregularities in service provision. The lack of control and coordination in the public transport system had a detrimental effect on students, leading to late arrivals at school, facing teacher punishments, and struggling to find sufficient time for homework and private studies due to extended travel times. The careless handling of the public transport system was identified as a contributing factor to poor academic performance, with students developing coping strategies such as enduring long wait times and seeking financial assistance from fellow passengers. The study concluded that the challenges posed by the inefficient transport system impacted students' daily routines and academic achievements, underscoring the need for improved coordination and control in the public transport system.

The government's goal of integrating secondary education into basic education was delineated in Kenya's Session Paper No. 1 on Educational Planning and Policy (2005). In the long run, the goal was to encourage the growth of day schools as a way to increase accessibility or lower expenses for parents, particularly those related to their children's commuting expenses. According to African Population & Health Research Centre (APHRC) research from 2007, there is a major issue with schools being too far away in rural areas, which are frequently isolated and marginalized regions of the nation. This constraint is similar to that of urban slums, which frequently lack essential infrastructure. The rural urban poor share additional features in that they make up the bulk of the poor who cannot afford to attend secondary school in the region; programs aimed at improving transition to secondary school must target these segments of the community. As a result, the implementation of FDSE policy in Kenya assures that all Kenyan children have access to basic education, which now includes secondary education.

Mutegi, R. G. (2017) found that the distance from home to school is a factor of school access. This is due to the real distance between houses and schools, which was found to be 25 kilometers on average, particularly for boarding institutions, and 12 kilometers for day schools. The considerable distance increases transportation costs, making it difficult for some parents to afford. Children have a tough time walking to school because of the distance. The study found a statistically significant relationship between distance and transport cost ($P<0.05$ and coefficient of 142), indicating that each additional kilometer increases transport costs by Ksh 142. According to Edwards (2022) study which aimed to understand how school bus eligibility influences student attendance and achievement. The analysis indicated that, overall, eligibility for school bus transportation did not have a significant impact on student attendance or achievement. However, it did reveal that economically disadvantaged students, eligible for district-provided transportation, were less likely to experience chronic absenteeism. This aligns with existing research emphasizing the positive outcomes linked to increased attendance for students, covering both cognitive and non-cognitive aspects. While the study did not compare school buses to other transportation modes or explore the effects of longer bus travel times, it offered valuable insights for district leaders. The results suggested that policymakers and district leaders might consider utilizing transportation as an intervention for chronically absent students, especially those from economically disadvantaged backgrounds, providing them with additional learning time in school that could positively impact their academic achievements.

The literature review highlights several aspects related to student transportation, particularly focusing on the use of school buses and public transport. The literature primarily discusses the financing of school buses through government funding, local taxes, and private contributions. However, there is a lack of exploration into how communities themselves contribute to or finance secondary school transportation, especially in regions where government funding might be insufficient or inconsistent. While the studies provide valuable insights into the

impact of transportation on students' academic performance, there is a noticeable gap in the existing research regarding the community financing of secondary school transport and its effects on the provision of quality education.

2.5 Community Financing on Human Resources of Public Secondary Schools and its Effect on Academic Achievement in Kisumu County

Sharma and Pandey (2021) define Human Resources as comprising the personnel, staff, or workers in an organization employed to achieve its goals. They encompass both skilled and unskilled manpower collaborating to fulfill organizational objectives. The overarching aim of human resources is to ensure organizational success through effective manpower utilization. Human resource management entails the tasks of recruitment, selection, training, and skill development, alongside the maintenance of staff benefits and rewards to enhance performance. Human Resources foster the enhancement of staff skills, organizational competencies, managerial acumen, and a culture of care within the organization. This function serves as a motivational and directional force, guiding the efforts of teachers and other staff towards maximum productivity and optimal achievement of educational goals. In various scenarios, Human Resource Management involves the process of motivating and promoting personnel within the organization to accomplish desired goals and objectives.

Teachers and support personnel are examples of human resources in schools. Adequacy and quality, as shown by training and motivation levels, have an impact on human resources as a component of production (Juma, 2011). In an educational institution, instructors and teaching staff are a vital human resource (Winarti, 2018). This is because they are front-line educators who work directly with learners, meaning that teachers have the ultimate say over whether or not students succeed in the learning process. Rivkin, Hanushek, and Kain (2005) state that there is agreement on the particular teacher characteristics that affect students' academic achievement. With varying degrees of success, researchers have looked at how instructor

attributes including gender, educational background, and experience instructing pupils are related to their academic achievement. Akiri and Ugborugbo (2008) revealed a substantial link between instructors' gender and students' academic success. Yala, Wanyohi, and Adeyemi (2010) noted that instructors' experience and educational credentials were the strongest predictors of students' academic success. However, Ravkin et al. (2005) discovered that instructors' teaching experience and educational degrees had no significant relationship to student success. According to Easy (2005) research in Ghana, instructor variables that strongly related to low academic attainment were tardiness to school, absenteeism, unpreparedness, drinking, poor teaching techniques, and failure to submit syllabi on time.

The pupil-teacher ratio represents the number of students handled by one instructor in a stream during a class (Lumuli 2009). A low pupil-teacher ratio indicates that a teacher will be able to handle fewer students, signifying a good attention level. A high pupil ratio indicates that a teacher will be able to handle a large number of students at one time. This will cause a teacher to use logical teaching approaches, leaving students passive (Michelowa, 2003; Dembele & Miaro, 2003). However, there is a need for balance since excessively low pupil-teacher ratios lead to teacher underutilization, whereas high pupil-teacher ratios degrade academic achievement, lowering educational quality.

According to the National Center for Education Statistics (2022), the financing of human resources in education in America is primarily the responsibility of state and local governments, as well as private organizations. The structure of education finance in the United States reflects a predominant state and local role, with about 92 percent of the funds for elementary and secondary education coming from non-federal sources. While the federal government contributes approximately 8 percent to elementary and secondary education, the majority of the funding is derived from state, local, and private sources. In higher education,

expenditure on human resources accounts for about two-thirds of current spending, significantly impacting the performance and financial sustainability of institutions.

In Africa, the United Nations Development Programme (UNDP) (2023), states that financing of human resources in education across African countries is sustained by various organizations and initiatives. Key financiers and partners include the UNDP itself, which supports human capital development, encompassing education, to advance countries towards sustainable development goals. The World Bank significantly contributes to education and human capital development in Africa, offering substantial aid for health, education, and social protection in nations like Rwanda. Additionally, the African Development Bank (AfDB) champions the Human Capital Development initiative, striving to unlock Africa's potential through education, skills enhancement, and job creation, thus serving as a pivotal financier for education and human resource development in the region.

Shyllon and Joshi (2015) highlight Tanzania's challenges in financing human resources in education. According to the World Bank, primary sources of education finance in Tanzania encompass private resources of households, domestic government revenue, and external resources. However, significant shortfalls in infrastructure and human skills have hindered industrial development and growth, emphasizing the critical need for improved human development outcomes for Tanzania to realize its development potential. Human capital wealth, defined as the present value of future earnings of the labor force, stands out as the most crucial component of national wealth. Tanzania requires increased investment in human capital, particularly in agriculture. The Tanzanian Minister for Finance has urged financial institutions to support Africa's endeavor to accelerate human capital development. Additionally, a study on the relationship between human resource competencies and firm performance in Tanzania identified strategic contribution as the most significant competency influencing financial institutions' performance. The Bank of Tanzania Academy offers specific

training programs in payment systems, financial markets, microfinance, macroeconomics, and financial modeling.

In Kenya, Karigitho (2021) highlights that financing of human resources in education in Kenya is primarily supported by the government and other stakeholders. According to the Global Campaign for Education, the Kenyan government has substantially increased its expenditure on education, allocating a significant portion of the national budget to the education sector, with specific allocations for teacher remuneration, public universities, and primary education. Itegi (2016) states that the government has also implemented subsidy programs, such as Free Primary Education and Free Day Secondary Education, to support the expansion of education at the secondary level. Furthermore, diverse sources of financing, including bursaries, student loans, community financing, private sector financing, and donor support, contribute to the overall financing of education in Kenya. This multi-faceted approach reflects a commitment to investing in education as a means of developing human resources and achieving national development goals.

Muthoka (2023) outlines several challenges that Kenya faces in financing human resources in secondary education. The government's commitment to providing free primary and secondary education remains unfulfilled, resulting in hidden costs, delayed funding, and unpaid debts, which strain the education system. The Finance Bill 2023 does not allocate funds for new education initiatives, potentially stalling innovation in the country. Secondary and higher education in Kenya suffer from underfunding by both governments and donors, leading to neglect of these sectors. Although the Finance Bill 2023 increases funding for education, gaps still exist, and the budgetary allocation across education sub-sectors remains unclear. Additionally, a new funding model developed by the Presidential Working Party on Education Reform places a greater burden on the financially able, potentially sparking controversy, especially in determining which students are vulnerable and eligible for free higher education.

Shushila (2004) in his studies on Kuria District, Headteachers' and school management have an impact on academic performance. According to this study, school chairman ought to have satisfactory expertise in preparing the school management towards engineering good school performance. The study revealed that academic performance of students in KCSE is to a greater extent influenced by the accessibility of teachers' by students and school management.

The study conducted by Khaemba (2014) reveals several key insights regarding the relationship between funding and educational performance, or quality, in public secondary schools. Firstly, it suggests that public subsidies may not effectively impact human capital investment due to delays in remittances. Additionally, some schools resort to charging levies to compensate for inadequate public funding. Conversely, the study indicates that private financing, which is often adequate, allows parents to afford subsidized fees, thereby improving human capital investment. However, there is a decline in the traditional role of voluntary organizations in education funding. Moreover, schools face various challenges related to funding, including delayed government remittances, arrears, and limited financing sources, highlighting the need for increased commitment and support from all stakeholders to ensure successful human capital financing and improve educational quality in public secondary schools.

A study conducted by (Ngware, Onsomu and Muthaka, 2007) on Relationship between Education Financing and Human Capital Investment: a survey of Public secondary schools in Kimilili-Bungoma Sub- County, revealed that there was no significant difference in mean human capital investment between those schools adequately funded and those not ($t=1.486$, $p=0.157$). the study noted that many of the developing nations invest huge amounts of money on education not only as an attempt to impart knowledge and skills to individuals but also to impart values, ideas, attitudes and aspirations which may be in the nation's best interests (Olaniyan & Okemakinde, 2008). Despite the government funding being low, some schools through their boards agreed to levy an extra fee that can support academic programmes to avoid

tremendous effects from delayed or low public funding. Given the numerous competing demands on constrained public resources, many governments find it impossible to mobilize sufficient funds to accelerate the development of secondary education, while fees and other private cost impede enrollment of financially disadvantages students. The present study explores the influence of community financing of human resource and their influence on academic achievement in secondary schools.

The financing of human resources in education, as discussed in the provided section, is crucial for the provision of quality education. Human resources, including teachers and support staff, play a vital role in shaping educational outcomes. Adequate funding ensures the recruitment, training, and retention of qualified personnel, which directly impacts the quality of instruction and student achievement. Additionally, funding influences the availability of resources, such as teaching materials, facilities, and infrastructure, which are essential for effective learning environments. However, the section also highlights various challenges and gaps in financing human resources in education, such as delayed government remittances, inadequate funding, and reliance on alternative financing sources. These challenges underscore the need for further research to understand the dynamics of community financing of secondary schools' human resources and their effect on the provision of quality education. This study aims to address this gap by investigating how community financing of secondary schools human resource and its effect on academic achievement in Kisumu County.

2.6. Community Financing on Lunch Program in Public Secondary Schools and its Effect on Academic Achievement in Kisumu County

The WFP (2013) defines school feeding as providing meals to schoolchildren. There are as many types of programs as there are nations, but they may be divided into two categories depending on their delivery methods: (1) in-school feeding, in which children are fed at school, and (2) take-home rations, in which families are provided food if their children attend school.

In-school feeding may be classified into two types: (1) meal programs and (2) high-energy biscuits or snacks (WFP, 2013). In certain countries, in-school meals are paired with take-home rations for especially vulnerable students, such as females and HIV-positive children, to increase school enrollment and retention rates while also reducing gender or social disparities. In many countries, school feeding schemes may also include pre-primary, primary, and secondary schoolchildren.

Bundy, D. A., de Silva, N., Horton, S., Patton, G. C., Schultz, L., & Jamison, D. T. (2017) Almost every country in the world has a national school feeding program to provide daily snacks or meals to school-attending children and adolescents. The interventions reach an estimated 368 million children and adolescents globally. The total investment in the intervention is projected to be as much as US$75 billion annually (WFP 2013), largely from government budgets.

Ali, Y., & Mackintosh, A. (2022) conducted a comprehensive analysis that underscored the critical importance of financing school meals programs, particularly in the context of the multifaceted challenges posed by the COVID-19 pandemic and pre-existing learning, poverty, and malnutrition crises. The findings highlighted that well-designed and properly financed school feeding initiatives have the potential to mitigate the adverse effects of the "triple crisis" and yield substantial benefits for vulnerable learners, especially those living in poverty. The report emphasized the role of school meals in enhancing school participation, reducing dropout rates, and improving learning outcomes, with a focus on equitable distribution. Moreover, the financial constraints faced by governments and the underinvestment from aid donors and multilateral development banks were identified as significant hurdles that necessitated urgent attention.

Their study found that the adoption of the Community Eligibility Provision (CEP) resulted in improved arithmetic performance and a significant drop in out-of-school suspensions, particularly among white male primary pupils. The data show a 17% reduction in suspensions for this grouping. The analysis reveals that the advantages extend to locations and subpopulations with limited free-meal participation prior to the CEP, highlighting the program's importance in extending access for families that may not meet standard income-based requirements. The data also finds that the advantages are concentrated among younger pupils and those that are more likely to receive access through universal programs.

Most Malaysian schools, whether public or private, include canteens where students may buy food and drinks from vendors. School canteens serve food and beverages at lower pricing. Underprivileged pupils can apply for the free-food program, which is supported by either the school's parent-teacher organization or the Ministry of Education. Low-income kids may also be eligible for the School Milk Programme, which is supported by milk firms and non-governmental organizations (Ministry of Education, Malaysia, 2014). In Singapore, most primary and secondary schools serve school meals through their canteens (or tuckshops). Canteens are made up of booths that sell a wide variety of meals and drinks. Canteens frequently provide a variety of cuisines, including Chinese, Indian, Malaysian, and Western delicacies, to accommodate Singapore's many races, faiths, and cultures (Government of Singapore, 2016). To encourage healthier eating habits in children, the Health Promotion Board of Singapore developed the nutritious Eating in Schools Programme, which awards schools that offer nutritious meals. To qualify for the award, schools must lower the sugar content of beverages and sweets, provide less deep-fried and fatty foods, and include two portions of greens in their meals (Government of Singapore, 2016).

Aliyar, Ruzky; Gelli, Aulo; and Hamdani, SalhaHadjivayanis (2015) stated that, a school lunch is a meal served to students and teachers at school, usually in the middle or beginning of the school day. Countries throughout the world provide many types of school lunch programs. Every weekday, millions of pupils of different levels and grades enjoy meals at their individual schools. School lunches in twelve or more nations provide high-energy, nutritionally dense cuisine for free or at a low cost. The benefits of school meals differ by nation. While in wealthy nations, school lunches provide nutritional meals. In poor nations, it serves as an incentive for youngsters to attend school and further their education. In underdeveloped nations, school meals provide food security during times of crisis and help children grow into healthy, productive adults, so helping to break the cycle of poverty and hunger.

School feeding program are crucial initiatives that have been implemented in many developed and developing nations across the world to combat poverty, increase school enrollment, and improve student performance. Almost 60 million children in poor nations go to school hungry every day, with Africa accounting for almost 40% of the total. Providing school meals is so critical in feeding students. Parents are encouraged to send their children to school rather than keep them at home to work or care for younger siblings (Akanbi, 2013). The introduction of school feeding can be traced back to the Millennium Development Goals (MDGs) initiative and several subsequent conferences held by African leaders to address issues such as peace, security, good economic, political, and corporate governance, as well as make the continent an appealing investment destination. Some of these developments include the 'New Partnership for African Development,' which, according to the blueprint, is a pledge by African leaders based on a common vision and a firm and shared conviction to eradicate poverty while also putting their countries on a path of sustainable growth and development, as well as actively participating in the global economy and politics. The 'Comprehensive African Agriculture Development Programme' and the 'Millennium Hunger Task Force', among others, were

programs aimed at linking school meals to agricultural development through the purchase and consumption of locally produced food (Bundy et al, 2009).

According to Home Grown School Feeding (2014), the State of Osun in Nigeria pioneered a statewide school lunch program for all public elementary school students. As of July 2014, it served lunch to approximately 252,000 students in all of Osun's primary schools. In addition to staples like rice, beans, and yams, which are offered with stews, soups, and vegetables, the regimen includes daily fruits. The anticipated cost is N50 (USD $0.31) per kid each day (HGSF, 2014). All food items are acquired locally from farmers and others throughout the supply chain, which boosts employment in the state. Addressing child malnutrition has improved pupils' academic performance and boosted school participation by 24% compared to numbers before to April 2012.

Jensen (2010) revealed that, school feeding is typically implemented as part of larger national school reform efforts. These changes should prioritize other critical inputs into education and learning, such as teacher development, curriculum reform, and student evaluation. National ministries or educational organizations should not be pushed to prioritize school meals over other educational inputs because refusing food aid is politically difficult. According to Pediatre (2001), the school feeding program improves attendance and academic performance significantly. Many schools are already trying to operate barely functional teaching systems while also taking on the added weight of food delivery. Taylor (2010) asserts that in order to reduce dependency on outside food sources, including school feeding programs, complementary inputs are required. She focused on the need of supplemental nutrition and health interventions to go along with the feeding program. Children who are healthy and well-nourished do better academically than their classmates who are ill and undernourished, according to research on school-age children examining the association between health,

nutrition, and school performance (Nkinyangi, 1991). Feeding has an impact on how the body and brain grow (KIE, 1990). No youngster can reach their full potential cognitively without adequate nutrition.

Kiiru, J. K., Mange, D., &Otieno, D. (2020) study on the lunch program in public day secondary schools in Mombasa and Kilifi Counties, Kenya, revealed its crucial role in influencing educational outcomes. The research found that schools with a well-implemented food safety program experienced positive impacts on students' academic performance. The provision of hygienic and safe food ensured that students remained healthy, contributing to regular attendance and improved overall well-being, which, in turn, positively affected educational outcomes. However, the absence of hygienic food storage in some schools raised concerns, potentially leading to food spoilage and negatively impacting educational achievements. The study also highlighted the importance of monitoring and evaluation procedures in the lunch program. Positive relationships between improved performance, discipline, health status, and time management underscored the significance of these procedures in enhancing various aspects of educational outcomes.

Muriuki, M. W. (2021) conducted a study examining the effects of providing nutritious school meals on educational achievements in secondary schools in Kibra Sub-county, Nairobi, Kenya. The overall findings suggested a positive association between the provision of nutritious meals and higher educational achievements. Despite the significant positive impact observed, the study identified gaps in the provision, quality, and quantity of nutritious school meals.

Munuhe, B. W. (2014) study revealed that, School feeding programs (SFPs) serve as a crucial social safety net in developing nations, addressing various policy areas to aid vulnerable populations, particularly school-aged children. Munuhe’s study in Isinya Division, Kajiado in Kenya. The findings showed that the school’s reliance on external support (donors and the government) was extremely high. This was in comparison to the support that the schools and

the communities ought to have provided to come up with long lasting solutions geared towards sustainability of the SFPs. In all the schools visited, it was evident that the donors and the government contributed over 80% of the resources required in running the SFPs, with 20% being drawn from the local communities (mainly the parents). Rising cost of food commodities was cited by most of the head teachers as the biggest threat towards making the meals program sustainable. The findings showed that none of the sampled schools had initiated income generating activities geared towards directly supporting the meals program. This was founded on the attitudes and perceptions from the school stakeholders (teachers, parents, communities) that SFP is a government-supported venture and therefore they should not strain to have is running. Only six of the forty-two visited schools had alternative sources of financing to supplement what they received from the donors and the government is offering. These are mainly those sponsored by religious institutions, which also demonstrated the role of faith-based organizations in ensuring sustainability of the meal programmes. While these findings underscore the multifaceted challenges that impact the effective implementation and sustainability of school feeding programs in the region, the present study intends to investigate the influence of community financing of lunch programs and their influence on academic achievement.

The literature review provides comprehensive insights into school feeding programs globally, emphasizing their importance in addressing issues of poverty, malnutrition, and enhancing educational outcomes. While the literature extensively covers the significance of school feeding programs, it does not thoroughly explore how communities contribute financially to sustain these programs, especially in areas that experience financial constraints. Understanding the dynamics of community financing is crucial for comprehensively assessing the challenges and opportunities associated with ensuring the continuity and effectiveness of lunch programs in secondary schools.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section outlines the research design, area of study, study population, sample and sampling techniques, data collection instruments, pilot study, data collection procedures, methods of data collection and ethical considerations.

3.2 Research Design

The research designs adopted in this study was descriptive survey design and a correlational design. Descriptive survey design was used as it builds a picture of the current situation and describes what exist at the moment in a given context. Best and Khan (2006) assert that descriptive is designed to obtain current information and phenomenon and wherever possible draw valid general conclusions from facts discussed. Mugenda (2008) states that descriptive study design are quite important as they provide a foundation upon which correlation and experimental studies emerge. Correlation research approaches look for probable cause-and-effect relationships by examining an existing situation or state of affairs and looking back in time (Cohen and Manion, 1994). In such a study, the researcher develops systematic and empirical inferences about the relationship between variables without direct control of independent variables since they have already manifested or are fundamentally non-manipulable (Kerlinger, 1973). The factors appear in a natural situation, and the researcher sought to discover the link and impacts of the variables (Orodho 2005). To this end, the study was confined to the years 2016–2019.

3.3 Area of Study

The choice of Kisumu County as the area of study is influenced by the following factors; the area is a cosmopolitan region and the findings can apply to other regions in the country and also by the fact that despite the continued government support to the public primary schools in

the area, the performance is stagnant compared to other counties. Kisumu County is located between latitudes 00 20' South and 00 50' South and longitudes 33020'E and 350 20'E. According to Kisumu County (2018) (See Appendix 9), the counties that border the County are Homa Bay County to the south, Nyamira County to the south-east,Kericho County to the east,Nandi County to the north, Vihiga County to the north-west and Siaya County to the west. According to the 2019 Kenyan population and Housing Census, the population of Kisumu County was 1,155,574 with population density of 545 persons per km^2, an annual growth rate of 2.5%.Lake Victoria has an impact on the entire county's climate, the County's Annual Relief rainfall is between 1200 mm and 1300 mm. Kisumu County is divided into seven sub-counties; Kisumu Central, Kisumu East, Kisumu West, Muhoroni, Nyakach, Nyando and Seme. The major rivers include; Nyando and Sondu-Mirui (See Appendix 9). These rivers flow throughout the year and drain into Lake Victoria. The soil types found in Kisumu County are categorized as clay, sand, loam, black cotton soil and rocky in the hilly areas. The county has four sugar factories; Chemelil, Muhoroni, Kibos (Private) and Miwani.The primary economic activities are Subsistence farming, livestock keeping, fishing, rice farming, maize farming, sugar cane growing and small scale trading. The crops grown are for both subsistence and commercial purposes. In the informal sector comprise of "Jua kali" activities; carpentry, brick making, tailoring, hotel industry, retail business, motor vehicle repair and welding. The selection of Kisumu County for the study was promoted by; first, in spite of diverse economic activities out of the county it is among the counties with schools lacking in basic learning facilities and cost of education is high (Olendo,C. 2016). Secondly a study of this nature had never been conducted in the county. Thirdly the area has a number of economic activities which can be harnessed to support schools in order to promote economic achievement. The economic potential of the county is assumed to foster a positive attitude of the stakeholders to finance education.

3.4 Study Population

The target population consisted of all the 72 public boarding and 142 public day secondary schools. Hence 214 principals, and the C.D.E Kisumu County, 214 B.O.M chairpersons and 48 Community Based Organizations Chairpersons that support secondary schools education were the respondents, private schools were left out since they have a different source of funding and their schools fees is not regulated by the government.

3.5 Sample Size and Sampling Techniques

The sample size of the population was guided by the heterogeneity in the data in the form of national, extra-county, county and sub-county schools. The subgroup within the population was fairly represented. Random sampling and stratified random sampling technique were used to select a third of the target population. Stratified random sampling procedure was used to sample the 64 public secondary schools in Kisumu Country and 64 principals. In addition, the C.D.E Kisumu County, 64 B.O.M Chairpersons and 16 community-based organizations formed part of the sample. Table 3.1 shows sample frame of the study.

Table 3.1: ***Sample Frame***

Principal	Population	Sample	%
.Principal	214	64	29.9%
BOM chairperson	214	64	29.9%
CBO chairperson	48	16	33.33%
CDE	1	1	100%

3.6 Instruments for Data Collection

This section highlights the tools used to collect data for the study. The study used questionnaire, interview schedule and document analysis guide.;

3.6.1 Questionnaire

Five sets of questions were designed for students, principals, B.O.M chairperson, community-based organization and C.D.E.-Kisumu County to comprehensively exhaust the aspect of the

study. These were developed by reference to the stakeholders and information provided in the literature

3.6.1.2 Principals Questionnaire(PQPSS)

The principal questionnaire sought to find out information on the status of the school in terms of background information, community financing in relation to financial resources, physical resources and human resources' instructional resources, transport and lunch program (See Appendix 3).

3.6.1.3. BOM chairperson Questionnaire (BOMCQ)

The BOM chairperson questionnaire seeks to investigate the effectiveness and implications of community financing of secondary school education in Kisumu County (see Appendix 4)

3.6.1.4 CDE Questionnaire (CDEQ)

The CDE questionnaire sought to investigate the effectiveness and implications of community financing of secondary school education in Kisumu County. The questionnaire addressed funding in the county projects and their implementation. (See Appendix 6)

3.6.1.5 CDE Interview Schedule(CDEIS)

This was administered to the CDE in enhancing information from the school and the County. The interview assisted the researcher to collect data to clarify issues on the questionnaire and provided information that cannot be directly observed (see appendix 7).

3.6.1.6. CBO Chairperson Questionnaire (CBOCQ)

The questionnaire was administered to the CBOs to provide information on CBO objectives, projects, funding, community input, challenges and effectiveness of their programmes (See Appendix 5).

3.6.1.7 Document Analysis Guide (DAG)

The documents from schools, education offices and community based organization were read for further information. The schools budgets, and development report, community based organization records, budgets and invitations. (Appendix 8)

3.7 Pilot Study

The pilot study was required to fine-tune the research equipment before delivering them to the sample. According to Kombo and Trump (2006), piloting allows the researcher to determine if the items in the instrument not only measured what they were designed to measure but also remained consistent over repeated tests of the same constant. According to Orodho and Kombo (2011), 10% of the study population is suitable for a pilot research. For the pilot project, six schools were selected from the population using simple random selection. The schools consisted of three public day schools and three public boarding secondary schools, which were utilized to pre-test the instruments prior to the actual data collection to assist identify confusing or unclear questions that would represent difficulty to the respondents.

3.8 Validity of Instruments

The instrument's validity is determined by the extent to which it claims to measure what it is designed to measure (Kanthen, 2004). Validity refers to how accurately a method measures what it is intended to measure. If research has high validity that means it produces results that correspond to the real properties, characteristics, and variations in the physical or social world,, high reliability is one indicator that a measurement is valid, (Borg and Gall, 2007).

To ensure validity of the research instruments, pilot testing was carried out in six schools in the seven sub-counties in stratified random sampling. An assessment was done on language, clarity of questions ability to collect information and ethical considerations for the client. Three specialists from Maseno University's Department of Educational Management and Foundation reviewed the instruments to ensure their content validity. They assessed the instruments'

content coverage using the research criteria. The instruments were also sent to peers for further examination to ensure internal consistency.

As a measure of the validity, formula of the validity index extracted from Aiken, (1980) was used as stated.

$$\sum_{i=1}^{(c-i)} \frac{in_i}{N(C-1)}$$

Where;

i : Judge

n: Value given by judge i.

N: Total number of judges

C: Higher category in ordinal rating scale

The ratings were suggestions of experts who reviewed and judged the questionnaire items to either relevant or irrelevant to the study: The higher the percentage of items judged relevant the higher the validity of the instruments. Based on the feedback, from the specialists and the validity index, the researcher improved on the instruments.

3.9 Reliability of Instruments

The researcher employed the test-retest approach to assess reliability. Reliability refers to the degree of accuracy or precision in research tools, (Mugenda and Mugenda 2019). In this method the same instrument is re-administered shortly after the first administration and the two sets of results are correlated to obtain the reliability of the test. According to Orodho (2004), reliability assesses the degree to which a certain measurement approach produces consistent findings over several trials. It is influenced by random error which could arise from inaccurate coding and ambiguous instruments to the subjects. The instruments and tools used must yield the data the researcher requires to answer in the questionnaire.

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

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

Where

r = correlation Coefficient

x = the first observation (Test)

y = the second observation (re-test)

$\bar{x}$ = means of the value of the x variables

$\bar{y}$ = Mean of the value of the y variables

It was established that the correlation coefficient r of 0.86 for principals questionnaires, 0.87 for BOM chairperson's questions and 0.84 for CBO chairpersons questionnaire. The correlation value greater than 0.8 can be considered as high indicating acceptable reliability, (Orodho, 2012). Therefore, the instruments were considered suitable for research use.

3.10 Data Collection Procedures

The researcher requested for introductory letter from the School of Graduate Studies, (SGS) through the supervisors to proceed to the field to collect data. The Principles were contacted and dates for school visits were secured. With permission, the researcher visited the schools accessed documents; BOM minutes, PA Minutes, Cash books, trial balances, budgets and KNEC results. For CBO chairpersons and CDE prior visit was done to secure permission for data collection. The questionnaires were availed to respondents, copies were collected after completion on agreed date. The researcher carried out the interview schedule for CDE besides taking part in administering the CDE questionnaire.

Seven research assistants were selected from each sub-county, trained and assigned respective sub counties that make up Kisumu County to gather necessary data. During the training, the research assistants were given a briefing on the important terminology utilized in the tools and the primary information that the tools were designed to capture. With the research assistants, every item on the questionnaire and scheduled interview were addressed.

Rather than using postal surveys, a delivery and collecting approach was employed to collect data. In addition to increasing the return rate, the strategy was chosen because it made a conscious effort to limit the number of respondents and any potential source of bias at the point (Sary, 2002).

All the 64 questionnaires for principals, 64 for BOM chairpersons, 16 CBO chairpersons and one from the CDE were returned, representing 100% response rate. According to Mugenda & Mugenda (2019), numerous scholars believe that a response rate of 50% is appropriate for analysis and reporting, 60% is good, and 70% or more is excellent. The response rate for this research was excellent, at 100%.

3.11 Methods of Data Analysis

The qualitative data collected from the questionnaires were transcribed and analyzed in emergent themes and sub-themes as per the objectives of the study and relationship among the categories. The themes and patterns were coded before entering in the computer for analysis. The responses for open-ended questionnaires were recorded word for word and frequencies determined for similar responses which were converted into percentages. The items on attitude were coded using the likert scale and frequency counts computed for percentages.

Descriptive statistics applied because they easily communicate with the research findings to majority of the readers (Gay, 1987). The collected quantitative data was coded and converted into ratios, percentages, frequencies for pie charts, bar graphs and line graphs. Community financing input (Kenya Shillings) and KCSE mean scores were used for correlation and regression analysis using SPSS 8.0 computer package.

Regression equation was estimated in linear form to determine the coefficient of the independent variables; community financing and the significance of the dependent variable as follows:

$Y = b_0 + b_1X_1 + b_2X_2 + \ldots bnX_n$

Where

Y =	Academic Achievement
b_0 :	The coefficient for the Intercept
$b_1b_2 \ldots bn$:	The coefficient of the selected predictor variable ($X_1 X_2 \ldots X_n$)
($X_1 X_2 \ldots X_n$):	Are community financing inputs which affect academic achievement in secondary schools; infrastructure (X_1), teaching and learning resources (X_2), Human Resources (X_3), Transport and Travel (X_4), Lunch Programme (X_4)

The stepwise multiple regressions were employed to develop a linear combination of independent variables that would predict the dependent variable. It is adopted because of its abilities to discriminate among many variables that enable the effect of financial resources, school culture, government policy, leadership skills on academic achievement in secondary schools be determined. The equation eliminates independent variable whose contribution in the regression model declined to significant levels (Cohen, 1998).

In-depth document analysis of budgets, strategic plan and development report, community-based organization records, budgets and invitations was done to supplement discussion and interpretation of data. Based on the results of data analysis, conclusion and recommendations were made regarding the effectiveness of community financing on academic achievement of secondary schools in Kisumu County.

Qualitative data gathered from the CDE interview was documented then organized into concepts. The organized data was discussed under relevant objectives and hypothesis of the study.

Table 3.3below guides on the data analysis based on independent variables, indicators and the dependent variables.

Table 3.3: ***Independent variables and dependent variables indicators***

Independent Variables	Indicators	Dependent Variables	Statistical Methods
Infrastructure • Classes • Dormitories • Toilets	Class sizes Enrolments Student: toilet ratio Land acreage	KCSE Mean Score	Frequency Counts, Percentages, Pearson's (r) Correlation coefficient, ANOVA, and regression analysis
Teaching and learning resources • Laboratory equipments • Textbooks /Reference materials • Teaching Aids	Laboratory:Student equipment ratio Textbook ratio I.C.T	KCSE Mean Score	Frequency Counts, ratios, Pearson's (r) Correlation coefficient, ANOVA, and regression analysis
Human resources • Teachers • Workers • Outsourcing • Skilled manpower	Teachers on duty (TOD) CurriculumBased Establishment (CBE) Student worker ratio In-service training	KCSE Mean Score	Percentages, means, Pearson's (r) Correlation coefficient, ANOVA, and regression analysis
Transport and Local travel • School transport • Academic trips • Students activities	Number of buses Cost of hiring Transport to school	KCSE Mean Score	Pearson's (r) Correlation coefficient, ANOVA, and regression analysis
Lunch Programme • Kitchen utensils • Students utensils • Feeding programme	Menu Food ratio Quality of meals Safe and clean water	KCSE Mean Score	Pearson's (r) Correlation coefficient, ANOVA,and regression analysis

3.12 Ethical Considerations

The researcher used suitable approach to urge respondents to collaborate and confirm that their rights were safeguarded. Participants were informed of the purpose of the research, expected duration and the procedure. They were also informed of their rights to decline, to participate and to withdraw from the researcher once it had started as well as consequences of doing so. This was accomplished through research permit for access of institutions, letter of introduction and consent forms for the respondents. (see appendices). The researcher ensured that participants were informed of potential risks, discomfort or adverse effects and any prospective research benefit. They were adequately briefed on limits of confidentiality and who they could contact with information. The participants were presented with introduction letter (Appendix 1) an informed consent form (Appendix 2) for the respondents to sign as proof of willingness to participate in the research. The researcher permitted respondents to provide information willingly while respecting their opinions. This allowed them to share knowledge freely. The researcher informed the participants that the information they provided would be kept strictly secret and used solely for academic purposes.

Computer printouts were stored in a lockable cupboard accessible only to the researcher. The raw data was stored with the utmost care and safety, and the researcher was the only authorized holder and implementer of the results. Information collected from external sources or authorities to support the research investigation was acknowledged with references. The respondents were advised not to write their names and those of their schools or organizations on the questionnaire. The researcher thanked the respondents for participating in the study. They were assured that they would be free to access the final report of the findings of the study.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.1 Introduction

The chapter presents data analysis presentation and discussion of the findings of the study. Analysis done using thematic analysis; the descriptive statistics tabulated using the statistical package for social science (SPSS). The contents of the findings presented in the form of tables and figures.

4.2 Demographic Analysis of the Respondents

Table 4.1: *Demographic Information of the Principals*

	Principal	Percent
Gender		
Male	41	64.70
Female	23	35.30
Total	**64**	**100.0**
Academic Qualification		
Diploma	13	20.32
Bachelor's degree	36	56.25
Masters	15	23.43
Total	**64**	**100.0**
Years of service as a principal		
Less than 5 Years	4	6.30
6-14 Years	16	25.0
15-19 Years	40	62.5
Over 20 Years	4	6.30
Total	**64**	**100.0**

The demographic data pertaining to the school's principals in table 4.1 provides valuable insights into the composition of its leadership. Gender-wise, there is a noticeable gender disparity, with 64.7% of principals being male and 35.3% female, indicating a predominantly male leadership. In terms of academic qualifications, the majority of principals hold a degree (56.25%), followed by those with a master's degree (23.45%), and a smaller percentage with a diploma (20.32%). This data reflects highly educated principals. Concerning years of service, the principals demonstrates diversity, with a range of experience levels: 6.3% have less than 5

years, 25.0% have 6-14 years, 62.5% have 15-19 years, and 6.3% have over 20 years of service. This diverse mix of experience likely contributes to a multifaceted perspective within the school's leadership.

According to Walston (2008) leadership of the principal is known to be a key factor in supporting student's achievement. Education leadership can have strong positive indirect effect on student learning and teacher performance (Ndolo, 2016). This information is relevant to the study as principals have knowledge of community financing and its effect on academic achievement.

Table 4.2: ***Demographic information of BOM Chairpersons***

	BOM	Percent
Gender		
Male	53	82.8
Female	11	17.2
Total	**64**	100.00
Academic Qualification		
Diploma	5	7.80
Degree	37	57.80
Masters	22	34.40
Total	**64**	100.00
Years of service as a BoM Member		
1-3 Years	26	40.30
4-6 Years	24	37.50
7-9 Years	8	12.50
10 – 12 Years	3	4.69
13-15 Years	2	3.10
16-18 Years	1	1.50
Total	**64**	100.00

The provided demographic data in table 4.2 pertains to the composition of the Board of Management (BOM) and offers insights into its members' characteristics. In terms of gender, the BOM appears relatively balanced, with 51.60% male and 48.40% female representation. Academically, the majority of BOM members are highly educated, with 57.80% holding a degree and 34.40% having completed a master's degree. A smaller percentage, 7.80%,

possesses a diploma. In terms of experience, the board showcases diversity, with varying years of service: 20.30% have less than 5 years, 26.60% have 6-14 years, 40.60% have 15-19 years, and 12.50% have over 20 years of service. This data paints a picture of a well-educated and diverse BOM, with a mix of experience levels, likely contributing to a multifaceted perspective and potential effectiveness in governing educational matters.

Table 4.3: *Demographic Information of the CBO Chairperson*

	CBO Chairperson	Percentage
Gender		
Male	9	56.25
Female	7	43.75
Total	**16**	**100.0**
Academic Qualification		
Diploma	4	25.00
Degree	10	62.50
Masters	2	12.50
Total	**16**	**100.0**

The provided demographic in data in table 4.3 sheds light on the composition of Community-Based Organizations(CBO) Chairperson, revealing key characteristics. In terms of gender, the data highlights a gender imbalance, with 56.25% of CBO being female and 43.75% male. Academically, the majority of CBO Chairpersons hold degrees (62.25%), followed by those with master's degrees (12.5%), and a smaller percentage with diplomas (25.0%). This data underscores a well-educated membership within CBO Chairpersons.

Table 4.4*: Status of Secondary Schools in Kisumu County*

	Frequency	**Percentage**
Sub County	30	46.80
County	21	32.81
Extra County	12	18.75
National	1	1.56

Table 4.4 shows the distribution of schools based on their classification into Sub County, County, Extra County, and National categories, along with corresponding frequencies and

percentages. It is evident that 46.80% of schools fall under the Sub County classification and are day schools, accounting for 30 instances. County schools constitute the next most common category, with 21 instances, making up 32.81% of the total. Extra County schools follow, with 12 instances, representing 18.75% of the total. Notably, National schools are the least common, with only one instance, accounting for a mere 1.56%.

Table 4.5: ***Trends in Student Enrolment for period 2015 – 2019***

	2015	**2016**	**2017**	**2018**	**2019**
Boys	4443	4368	4536	3978	6480
Girls	4050	4185	4749	5235	5787
Total	8493	8553	9285	9213	12267
Mean	1415.5	1425.5	1547.5	1535.5	2044.5

Table 4.5 shows the enrolment of students which was at 8493 in the year 2015 and this rose steadily to 9285 in the year 2017. Enrolment slightly reduced in the year 2018 to 9213 but rose again to 12267 in the year 2019. The trend of student enrolment is also shown in figure 4.1 below. In the year 2019, the Kenya government introduced a policy 100% transition for class 8 to form 1, the policy made it illegal repeating class 8. The provincial administration and primary schoolhead teachers were mandated to mobilize the class8 graduates for admission to form 1 in the year 2020 (Republic of Kenya 2020)

The Trends in student enrolment are reflected in a linear graph as shown in figure 4.1

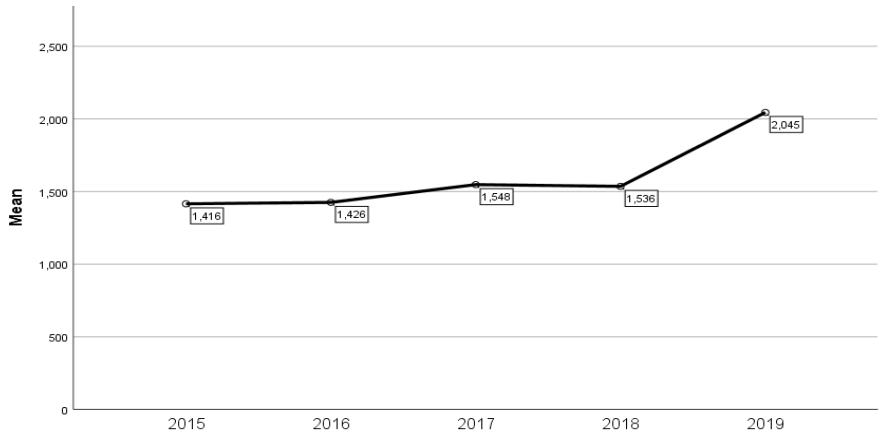

Figure 4.1: ***Line Graph of Trends in Student Enrolment 2015 - 2019***

The trends in student enrolment from 2015 to 2019 in figure 4.1 illustrates a compelling upward trajectory, underscoring the school's consistent growth in enrolment over this five-year period. Both boys and girls contributed to this expansion, with their respective enrolment closely tracking each other, indicating a commitment to gender equity in education. The total enrolment figures demonstrated significant year-on-year growth, reflecting the schools appeal and their ability to cater to the educational needs of the community. The mean enrolment data further reinforced this positive trend, indicating that, on average, the school attracted more students each year.

4.2.1 Academic Performance of Students in Kisumu County, 2015 – 2019.

The table below show KCSE mean scores in the period 2015 to 2019.

Table 4.6: *Academic scores in Kisumu County KCSE 2016 – 2019*

Year	Mean Score
2015	5.099850
2016	3.023904
2017	3.106000
2018	3.271232
2019	3.366358

Table 4.6 shows that the county mean performance in 2015 was 5.099850 and this fell to 3.0239 in 2016 and to 3.106 in 2017. However, since then, the performance has been steadily increasing to 3.271232 in 2018 to 3.3663 in 2019. These findings are consistent with the findings by Macharia (2013) who noted poor performance in all subjects in Nakuru County. According to Macharia (2013), based on the number of students that graduate from secondary schools in Nakuru district each year, one may conclude that secondary education in the district is attempting to meet national educational goals aligned with Vision 2030. However, based on the quality of the students that graduate each year, it appears that secondary education was not meeting the aims and purposes for which it was established in Nakuru district. Kisumu County mean score 2015-2019 remained below average; 6 out of a possible 12. This shows that the

schools do not give value for the resources invested in them. This revelation therefore necessitated the study. This study sought to assess community financing of secondary schools and its effect on academic achievement in Kisumu County.

The mean academic performance is also reflected in a line graph Figure 4.2 below showing trend from 2015 to 2019.

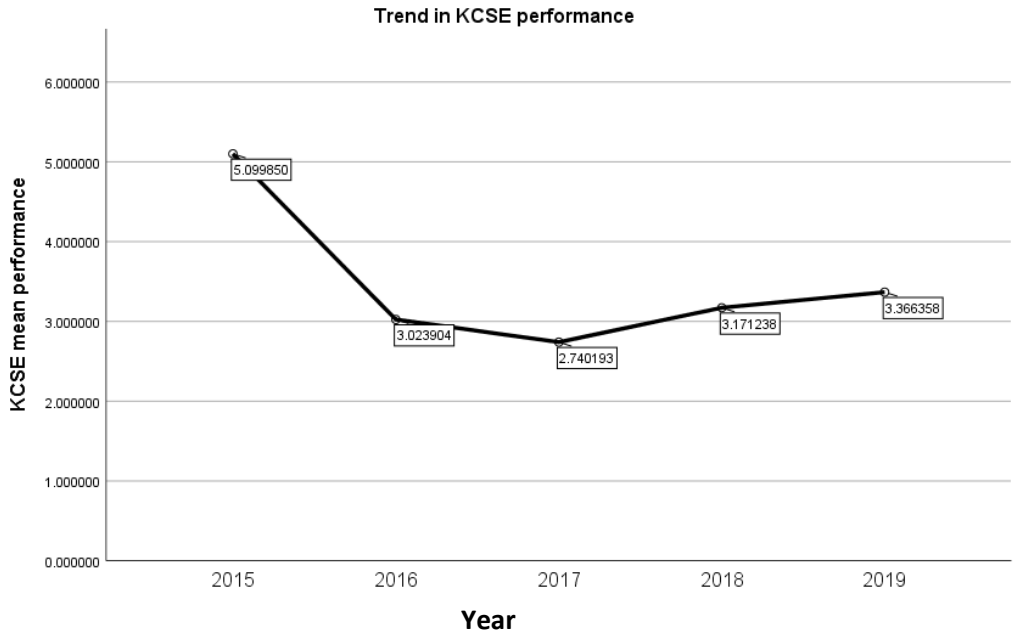

Figure 4.2*: Line Graph on Trend in Academic Performance 2015-2019 in Kisumu County*

The trend in academic performance in Figure 4.2 also showed that performance has been on the upward trend from the year 2017 to 2019. However, it experienced downward trend between 2015 to 2016. The results are consistent with various findings in the study of academic performance in KCSE. The reflected drop in KCSE meanscores 2015-2016 was due to stringent measures introduced by KNEC on KCSE administration. The results are also consistent with the findings of MoEST, Homabay County (2018) that stated that the mean performance in 2016 and 2017 KCSE examinations in public secondary schools in Rachuonyo South dropped from 4.146 to 4.091 respectively. The results indicated a minimal downturn in academic performance. The Kenya National Examination Sector Plan (NESP, 2013-2018) highlights the

government's commitment to improving students' learning outcomes by addressing a variety of quality concerns, including the utilization of suitable professional development programs to support academic performance (Republic of Kenya, 2014).

The period 2017 – 2019 showed consistent improvement in performance with a mean of 3.106, 3.271, and 3.366 respectively for the year 2017, 2018 and 2019 respectively. The improved performance may be attributed to attempts by the ministry of education and teachers service commission to improve teacher productivity and efficiency at work with the goal of enhancing student academic performance. The TSC introduced Principals Performance Contract (PPC) and Teacher Performance Appraisal and Development (TPAD) tool in 2016 (TSC, 2016).The implementation of both required resources hence the need to provide the same from all sources including community financing.

4.3Constraints on Public Secondary School Financing in Kisumu County

The study sought to find out the strategies used by principals to fill the shortfalls in the schools financial budget and the results were obtained as outlined. Table 4.7 below shows the gaps in financial budget.

Table 4.7: ***Gaps in Financial Budget Shortfalls***

How do the school fill the shortfall in financial/budget?	Frequency	Percentage
Obtain goods on credit	1	6
Funds used according to budget	1	6
Collect fee arrears	1	6
Parents pay lunch fee in kind	1	6
Savings/Income generating activities e.g. school farm, bakery, school bus	3	19
Debts are carried forward	2	13
Donations	2	13
Harambees/Fundraising	2	13
Cutting cost on expenditure	1	6
Request from CDF	1	6
Appealing to parents to support financially	1	6
Total	16	100

The principals stated that in order to fill the shortfall in financial budget, they obtained goods on credit, received donations, appealed to parents to support in clearing fee arrears; a task that they stated to be daunting and as a result they organized for fund raising events such as Harambees. Many principals also stated that they bridge the financial shortfall through savings, bus hires to generate money and income generating activities such as management of school farm, bakery and farm animals. Indeed it showed inadequacy in provision of financial resources.

Table 4.8 below shows constraints in regards to financing of education in Kisumu County.

Table 4.8: ***Constraints in regards to financing of Education in Kisumu County***

What constraints if any does the school have with regard to financing of education in your school?	**Frequency**	**Percentage**
Most parents don't pay fees	9	39.06
Inadequate funds from the government	12	51.56
Fluctuations of prices	1	4.69
Lack of enough funds for salaries	1	4.69
Total	23	100

Many principals complained that they received inadequate funds from the government (51.56%) and that (39.06%) of parents do not pay fees due to low attitude towards education and poverty levels in the community. Few principals also stated that fluctuation of prices of basic commodities was a constraint in financing education. The constraint in financing of secondary schools should have a way forward from the stakeholders that form basis of this study.

4.3.1Community financing of infrastructure in Public Secondary Schools and its effect on academic achievement in Kisumu County

The study identified the following infrastructure resources being financed by the community in Kisumu County. They include administration block, classrooms, libraries, dormitories,

dining halls, playgrounds, games equipment's, electricity, water projects, tree plantings, school's buses, school gates, laboratory, generator and bicycles

The table 4.9 shows the amount of the community financing of infrastructure resourcesin secondary schools in Kisumu County.

Table 4.9*: The amount the community financed infrastructure resources (2015 – 2019)*

Year	2015	2016	2017	2018	2019
Administration Block	6,755,668.00	7,943,020.00	9,227,442.00	5,403,172.00	2,566,103.00
Classes	5,164,391.00	3,408,275.00	3,427,332.00	4,885,847.00	6,139,647.00
Library	3,659,919.00	1,444,184.00	1,626,664.00	1,868,118.00	2,183,917.00
Dormitories	4,629,146.00	4,365,191.00	4,613,717.00	5,518,141.00	4,149,443.00
Dining Hall &Kitchen	1,735,930.00	2,021,858.00	2,227,766.00	1,932,783.00	1,943,686.00
Playground & Games equipment	491,846.00	209,406.00	626,147.00	778,071.00	390,375.00
Electricity	499,079.00	620,999.00	458,735.00	485,710.00	429,139.00
Water	514,992.00	610,889.00	624,433.00	674,390.00	281,616.00
Environment/Tree planting	65,097.00	62,894.00	25,731.00	45,280.00	19,109.00
School gate & Fencing	733,430.00	866,510.00	856,833.00	1,530,419.00	818,969.00
School bus	4,339,825.00	3,320,179.00	3,295,512.00	2,241,741.00	6,807,278.00
Laboratory	3,616,520.00	2,743,950.00	1,581,845.00	4,023,639.00	1,583,340.00
School generator	361,652.00	223,848.00	263,640.00	215,552.00	218,391.00
Toilet Facilities	1,913,862.00	1,998,751.00	1,865,260.00	1,880,332.00	4,886,515.00
Bicycle	578,643.00	361,046.00	329,551.00	574,805.00	638,512.00
Total	**35,060,000.00**	**30,201,000.00**	**31,050,608.00**	**32,058,000.00**	**33,056,040.00**

Table 4.9 illustrates community financial allocation and trends within school's budgets over a five-year period from 2015 to 2019. Notably, total expenditures decreased slightly from Ksh. 35,060,000.00 in 2015 to Ksh. 33,056,040.00 in 2019. The school's financial priorities evolved over these years, with notable investments in infrastructure maintenance, including dormitories, dining facilities, and libraries. Capital assets, such as school buses and generators, also saw significant allocations, suggesting a focus on transportation and backup power solutions. Additionally, the data reflects variable spending on environmental initiatives,

administration block, library, laboratory, dormitory, kitchen and toilet facilities. These shifts in financial distribution likely align with the school's evolving needs and strategic priorities, contributing to an overall stable budget throughout the period. Further analysis can provide insights into the effect of these investments on the school's overall functioning and educational outcomes

Figure 4.3 is a line graph portraying a compelling trend in community investment over a five-year period, with all values represented in Kenyan Shillings (KES).

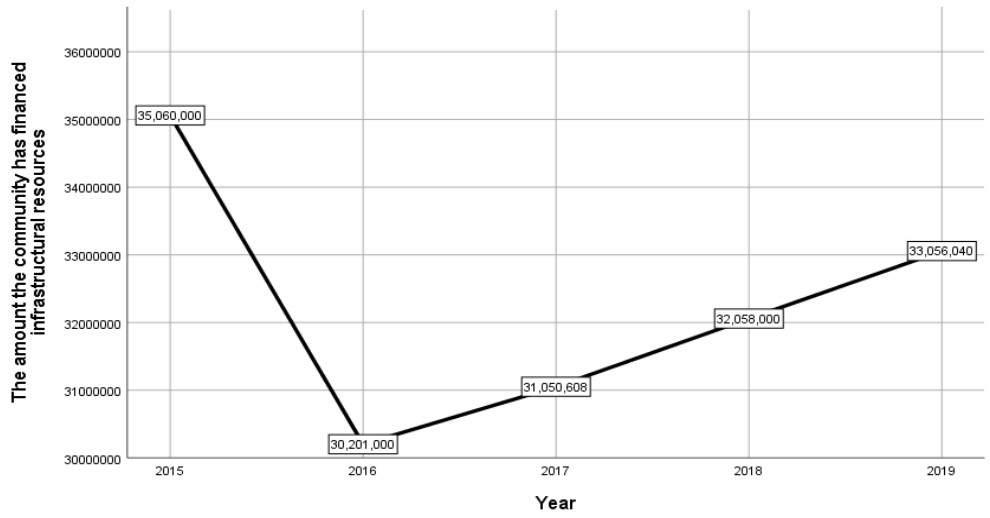

Figure 4.3: ***Line Graph on Trend of Community Financing of Infrastructure Resources 2015 – 2019, Kisumu County***

In 2015, community financing commenced at approximately 35,060,000 KES. The subsequent year, 2016, witnessed a slight dip in funding, dropping to 30,201,000 KES. However, from 2017 onwards, there was a consistent and positive trajectory in financing. In 2017, funding increased to approximately 31,050,608 KES, followed by a further rise to 32,058,000 KES in 2018. The peak in financing occurred in 2018, demonstrating the community's substantial

commitment to infrastructural development. This trend continued in 2019 when community financing reached approximately 33,056,040 KES.

4.3.2 Principals response on Community Financing on infrastructure Resources in Public Secondary Schools and its effects on academic achievement in Kisumu County

Table 4.10 shows principals response on community financing of secondary education. The response were in terms of Strongly Agree (SA), Agree (A), Disagree(D) and Strongly Disagree (SD). The mean ratings were aggregated at the end of statement items.

Table 4.10: ***Principals Response on Community Financing on Infrastructure resources in Kisumu County***

Statements	SA	A	D	SD	mean
Community financing of adequate classrooms has an influence on KCSE performance	34(53.3)	26(40.0)	0	4(6.7)	3.41
Community financing of library resources improves academic performance	43(66.7)	17(26.6)	0	4(6.7)	3.55
Community financing of laboratory equipment improves academic performance	50(78.6)	9(14.3)	0	5(7.1)	3.63
Community financing of electricity in school improves academic performance	37(57.1)	22(35.7)	0	5(7.1)	3.42
Community financing of adequate supply of water to the school improves academic performance	25(38.5)	34(53.8)	0	5(7.7)	3.23
Community financing of staff room and offices improves academic performance	17(27.3)	41(63.6)	0	6(9.1)	3.08
Community financing of teacher houses improves academic performance	27 (42.9)	32(50.0)	5(7.1)	0	3.34
Community financing of enough toilets improves academic performance	32(50)	27(42.9)	5(7.1)	0	3.42
Community financing of adequate desks and chairs improves academic performance	41(64.3)	18(28.6)	5(7.1)	0	3.56
Community financing of adequate pavements and good school paths improve attractiveness and therefore improves academic performance	21(33.3)	26(40.0)	13(20.0)	4(6.7)	3.00
Community financing of adequate playground and adequate space	16(24.7)	38(60.0)	4(6.7)	6(6.7)	3.00
Community provision of adequate classrooms has an influence on KCSE performance	25(39.6)	32(50.0)	5(8.3)	2(2.1)	3.25
Community provision of library resources improves academic performance	30(46.9)	30(46.9)	3(4.1)	1(2.0)	3.39
Community provision of electricity in school improves academic performance	25(38.8)	33(51.0)	5(8.2)	1(2.0)	3.28
Community provision of adequate supply of water to the school improves academic performance	20(31.3)	39(60.4)	4(6.3)	1(2.1)	3.22
Community provision of staff rooms and offices improves academic performance	16(25.0)	40(62.5)	5(8.3)	3(4.2)	3.08
Community provision of teacher houses improves academic performance	27(42.9)	25(38.8)	9(14.3)	3(4.1)	3.19
Community provision of enough toilets improve academic performance	14(22.9)	39(60.4)	8(12.5)	3(4.2)	3.00
Community provision of adequate desks and chairs improves academic performance	29(44.9)	23(36.7)	9(14.3)	3(4.1)	3.22
Community provision of text books improves academic performance	29(45.8)	27(41.7)	5(8.3)	3(4.2)	3.28
Community provision of adequate pavements and good school paths improve attractiveness and therefore improves academic performance	17(27.1)	28(43.8)	15(22.9)	4(6.3)	2.67
Adequate playground and adequate space improves academic performance	17(26.5)	34(53.1)	12(18.4)	1(2.0)	3.05
Overall mean					**3.33**

Table 4.10 shows the overall mean was 3.33 (adequate).

Community Financing of Adequate Classrooms: A majority of respondents (53.3%) strongly agree that community financing for adequate classrooms has effect on KCSE performance, with an overall mean score of 3.33. This indicates strong support for the idea that investing in classroom infrastructure positively affect academic achievement. Community Financing of Library Resources: A significant portion of respondents (66.7%) strongly agree that community financing of library resources affects academic performance, yielding a high mean score of 3.55. This highlights the importance of well-equipped libraries in enhancing learning outcomes.

Community financing of laboratory equipment; this item receives strong support with (78.5%) of respondents strongly agreeing that affect academic achievement, the mean score of 3.63 emphasizes the significant of well equipment laboratory in enhancing learning.

Community Financing of Electricity in School: A majority (57.1%) strongly agree that community financing of electricity improves academic performance, with a mean score of 3.42. Access to electricity is seen as a contributing factor to better education. Community Financing of Adequate Supply of Water: While some respondents (38.5%) express strong agreement, a larger group (53.8%) agrees that it improves academic performance. The mean score of 3.23 suggests that access to water resources is perceived as beneficial to education. Community Financing of Staff Room and Offices: This item received mixed responses, with (27.3%) strongly agreeing and (63.6%) agreeing. The mean score of 3.08 indicates that while there's support, it's not as strong as for other factors.

Community Financing of Teacher Houses: A significant number (42.9%) strongly agree, while 50% agree that it improves academic performance. However, the presence of some disagreement results in a mean score of 3.34, suggesting relatively strong but not unanimous

support. Community Financing of Enough Toilets: Half of the respondents strongly agree, and (42.9%) agree that it improves academic performance, with a mean score of 3.42. Adequate toilet facilities are perceived as important for a conducive learning environment.

Community Financing of Adequate Desks and Chairs: A majority (64.3%) strongly agree, and (28.6%) agree that it improves academic performance, yielding a mean score of 3.56. Proper seating and workspaces are seen as crucial for learning. Community Financing of Adequate Pavements and Paths: This item received mixed responses, with (33.3%) strongly agreeing, (40%) agreeing, and (20%) disagreeing. The mean score of 3.00 indicates relatively moderate support for its effect on academic achievement

Community Financing of Adequate Playground and Space: This item received moderate support, with (26.5%) strongly agreeing and (53.1%) agreeing, resulting in a mean score of 3.05. Adequate play areas and space are seen as contributing factors to academic achievement.

Table 4.11: ***Principals views on the adequacy in community financing of infrastructure projects and facilities in the secondary schools.***

Frequency	**Parent**	**Percentage %**
Very Adequate	0	0
Adequate	10	15.63
Inadequate	54	84.37
Very Inadequate	0	0
Total	**64**	**100**

Table 4.11 presents an assessment of projects and facilities in secondary schools based on responses from a sample group. The majority of respondents, constituting 84.61% of the sample, categorized these projects and facilities as "Inadequate," indicating that there are significant concerns or deficiencies in secondary school infrastructure, while 15.38% of respondents rated the facilities as "Adequate," it's apparent that a minority found the conditions acceptable.

4.3.3 Regression Analysis of Community financing on Infrastructure Resources in Public Secondary Schools and its Effects on Academic Achievement in Kisumu County

Pearson correlation analysis was performed to determine the effect of community-financed infrastructure in Kisumu County secondary schools. The correlation analysis demonstrates the direction, intensity, and importance of the correlations between the study's variables (Sekaran 2003). A positive correlation means that when one variable grows, so will the other.

Figure 4.4 shows the scatter graph of the community financing effect on the provision of infrastructure resources. The infrastructure resources included buildings, land, administration blocks, furniture and equipments.

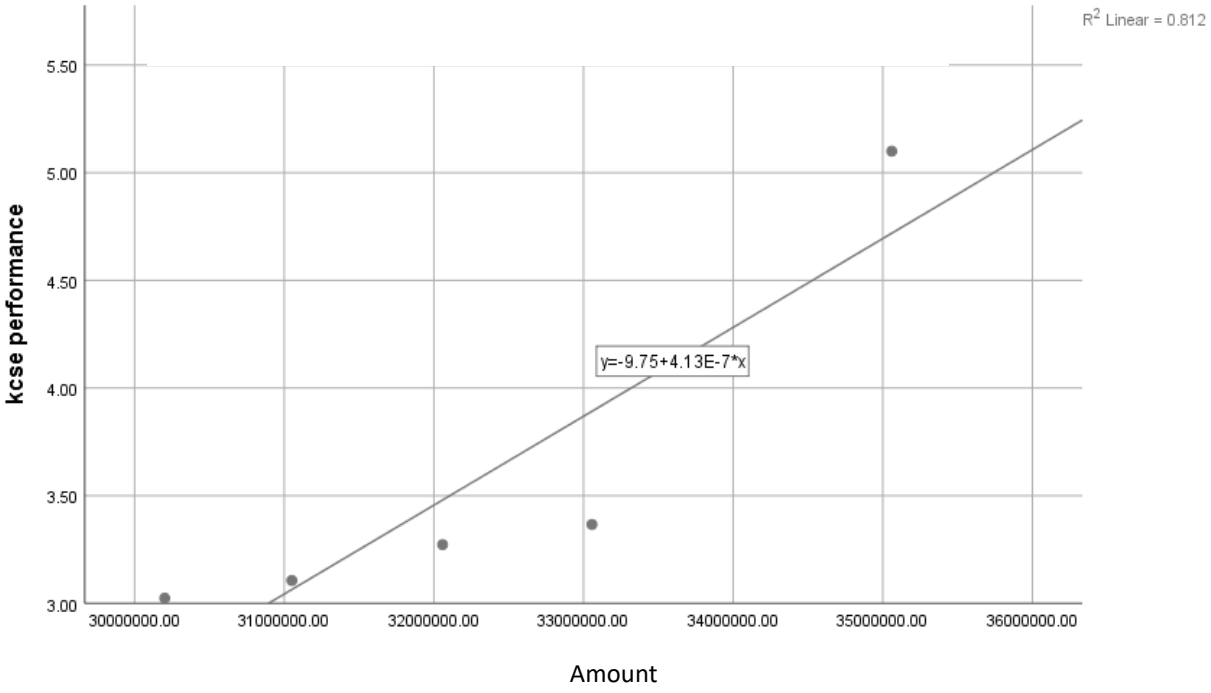

Figure 4.4: ***Scatter Graph of Community Financing of Infrastructure Resources on Academic Achievement***

The scatter graph in figure 4.4 visually illustrates the relationship between the amount the community has invested in infrastructure resources and KCSE mean scores. The line slopes upwards from left to right, and variables suggest a positive correlation,signifies that as the community invests more in infrastructural resources, such as classrooms, facilities, and other

educational amenities, there is a corresponding increase in KCSE scores. This positive relationship implies that investments in infrastructure significantly influence academic performance by providing students with conducive learning environments and essential resources.

Table 4.12 shows model summary of regression analysis; community financing of secondary school infrastructure on academic achievement in Kisumu County.

Table 4.12 (a) ***Model Summary***

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.901[a]	.812	.749	.43299

a. Predictors: (Constant), ***The amount the community has financed infrastructure resources***

According to the model summary in table 4.14, The R Square value indicates that approximately 81.2% of the variance in the dependent variable can be explained by the predictor(s) in the model. The Adjusted R Square takes into account the number of predictors and adjusts the R Square value accordingly. The Std. Error of the Estimate represents the average distance between the observed values and the predicted values by the model. Thus, community financing of infrastructure plays a role in facilitating academic performance in secondary school in Kisumu County.

Table 4.12(b): *ANOVA*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.422	1	2.422	12.916	.037[b]
	Residual	.562	3	.187		
	Total	2.984	4			

a. Dependent Variable: KCSE performance

b. Predictors: (Constant), The amount the community has financed infrastructure resources

According to table 4.12(b) The F-value of 12.916 suggests that there may be a significant relationship between the predictor(s) in the model and the dependent variable. The significance level of 0.037 indicates that the relationship is statistically significant at the 0.05 significance level.

Table 4.12 shows coefficients in regression analysis of community financing of public secondary schools infrastructure on academic achievement in Kisumu County.

Table 4.12(c): *Coefficients*

Coefficients[a]					
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	-9.752	3.713		-2.627	.079
The amount the community has financed infrastructure resources	4.128E-7	.000	.901	3.594	.037

a. Dependent Variable: KCSE performance

The coefficients table(table 4.12c) presents the results of a regression analysis, with the dependent variable being "KCSE performance" and the independent variable being "The amount the community has financed infrastructural resources." The analysis reveals valuable insights into this relationship. The unstandardized coefficient for the independent variable is approximately 0.0000004128, indicating that for every unit increase in the community's financing of infrastructure resources, KCSE performance is expected to increase by this small amount. Furthermore, the standardized coefficient of 0.901 demonstrates a strong positive relationship, implying that a one-standard-deviation increase in community financing is associated with a substantial increase in KCSE performance. The statistical significance of this coefficient, as indicated by a p-value of 0.037 (below the conventional threshold of 0.05), further emphasizes that the amount financed by the community is a significant predictor of KCSE performance. Thus, the statistical model takes the form $Y = B_0 - B_1 X_1 + \ldots\ldots e$. Where

Y represents the outcome variable while X represents the predictor variable i.e Y = -9.752 +4.128E-7$X_{1.....}e^{i}$.

The study findings are similar to the study done by Ugwu, Asuma, & Ugwuanyi (2024) on the impact of community led development initiatives on education quality and academic performance in Uganda. The study highlighted that community-led initiatives significantly enhanced infrastructure, such as the construction of classrooms, sanitation facilities, and teacher housing. This involvement led to improved learning environments that directly affect student attendance and retention rates. The study also found that community engagement in school management correlates with higher student retention and improved academic outcomes. The study notes that schools with active community participation see better performance metrics, particularly in subjects like science and mathematics. The study also identified a "ripple effect," where improved infrastructure and community support enhance overall educational quality, resulting in better academic achievement across various metrics.

The results of this study align with previous research, such as Ugwu, Asuma, & Ugwuanyi (2024), which underscores the critical role of community involvement in improving educational outcomes. Similar to their findings in Uganda, this study reveals that community financing of infrastructure positively impacts academic performance by enhancing the learning environment. The improvement of facilities through community support contributes to better attendance, retention rates, and ultimately, academic achievement. Both studies highlight the significant influence of community engagement on student outcomes, particularly in subjects that benefit from better infrastructure. This suggests that community-driven initiatives not only improve the physical conditions of schools but also foster a more conducive learning atmosphere, leading to improved performance. Consequently, this reinforces the notion that sustained community involvement in education is crucial for enhancing academic achievements.

4.4 Community Financing of Secondary Schools on Transport and Travelling in Public Secondary Schools and its Effects on Academic Achievement in Kisumu County.

The second objective of the study determined community financing of secondary schools on Transport and Travelling and its effects on academic achievement in Public Secondary Schools in Kisumu County. The aspect of transport looked at provision of funding in regard to students going for games, field excursion, school symposiums, tour and travel, among others.

Table 4.13 describes the acquisition of school transport for the school activities

Table 4.13: ***Acquisition of School Transport***

The school has a bus? If NO; how do you acquire school transport?	Frequency	Percentage
No	36	56.25
Yes	28	43.75
Total	64	100

Table 4.13 show that 56.25 % of principals stated that they did not have school bus and instead they had to hire from other schools at a fee which was expensive. Some also stated that they Hired matatus (Public Service Vehicles) for school transport and in some cases, students walk while others use readily available means such as boda-boda or public vehicles. However, 43.75% of principals had school buses for school transport.

Table 4.14shows community financing of travelling and transport for the period 2015 – 2019 in Kisumu County

Table 4.14: *Community Financing Transport and Travelling, Kisumu County,2015 - 2019*

	2015	2016	2017	2018	2019
Games	547,450.00	340,133.00	349,000.00	383,300.00	387,000.00
Excursions	175,950.00	114,950.00	115,650.00	115,500.00	134,550.00
Symposiums	23,150.00	60,000.00	50,155.00	65,000.00	31,120.00
Tours and travels	28,800.00	35,000.00	65,172.00	121,632.00	27,381.00
Others (Specify)	24,500.00	28,000.00	16,655.00	20,500.00	24,262.00
TOTAL	**799,850.00**	**578,083.00**	**596,632.00**	**705,932.00**	**604,313.00**

Table 4.14 outlines annual expenditure, denominated in Kenyan shillings, across various categories from 2015 to 2019. Notably, the "Games" category witnessed a consistent increase in spending over these years, indicating a growing investment in recreational activities. In contrast, the "Excursions" category displayed fluctuations, with a significant drop in 2016 followed by a resurgence in 2019. Meanwhile, "Symposiums" maintained relatively stable expenditure levels, and "Tours and Travels" experienced a peak in 2018. The others category exhibited some variability but stayed within a narrow range. Overall, the total expenses escalated over the five-year period, reaching the highest amount in 2015.

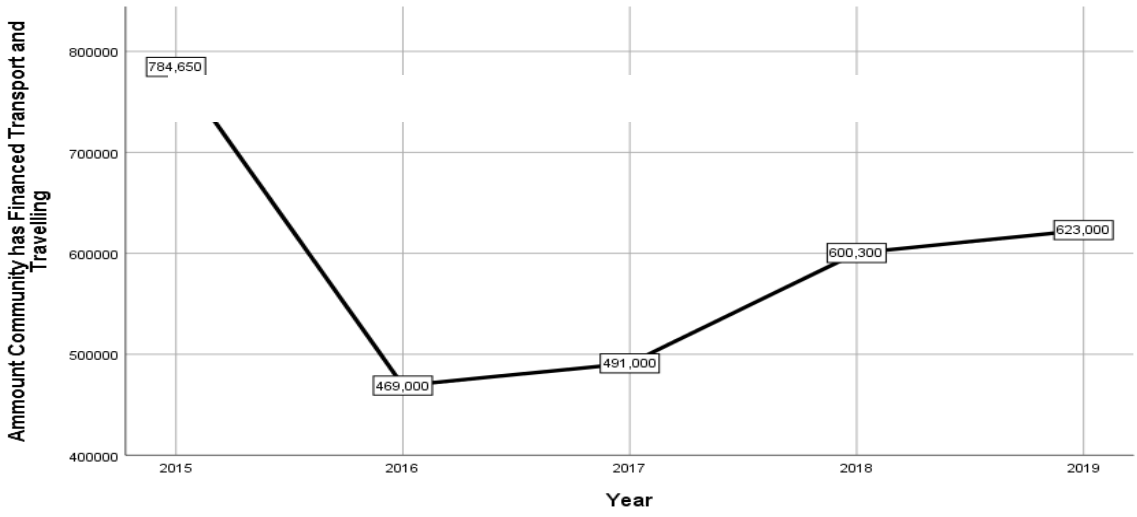

Figure 4.5: ***Line Graph on Community Financing of Transport and Travelling in Kisumu County. 2015 – 2019***

According to figure 4.5 over the five-year period from 2015 to 2019, community financing for transport and travel-related projects in Kenyan Shillings (KES) exhibited notable trends. In 2015, the community initiated its involvement with an initial investment of approximately 799,850.00 KES. A significant dip occurred in 2016, with funding dropping to 578,083.00 KES. However, from 2017 onwards, there was a consistent upward trajectory, reaching a peak of around 604,313.00 KES in 2019. This sustained growth signifies the community's increasing

recognition of the importance of investing in transportation infrastructure and services, possibly influenced by evolving community needs or a growing population.

4.4.2 Regression Analysis of community financing on transport and travelling of in Public Secondary Schools and its effects on academic achievement in Kisumu County

Pearson correlation analysis was used to establish the effect of community financing of transport and travel of secondary schools in Kisumu County. The correlation analysis shows the direction, strength and significance of the relationships among the variables of the study (Sekaran, 2003). A positive correlation indicates that as one variable increases, the other variable also increases.

Figure 4.6 shows the scatter graph of the community financing effect on the provision of transport & travelling resources.

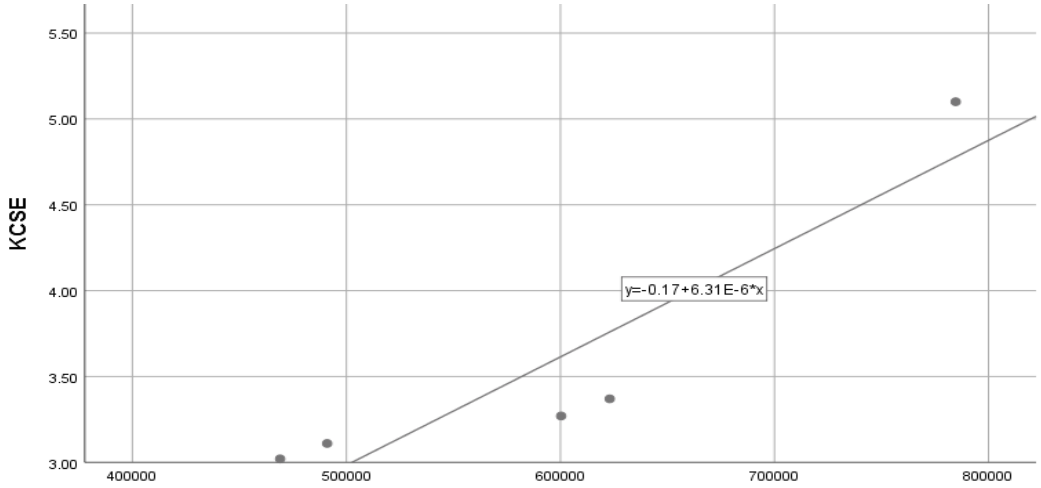

Figure 4.6: ***Scatter Graph on Relationship of Community Financing on Transport and Travelling; and Academic Achievement in Kisumu County,2015 - 2019***

The variables show strong positive relationship between community financing of transport and travel and academic achievement at KCSE. Transport and travelling resources were in form of hiring of buses, pick- ups, minibuses and vans.While this correlation doesn't establish

causation, it strongly suggests that improvements in transport and travelling resources can contribute positively to the academic success of students.

Table 4.15 shows model summary of regression analysis; community financing of secondary school transport and travel on academic achievement in Kisumu Coumty.

Table 4.15(a) : *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.878[a]	.771	.695	.47743

a. Predictors: (Constant), sports

Table 4.15 is a model summary for ***Community Financed Transport and Travelling*** as the predictor variable and the KCSE performance as the outcome variable. The value of R = .878 indicates a strong positive correlation between the predictor (sports) and the outcome variable. This means there is a high degree of association between ***Community Financed Transport and Travelling*** and KCSE performance. The R Square value = .771 means that 77.1% of the variation in the dependent variable is explained by ***Community Financed Transport and Travelling, Kisumu County***. In other words, ***Community Financed Transport and Travelling*** account for 77.1% of the changes in KCSE.

Table 4.15 (b) *ANOVA*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.301	1	2.301	10.095	.050[b]
	Residual	.684	3	.228		
	Total	2.985	4			

a. Dependent Variable: KCSE

b. Predictors: (Constant), sports

The ANOVA table for table 4.14 (b) presents key statistical insights into how ***Community Financed Transport and Travelling***, as an independent variable, predicts performance in the KCSE (dependent variable). The regression sum of squares (2.301) highlights that ***Community Financed Transport and Travelling*** explains a notable portion of the total variance in KCSE scores. The mean squares further emphasize the model's effectiveness, with a larger mean square for the regression (2.301) compared to the residuals (0.228), signifying that ***Community***

Financed Transport and Travelling significantly contributes to explaining the variation in KCSE performance. The F-statistic (10.095), derived from the ratio of the regression mean square to the residual mean square, indicates that the model provides a good fit, as higher F-values suggest stronger model performance. Finally, the p-value (0.050) is right at the threshold of statistical significance, indicating that while the contribution of sports to predicting KCSE performance is not overwhelmingly significant, it is still marginally meaningful and worth considering.

Table 4.15 (c) : *Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.720	1.680		-1.024	.381
	Sports	8.058E-6	.000	.878	3.177	.050

a. Dependent Variable: KCSE

The coefficients table from the regression analysis reveals significant insights into the relationship between sports participation and KCSE scores. The unstandardized coefficient for sports (B = 8.058E-6) indicates a very slight positive effect, suggesting that an increase in sports participation correlates with a marginal increase in KCSE scores, albeit by a minuscule amount. This implies a positive relationship where more engagement in sports might be linked to improved academic performance. The standardized coefficient (Beta = .878) indicates a strong effect size, reinforcing that sports participation is a substantial predictor of academic achievement compared to other potential predictors. The t-statistic (t = 3.177) further supports the validity of the sports coefficient, suggesting that it is statistically significant and meaningfully different from zero. However, the p-value (Sig. = 0.050) being at the threshold of significance indicates that while there is a noteworthy relationship, it is marginally significant and warrants further investigation. Thus, the statistical model takes the form Y = B0 - B1 X1 +……e. Where Y represents the outcome variable while X represents the predictor variable i.e Y = -1.720 + 8.058X1 + …….e.

The findings of this study are similar to that of Fan & Das (2015) on assessing the impacts of student transportation on public transit. According to the study, the findings regarding student transport and academic performance, particularly from the Student Pass program in Minneapolis, highlight significant educational, economic, and societal benefits. Transportation improved attendance which was evident by Students using the Student Pass showed a 23% reduction in absenteeism compared to non-users, indicating that easier access to transportation positively affects school attendance. Transportation also led to higher academic performance shown by the students who participated in after-school activities using the pass had an average GPA that was 0.28 points higher than those who did not utilize the pass for such opportunities. This suggests that access to transportation can enhance academic outcomes by allowing students to engage in additional learning experiences beyond regular school hours. The study findings also align with the findings of Edwards (2015) on another one rides the bus: The impact of school transportation on student outcomes in Michigan. The findings on student transportation and academic performance reveal significant insights into how access to school transportation affects student outcomes, particularly in Michigan. The findings indicated that eligibility for school transportation was found to significantly increase attendance rates, especially among economically disadvantaged students. The study indicated that these students experienced an increase in attendance of approximately 0.5 to 1% point, which translates to about one additional day of attendance in a typical school year. Transportation also reduced the likelihood of being chronically absent (missing less than 10% of school days) decreased by 2 to 4% points for economically disadvantaged students who had access to transportation. This suggests that reliable transport is crucial for encouraging regular school attendance among at-risk populations. However the study found no Significant Effect on academic achievement: Despite the positive impact on attendance, the study found no significant evidence that school transportation eligibility influenced academic achievement outcomes, such as standardized test

scores in math and English Language Arts. This indicates that while attendance is critical for academic success, simply providing transportation does not directly enhance academic performance.

The findings of this study align with existing research that emphasizes the importance of transportation in improving school attendance, as highlighted by Fan & Das (2015) and Edwards (2015). Like those studies, this research shows that reliable transport is crucial for regular school attendance and, subsequently, academic performance. However, similar to Edwards' work, the direct impact of transport on academic achievement remains less clear, suggesting that while transportation solves access issues, it may not be the sole factor influencing academic success. Based on these comparisons, it is evident that while transportation is a vital enabler of educational access, improving academic outcomes likely requires a more comprehensive approach that addresses other challenges, such as quality of education and socio-economic support. Therefore, future efforts should focus on integrating transport solutions with broader strategies aimed at enhancing learning environments and student well-being.

4.5 Community financing on Teaching and Learning in Public Secondary Schools and its effect on academic achievement in Kisumu County

The third objective of the study was to determine Community financing on Teaching and learning and its effect on academic achievement in Public Secondary Schools in Kisumu County. The teaching and learning resources whose adequacy the study sought to find as per the status of enrolment were: Textbooks, Stationeries, Exercise books, Charts, Equipment's, and Audio-Visuals.

Table 4.16 shows the provision of exercise books in secondary schools in Kisumu County as indicated by the principals.

Table 4.16: ***Whether Exercise Books are provided in Schools***

Does your school provide exercise books for students?	**Frequency**	**Percentage**
Yes	64	100
NO	0	0
Total	**64**	**100**

All principals interviewed revealed that though the schools provided books for the students, the books were inadequate and students were required to buy additional books for personal use and extra assignments.

Table 4.17: ***Participation of the Community in regards to provision of Exercise books***

ii. Do the community participate in the provision of exercise books?	**Frequency**	**Percentage**
No	61	95.31%
Yes	3	4.69%
Total	64	100%

Table 4.17 shows that 95.31% of the schools had community support in provision of exercise books. The principals noted that the government provides exercise books and therefore minimal support from the community.

4.5.1Text Book Ratio in Public Secondary Schools in Kisumu County

Table 4.18 shows the principal response on the available text book ratio in the secondary schools. The text books were mostly in the ratio of 1:1 in most core and compulsory services.

Table 4.18: ***Principals Response on the textbook student ratio***

Text Books	1:1	1:2	1:3	1:4	1:5
English	55	5	2	2	0
Kiswahili	54	3	4	3	0
Mathematics	55	5	2	2	0
Chemistry	53	5	4	2	0
Biology	54	6	3	1	1
Physics	56	5	3	0	1
Geography	58	3	2	1	1
History	57	6	1	0	0
CRE	60	2	2	0	0
Agriculture	48	8	2	2	0
Business Studies	47	9	3	2	0
Computer	15	3	2	0	1
H/Science	18	3	1	0	0
French	4	1	1	0	0
Art & Design	4	0	1	0	0
German	1	0	1	0	0

Table 4.18 displays the principals' responses regarding the textbook-to-student ratio in various subjects. The ratios range from 1:2 to 1:5, representing the number of students per textbook. In subjects like English, Kiswahili, and Mathematics, the 1:1 ratio (one textbook per student) is prevalent, indicating a strong commitment to textbook provision. The government policy of providing textbooks from 2018 is success in many schools giving a ratio of 1:1 in the compulsory subjects (Republic of Kenya,2020)

However, other subjects, such as Biology, Physics, Geography, and Business Studies, predominantly have a 1:2 ratio, suggesting shared textbooks among two students. Some subjects exhibit variations with occasional 1:3 ratios. The principals reported the low ratios in optional subjects was due to lack of the right students enrolment figures and some schools did not offer these subjects earlier.

4.5.2 Principals Response on Community Financing on Teaching and Learning Resources in Public Secondary Schools and its effects on academic achievement in Kisumu County

Table 4.19 show the principals response on the amount the community financed for the learning and teaching resources.

Table 4.19: ***Principals Response on the amount community financed the following learning and instructional materials.***

	2015	2016	2017	2018	2019
Textbooks	864,667.00	107,604.00	695,222.00	1,003,733.00	1,196,005.00
Stationeries	58,522.00	107,027.00	32,228.00	28,251.00	33,663.00
Exercise books	126,525.00	528,697.00	86,678.00	390,144.00	464,880.00
Charts	17,820.00	22,138.00	8,195.00	346	412
Equipment's	986,103.00	0	0	20,372.00	24,275.00
Audio-Visual	398,683.00	64,896.00	477,677.00	62,624.00	74,621.00
Total	**2,452,320.00**	**830,362.00**	**1,300,000.00**	**1,505,470.00**	**1,793,856.00**

Table 4.19 Presents a detailed breakdown of annual expenditures, in Kenyan shillings, across multiple categories of educational materials and resources spanning five years, from 2015 to 2019. Notably, the data reveals fluctuations and shifts in spending patterns over this period. The "Textbooks" category witnessed a substantial increase in 2019, reflecting a notable investment in academic materials. In contrast, "Stationeries" and "Charts" categories showed varying levels of spending, possibly indicating changing requirements for stationary and visual aids. "Exercise books" exhibited a significant rise in expenditure, suggesting increased emphasis on supplementary learning materials; that is not provided by the Kenyan government. Lastly, "Audio-Visual" expenses displayed fluctuations, with the highest spending recorded in 2017, likely associated with promotion multimedia and audio-visual aids as noted by the principals. The overall trend points to an upward trajectory in total expenditure. Figure 4.7 illustrate graphical trend of community financing of teaching and learning resources

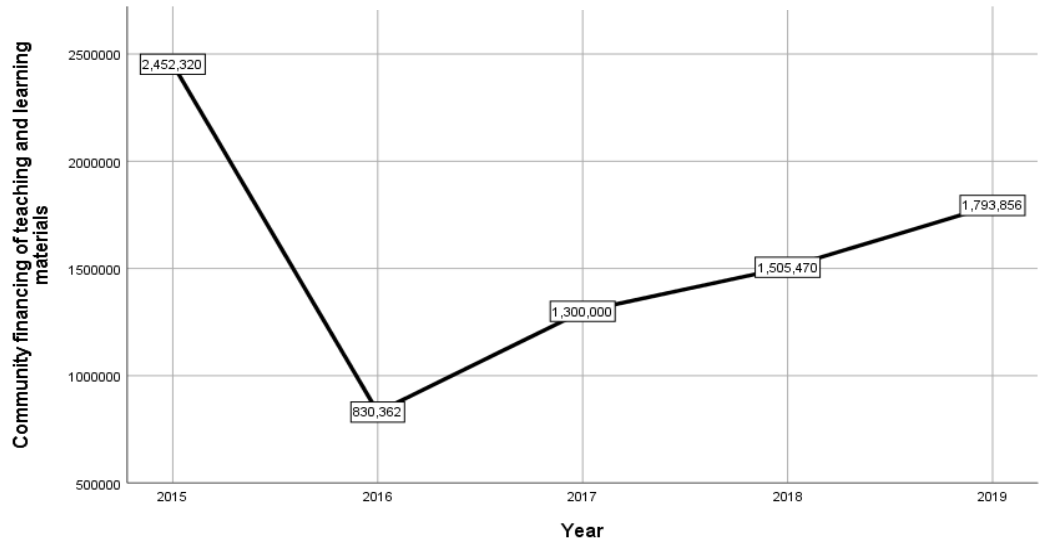

Figure 4.7: ***Line Graph on Trend in Community Financing of Teaching and Learning Materials***

The line graph in figure 4.7 offers a compelling insight into the community's investment in education resources, all values represented in Kenyan Shillings (KES). In 2015, the community initiated its commitment with an initial investment of approximately 2,452,320 KES. However, 2016 witnessed a significant decline in funding, with resources dropping sharply to around 830,362 KES. A positive shift emerged in 2017, with funding increasing to about 1,300,000 KES, indicating a renewed dedication to education. The upward trajectory persisted, with approximately 1,505,470 KES allocated in 2018, and the peak reached in 2019 at approximately 1,793,856 KES, showcasing a significant commitment to supporting learning and instructional materials.

Table 4.20: ***Principal Response on Adequacy Teaching and Learning Resources***

	SA	A	D	SD	mean
School has adequate textbooks in every subject	38 (58.7)	18 (28.2)	7 (10.9)	1 (2.2)	3.43
School has adequate number of readers and novels for English and Swahili	9 (14.1)	9 (14..1)	36 (56.2)	10 (15.6)	2.24
School has adequate maps, charts for every subject	1 (2.1)	16 (25.0)	40 (62.5)	7 (10.4)	2.19
Science subject has adequate equipment, models and structures for teaching	2 (32)	23 (35.9)	32 (50.0)	7 (10.9)	2.33
School has enough tuition materials e.g. chalks, exercise books, chalk boards.	17 (26.5)	30 (46.9)	17 (26.5)	0	3.00
Mathematics teacher have enough equipment, rulers, set squares for teaching	6 (8.7)	35 (54.3)	17 (30.4)	4 (6.5)	2.65
School has adequate students' furniture	15 (23.4)	38 (59.6)	10 (14.9)	1 (2.1)	3.04
School has adequate land for practical subjects (Agriculture, Biology)	9 (14.1)	25 (39.1)	22 (34.3)	8 (12.5)	2.56
Overall mean					2.64

The study sought the principals view on whether schools had adequate textbooks in every subjects. The study showed that 58.7% strongly agreed while 28.3% agreed. This amounted to 87% of secondary schools' principals who in general agreed that schools had adequate textbooks in every subject. The study also showed that 10.9% disagreed while 2.2% strongly disagreed. The mean ratings were 3.43 (adequate). The interpretation was that secondary schools' administration was in agreement that secondary schools had enough textbooks but they were inadequate in terms of textbooks provision of ration 1:1 and this may have negative effect on academic achievement.

Readers and Novels are especially used in English and Kiswahili subjects. The question posed to the school principals was whether School had large number of readers and novels for English and Swahili. The study showed that 13.3% strongly agreed and 13.3% agreed respectively. This amounted to 26.6% of secondary schools' principals who in general agreed that schools had large number of readers and novels for English and Kiswahili. The study also showed that

57.8% disagreed while 15.6% strongly disagreed. This amounted to 73.4% of secondary schools' principals who in general disagreed that schools had large number of readers and novels for English and Kiswahili. The mean ratings were 2.24 (very inadequate). The interpretation was that secondary schools' administration was in disagreement that secondary schools had large number of readers in English and Kiswahili. Novels and readers were not provided by the government and this may have negative effect on achievement performance.

The question posed to school principals was whether School had maps and charts for every subject. The study showed that 2.1% strongly agreed and 25.0% agreed respectively. This amounted to 27.1% of secondary schools' principals who in general agreed that schools had maps and charts for all subjects. The study also showed that 62.5% disagreed while 10.4% strongly disagreed. This amounted to 72.9% of secondary schools' principals who in general disagreed that schools had maps and charts for every subject. The mean ratings were 2.19 (very inadequate). The interpretation was that secondary schools' administration was in disagreement that secondary schools had adequate number of maps and charts. This may have negative effect on academic achievement.

Science subjects use equipment, models and structures for teaching. The question posed to the school principals was whether science subjects had adequate equipment, models and structures for teaching. The study showed that 4.2% strongly agreed and 35.4% agreed respectively. This amounted to 39.6% of secondary schools' principals who in general agreed that schools had equipment, models and structures for teaching the science subject. The study also showed that 50% disagreed while 10.4% strongly disagreed. This amounted to 60.4% of secondary schools' principals who in general disagreed that schools had adequate science equipment, models and structures for teaching. The mean ratings were 2.33 (inadequate). The interpretation was that secondary schools' administration was in disagreement that secondary schools had adequate

equipment, models and structures for teaching science subjects. This may have negative effect on academic achievement.

The question posed to school principals was whether School had adequate tuition materials e.g chalks, exercise books, chalks boards etc. The study showed that 26.5% strongly agreed and 46.9% agreed respectively. This amounted to 73.4% of secondary schools' principals who in general agreed that schools had enough tuition materials. The study also showed that 26.5% disagreed. The mean ratings were 3.00 (inadequate). The interpretation was that secondary schools' administration were in agreement that secondary schools had inadequate tuition materials. This may have negative effect on academic achievement.

The question posed to school principals was whether mathematics teachers has enough equipment, rulers, set squares for teaching. The study showed that 8.7% strongly agreed and 54.3 agreed respectively. This amounted to 63.0% of secondary schools' principals who in general agreed that mathematics teachers had enough equipment for teaching. The study also showed that 30.4% disagreed while 6.5% strongly disagreed. This amounted to 36.9% of secondary schools' principals who in general disagreed that mathematics teachers had enough equipment. The mean ratings were 2.65(inadequate). The interpretation was that mathematic teachers had inadequate resources for teaching in secondary school. This may have negative effect on academic achievement.

The question posed to the school principals was whether School had adequate student furniture. The study showed that 23.4% strongly agreed and 59.6% agreed respectively. This amounted to 83% of secondary schools' principals who in general agreed that schools' adequate furniture for students. The study also showed that 14.9% disagreed while 2.1% strongly disagreed. This amounted to 17% of secondary schools' principals who in general disagreed that schools had adequate students' furniture. The mean ratings were 3.04 (inadequate). The interpretation was that secondary schools' administration had supplied inadequate student furniture and this had

implication on student attendance to class. This may have negative effect on academic achievement.

The subjects' agriculture and Biology requires land for practical. The study sought the principals view on whether schools had adequate land for agriculture and Biology subjects. The study showed that 14.6% strongly agreed while 39.6% agreed. This amounted to 54.2% of secondary schools' principals who in general agreed that schools had adequate land for agriculture and biology subjects. The study also showed that 33.3% disagreed while 12.5% strongly disagreed. The mean ratings were 2.56 (inadequate). The interpretation was that secondary schools' administration was in agreement that land for agriculture and biology subjects were inadequate this may have negative impact on academic performance involving the two subjects.

Teaching and learning resource management is an integral part of the overall management of schools. Actualization of predetermined goals and objectives by the school management requires provision, maximum utilization and appropriate management of these resources. Adoption of modern methods of resource management helps to improve the quality of teaching and learning. This is because there is a direct relationship between provision and utilization of teaching and learning resources and its effect on academic achievement.

The levels of availability of instructional materials in public secondary schools in Kisumu County were determined and represented in the table 4.19 below.

Table 4.21: *Principal Response on Availability of Instructional Resources*

Audio-Visual materials	VA	A	LA	NA	mean
Radio	2(3.1)	20(31.3)	3(4.2)	39(60.4)	1.79
Television	4(4.6)	30(46.7)	7(11.1)	23(35.6)	2.24
Slides/films	0	0	24(21.7)	40(60.9)	1.59
Video Recording	0	8(11.4)	10(15.9)	46(72.7)	1.39
Overall Mean					1.72
Two dimensional materials					
Charts	6(8.7)	36(56.5)	22(34.8)	0	2.74
Photographs/Pictures	0	25(39.1)	31(47.8)	8(13.0)	2.26
Maps	1(2.1)	36(56.3)	25(39.6)	1(2.1)	2.58
Diagrams/Drawings	4(6.5)	35(54.3)	18(28.3)	7(10.9)	2.57
Overall mean					2.51
Three Dimensional materials					
Globes	8(13.0)	31(47.8)	17(26.1)	8(13.0)	2.61
Experimental models	4(6.5)	24(37.0)	26(41.3)	10(15.2)	2.35
Castings	0	10(15.9)	19(29.5)	35(54.5)	1.61
Rocks/Minerals	3(4.4)	9(13.3)	18(28.9)	34(53.3)	1.69
Plants and Specimen	2(4.7)	16(25.6)	33(51.2)	13(18.6)	2.16
Glass Objects	3(4.5)	19(29.5)	19(29.5)	23(36.4)	2.02
Measuring and monitoring instruments/weather stations	0	2(2.4)	12(19.0)	50(78.6)	1.24
Overall mean					1.93
Written descriptors					
Teaching aids-chalks, felt pens	20(31.9)	39(61.7)	5(6.4)	0	3.26
Reference materials	12(19.1)	38(57.4)	14(23.4)	0	2.96
Exercise books	25(39.1)	33(52.2)	6(8.7)	0	3.30
Overall mean					3.16

Table 4.21Audio – visual materials in the study included radio, television, films/film strip, slides and tape recorder. The study showed that the mean ratings in general as indicated by the school principal; were that radio had 1.79; television had 2.24; slides/films had 1.59; video recording was 1.39. The overall mean rating was 1.72 (very inadequate). The audio – visual materials were inadequate in most secondary schools and this may have negative effect on the teaching and learning process.

Two dimensional materials in the study included charts, photographs/pictures, maps, diagrams /drawings. The study showed that the mean ratings in general as indicated by school principals were that charts had 2.74; photography/pictures had 2.26; maps had 2.58; diagrams/drawings had 2.57. The overall mean rating was 2.51 (inadequate). The two-dimensional materials were inadequate in most secondary schools and this may have negative effect on teaching and learning process.

The three-dimensional materials included globes, experimental models, castings, objects and phenomena, minerals, rocks, plants and species, glass, objects, measuring and monitoring instruments, equipment's and machines. The overall mean rating was 1.93. The school Principals indicated that majority of items were inadequate.

Written descriptors were teaching aids, chalks, felt pens, textbooks, reference materials, readers and exercise books. The overall mean rating was 3.16 (inadequate). Though some were available but the school principal was in agreement that they were inadequate and hence this had effect on academic performance.

This result was in agreement with the findings of Makuto (2014) in Teso North District who found that teaching and learning materials were inadequate. He asserts that learning materials form one of the schools' assets that enhance pupils' foundation in the school for better performance in final examinations. The study found out that despite most of the schools receiving grants from the ministry of education most of the learning materials were not available in schools. This begs the question how was the money used when most essential items were not available in schools. This triggers the thinking of mismanagement of schools' funds by head teachers which results to insufficient learning materials hence poor pupils' academic performance in the final examinations.

This finding contradicts the findings of Kimeu, Tanui&Ronoh (2015) who reported that good student academic performance depended on sufficient and relevant teachers' reference books and guides, students and teachers' textbooks, charts, chalk board and pieces of chalk as teaching and learning materials. This finding also contradicts with the study of Loukas (2007) who reported that one of school characteristics is physical dimension which entails sufficient teaching and learning resource materials, school size and ratio of students to teachers in classroom, safety and comfort. Jaiyeoba (2011) also concurred with this finding by asserting that inadequate provision of teaching and learning materials was an impediment to effective academic performance of primary schools. Further, Ondieki&Orodho (2015) as well, reported that inadequate teaching and learning resources, incomplete syllabus coverage due to inappropriate instructional approaches and poor attitude amongst pupils and teachers negatively influenced academic performance in schools

Oguntunse et al (2013) concluded that availability and adequacy of teaching and learning materials promoted the effectiveness of schools as these are basic things that can trigger good academic performance of students. The study which was on the empirical nexus between teaching, learning resources and academic performance in mathematics among pre – university students in the Ile-Ife south – west, Nigeria, recommended that the government and private institutions should provide enough teaching and learning aids to students in order to enhance academic performance. This is being done by the government of Kenya as evidenced through FSE funds where purchase of teaching and learning resources is put under tuition fund. In the year 2018, the government committed Ksh. 4.792 per student towards the purchase of teaching and learning materials(See appendix 10)

4.5.3 Regression analysis of community Financing Teaching and Learning Resources in Public Secondary Schools and its effects in Academic Achievement in Kisumu County

Pearson correlation analysis was used to establish the effect of community financing of infrastructural development in secondary schools in Kisumu County. The correlation analysis shows the direction, strength and significance of the relationship among the variables of the study (Sekaran, 2003). A positive correlation indicates that as one variable increases, the other variable will also increase.

Figure 4.8 shows the scatter graph of community financing and its effect on the provision of teaching and learning resources

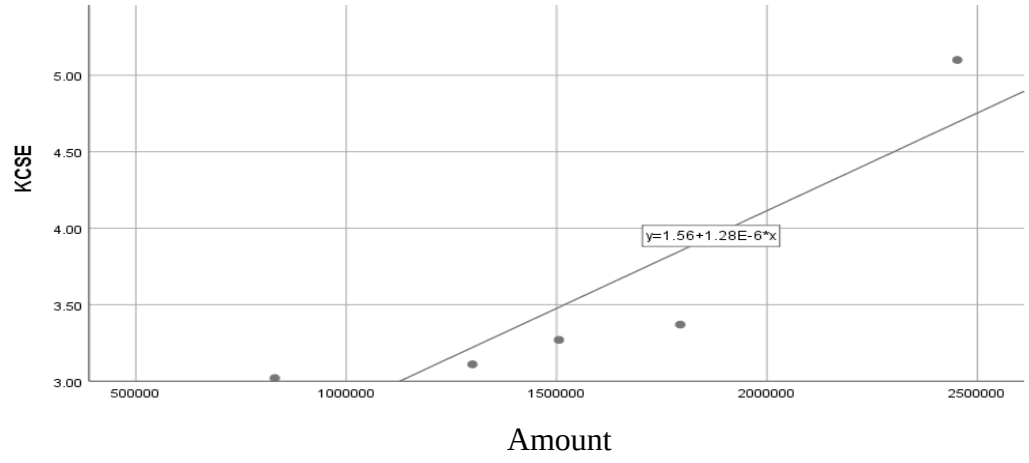

Figure 4.8: ***The scatter graph showing the relationship between Teaching and Learning Resources***

The variable shows strong positive relationship on the effect of community financing of teaching and learning resources on academic achievement of public secondary schools in Kisumu County.. The scatter plot in figure 4.8 shows the line sloping upwards from left to right, underscores that as community financing for instructional resources increases, there is a corresponding rise in KCSE scores. This positive relationship suggests that a greater level of community investment in teaching and learning materials contributes to improved academic performance. It implies that enhanced access to high-quality educational resources positively influences students' learning experiences, potentially leading to higher KCSE scores. While

causation is not proven by this correlation alone, it underscores the importance of community support and investment in providing quality educational materials to foster improved academic outcomes for students.

Table 4.22(a) ***Model Summary***

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.890a	.792	.722	.45509

a. Predictors: (Constant), *amount community has financed learning and instructional materials*

In the model summary in table 4.20 (a), A higher R Square value indicates a better fit of the regression model to the data. In this case, the R Square value of 0.792 suggests that approximately 79.2% of the variance in the dependent variable can be explained by the predictor variable(s). The adjusted R Square takes into account the complexity of the model and may be a more reliable measure of the model's performance.

Table 4.22(b) ***ANOVA***

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.363	1	2.363	11.408	.043[b]
	Residual	.621	3	.207		
	Total	2.984	4			

a. Dependent Variable: KCSE performance
b. Predictors: (Constant), *amount community has financed learning and instructional materials*

The ANOVA in table 4.22(b) summarizes the results of a regression analysis aimed at understanding the relationship between the dependent variable, "KCSE performance," and the predictor variable, "amount community has financed learning and instructional materials." The table indicates that the regression model, which includes this predictor, is statistically significant as evidenced by a significant F-statistic with a p-value of .043. This implies that the amount of community financing for learning materials is associated with a significant change in KCSE performance.

However, the results were subjected to further tests to determine the relationship between the dependent and independent variables as shown in table 4.22(c). In this model we focus on the unstandardized beta coefficients for the model (B values)

Table 4.22(c): *Coefficients[a]*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	1.563	.629		2.485	.089
	amount community has financed learning and instructional materials	1.275E-6	.000	.890	3.378	.043

a. Dependent Variable: KCSE performance

The coefficients in table 4.22(c) summarizes the results of a simple linear regression model aimed at understanding the relationship between "KCSE performance" and the predictor variable "amount community has financed teaching and learning materials." The analysis reveals that the predictor variable has a statistically significant and strong positive effect on KCSE performance, as indicated by a standardized coefficient (Beta) of 0.890 and a low p-value of 0.043. This means that for every unit increase in the amount of community financing for learning materials, KCSE performance is expected to increase significantly. However, it's important to note that the coefficient itself is very small in magnitude (1.275E-6), suggesting that the change in KCSE performance for each unit change in the predictor variable is quite tiny, despite its statistical significance. Therefore, as amount of money is spent on purchase of in teaching and learning resources declines by one-unit, academic performance in K.C.S.E score fluctuates by 1.275E-6. Thus, the statistical model takes the form $Y = B_0 + B_1 X_1 + \ldots\ldots e$. Where Y represents the outcome variable while X represents the predictor variable i.e Y = 1.563 + (1.275E-6 .....e^i.

This study findings are similar to the findings by Tety, (2016) on Role of instructional Materials in Academic Performance in Community Secondary Schools in Rombo District. The research

emphasized that quality and adequate instructional materials are crucial for effective teaching and learning. These materials include textbooks, audio-visual aids, and educational technology, which facilitate a more engaging learning experience. A significant finding was that most community secondary schools in Rombo District faced a shortage of essential teaching materials. This scarcity negatively impacted both teaching effectiveness and student academic performance. The study collected views from teachers and students, indicating a consensus that better access to instructional materials correlates with improved academic outcomes. For instance, students reported that having the right resources helped them understand concepts better and perform well in examinations. The findings further indicated a direct correlation between the availability of instructional materials and academic performance. Schools that managed to secure sufficient resources saw improvements in student grades and overall educational quality.

The findings of this study resonate with previous research, notably the work of Ugwu, Asuma, & Ugwuanyi (2024), which highlights the significant impact of community-led initiatives on educational quality and academic performance. This study underscores that community financing of infrastructure plays a vital role in enhancing the learning environment, ultimately leading to improved KCSE performance. The evidence suggests that when communities actively participate in financing educational resources, it not only boosts infrastructure but also positively influences student attendance and retention rates. Similar to the Ugandan context, this study illustrates that schools benefiting from community engagement exhibit better performance metrics, particularly in core subjects. Thus, the data reinforces the idea that fostering strong community involvement in education is essential for promoting academic success and improving overall educational outcomes.

4.6 Community Financing on Human Resources in Public Secondary Schools and Its Effects on Academic Achievement in Kisumu County.

The fourth objective of the study was to determine Community Financing on Human Resources in Public Secondary Schools and Its Effects on Academic Achievement in Kisumu County. The study sought to find out as per the status of payment of salaries, salary arrears and also fee arrears.

Table 4.23: ***Community Financing on Human Resources of Secondary Schools in Kisumu Coumty***

Statement	Number of BOM teachers	Community Financing(Salaries)
2015	328	1,179,534.00
2016	493	835,923.00
2017	498	984,847.00
2018	454	901,453.00
2019	439	1,022,817.00

Table 4.23shows the number of Board of Management (BOM) teachers and community financing from 2015 to 2019 in Kisumu county Kenya. In 2015, there were 328 BOM teachers, with community financing amounting to 1,179,534.00. Subsequently, in 2016, the number of BOM teachers surged to 493, while community financing decreased to 835,923.00. Over the next two years, the number of teachers remained relatively stable, hovering around 493 in 2017 and 2018, with community financing increasing slightly to 984,847.00 and 901,453.00, respectively. By 2019, the number of BOM teachers decreased to 439, while community financing increased further to 1,022,817.00.

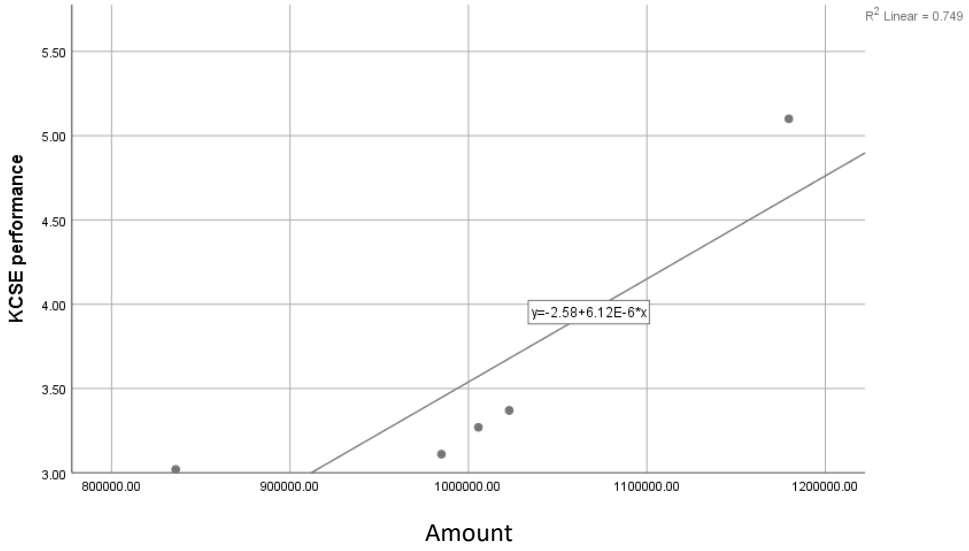

Figure 4.9: ***The Scatter Graph Showing Performance by Community Financing of Human Resources***

Scatter graph in figure 4.9 reveals a positive correlation between the two variables. This means that as community financing of human resource increases, there tends to be an associated increase in KCSE performance, and conversely, decreases in community financing of human resource are associated with lower KCSE performance. The positive line of fit on the scatter graph visually underscores this trend, indicating that there is a linear relationship between the variables.

Table 4.24 (a) : ***Model Summary***

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.879[a]	.772	.696	.47643

a. Predictors: (Constant), Human resource

The Model Summary table shows the strength of the relationship between the predictor variable (Human resource) and the dependent variable (KCSE performance). The **R value** of 0.879 indicates a strong positive correlation between human resource investments and KCSE performance. The **R Square** value of 0.772 suggests that 77.2% of the variation in KCSE

performance can be explained by the human resource factor. The **Adjusted R Square** value (0.696) is slightly lower, which accounts for the number of predictors used, indicating that even when adjustments are made, human resource still explains a significant portion of the variability. The **standard error of the estimate** (0.47643) is the average distance that the observed values fall from the regression line, indicating how well the model fits the data.

Table 4.24 (b): ***ANOVA***

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.304	1	2.304	10.150	.050[b]
	Residual	.681	3	.227		
	Total	2.985	4			

a. Dependent Variable: KCSE
b. Predictors: (Constant), Human resource

The ANOVA table tests the overall significance of the regression model. The **F value** of 10.150 is relatively high, suggesting that the model provides a good fit to the data. The corresponding **p-value (Sig.)** of 0.050 indicates that the model is statistically significant at the 5% level. This means that the influence of human resource on KCSE performance is significant, and there is only a 5% probability that this result occurred by chance.

Table 4.24 (c): ***Coefficients***

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.139	1.806		-1.184	.322
	Human resource	5.800E-6	.000	.879	3.186	.050

a. Dependent Variable: KCSE

The Coefficients table shows the specific influence of the predictor variable on the dependent variable. The unstandardized coefficient (B) for human resource is 5.800E-6, meaning that for every unit increase in human resource, there is an increase of 5.800E-6 units in KCSE performance. The t-value for human resource is 3.186, with a p-value (Sig.) of 0.050, indicating

that human resource has a statistically significant positive effect on KCSE performance. Thus, the statistical model takes the form Y=B0+B1X1+...+e. Where Y represents the outcome variable while X represents the predictor variable i.e Y=-2.139+5.800×10−6X1+…….e

This study findings are similar to the study done by Anderson (2022) on The Truth About Teacher Salaries and its Effects on Teachers and Students. The study found a significant relationship between teacher salaries, teacher quality, and student performance. The research indicated a direct correlation between teacher pay and student academic success. According to the study, the districts that implement performance-based pay systems tend to attract higher-quality teachers, which in turn positively affects student outcomes. The study highlighted that schools offering performance pay attracted teachers with Statistical Aptitude Test (SAT) scores averaging 30 points higher than those in schools without such incentives. This suggested that better-qualified teachers lead to improved student performance.

The results of this study align closely with the findings of Anderson (2022), which highlight the significant impact of human resources—specifically teacher quality and compensation—on student performance. The strong correlation identified between human resource investments and KCSE performance underscores the importance of adequately supporting and incentivizing educators to foster better academic outcomes. Just as Anderson demonstrated that districts with performance-based pay systems attract higher-quality teachers, this research suggests that enhancing human resource allocations is crucial for improving educational results. The implications of these findings advocate for strategic investments in human resources as a means to boost student achievement and enhance the overall quality of education. This reinforces the notion that a well-supported teaching workforce is instrumental in achieving academic excellence among students.

4.7 Community Financing on Lunch Program in Public Secondary Schools and its Effects on Academic Achievement in Kisumu County.

The fifth objective of the study was to determine the community financing secondary schools of lunch program. The study first determined the amount the community is giving towards lunch program and the number of students benefiting from scheme. Secondly, the study sought the perspective of principals regarding the community financing of lunch program. The key for the rating scale is as follows: SA: Strongly Agree = 4; A: Agree = 3; D: Disagree = 2; SD: Strongly Disagree = 1.In the interpretation of the level of adequacy of the infrastructure facilities, the mean score ratings were broken down into the following four ordinal categories: Very inadequate (0.0 – 1.4); Inadequate (1.5 – 2.4); Adequate (2.5 – 3.4); Very adequate (3.5 – 4.0). (Krishnaswami & Ranganatham, 2011).

Table 4.25 Shows the perspectives of secondary school's principles in regard to lunch program within their schools.

Table 4.25: ***Perspectives of the Secondary Schools Principals about the lunch program***

Statements	SA	A	D	SD	mean
School has enough cooks for lunch programs	17 (27.3)	39 (60.6)	6 (9.1)	2 (3.0)	3.11
School has adequate equipment for lunch programs	8 (12.1)	23 (36.4)	27 (42.4)	6 (9.1)	2.52
School has a large number of students taking lunch	28 (43.8)	28 (43.8)	8 (12.4)	0	3.44
School has adequate plates, cooking utensils and dining hall	2 (3.2)	12 (19.4)	29 (45.2)	21 (32.3)	1.92
lunch provided for student is balanced diet and adequate	12 (18.5)	42 (65.6)	8 (12.3)	2 (3.0)	3.13
the lunch program is a success in the school	18 (28.1)	34 (53.1)	10 (15.6)	2 (3.1)	3.06
School has enough food in the store	8 (12.5)	28 (43.8)	20 (31.2)	8 (12.5)	2.56
The school has dining hall	2 (3.3)	6 (10.0)	15 (23.4)	41 (63.3)	1.52
Overall Mean					2.66

According to Table 4.25 the question posed to school principals on whether the schools had enough cooks for the lunch programs. The study showed that 27.3% strongly agreed and 60.6%

agreed respectively. This amounted to 87.6% of secondary schools' principals who in general agreed that schools' had adequate cooks for the lunch program. The study also showed that 9.1% disagreed while 3.0% strongly disagreed. This amounted to 12.1% of secondary schools' principals who in general disagreed that schools' had adequate cooks for lunch program. The mean ratings were 3.11 (adequate).

The study explored further if the school had adequate equipment for lunch programs. The study showed that 12.1% strongly agreed and 36.4% agreed respectively. This amounted to 48.5% of secondary schools' principals who in general agreed that schools' had adequate equipment for the lunch program. The study also showed that 42.4% disagreed while 9.1% strongly disagreed. This amounted to 51.5% of secondary schools' principals who in general disagreed that schools' adequate equipment for the lunch program. The mean ratings were 2.52 (adequate).

The study explored if the school had a large number of students taking lunch. The study showed that 43.8% strongly agreed and 43.8% agreed respectively. This amounted to 87.6% of secondary schools' principals who in general agreed that schools' had large number of students taking lunch program. The study also showed that 12.5% disagreed. The mean ratings were 3.44 (very adequate).

The study also investigated whether schools had adequate plates, cooking utensils and dining hall. The study showed that 3.2% strongly agreed and 19.4% agreed respectively. This amounted to 22.6% of secondary schools' principals who in general agreed that schools' had adequate plates, cooking utensils and dining hall. The study also showed that 45.2% disagreed while 32.4% strongly disagreed. This amounted to 77.5% of secondary schools' principals who in general disagreed about adequacy of plates, utensils and dining hall. The mean ratings were 1.92 (inadequate).

The lunch provided for students is balanced diet and adequate. The study showed that 18.2% strongly agreed and 66.7% agreed respectively. This amounted to 84.9% of secondary schools' principals who in general agreed that schools' provided students with balanced diet that was adequate. The study also showed that 12.1% disagreed while 3.0% strongly disagreed. This amounted to 15.1% of secondary schools' principals who in general disagreed that schools' lunch program was balance diet. The mean ratings were 3.13 (adequate).

The question posed to school principal was whether the lunch program was a success in the school. The study showed that 28.1% strongly agreed and 53.1% agreed respectively. This amounted to 81.2% of secondary schools' principals who in general agreed that the schools' lunch program was a success. The study also showed that 15.6% disagreed while 3.1% strongly disagreed. This amounted to 18.7% of secondary schools' principals who in general disagreed that schools' lunch program was a success. The mean ratings were 3.06 (adequate).

The study investigated whether schools had enough food in store. The study showed that 12.5% strongly agreed and 43.8% agreed respectively. This amounted to 56.3% of secondary schools' principals who in general agreed that schools' had enough food stock in the store. The study also showed that 31.3% disagreed while 12.5% strongly disagreed. This amounted to 43.8% of secondary schools' principals who in general disagreed that schools had adequate food stock in the store. The mean ratings were 2.56(adequate).

The study explored if the school had a dining hall. The study showed that 3.3% strongly agreed and 10% agreed respectively. This amounted to 13.3% of secondary schools' principals who in general agreed that schools had a dining hall. The study also showed that 23.3% disagreed while 63.3% strongly disagreed. This amounted to 86.6% of secondary schools' principals who in general disagreed that schools had adequate dining hall. The mean ratings were 1.52 (inadequate).

4.7.1 Regression of Community Financing on Lunch Program in Public Secondary Schools and its Effect on Academic Achievement in Kisumu County.

The study found that all the secondary schools in the study had functional lunch program. And the community contributed towards the lunch program as shown in the table 4.26.

Table 4.26: ***The amount paid for lunch program by community***

Years	Community financing of Lunch
2015	1383164
2016	1003630
2017	1050857
2018	1100416
2019	1184207

The table presents data on community financing of lunch across the years 2015 to 2019. Over this period, the community financing for lunch shows fluctuations over the same timeframe, with the lowest amount reported in 2016 at 1,003,630 and the highest in 2019 at 1,184,207.

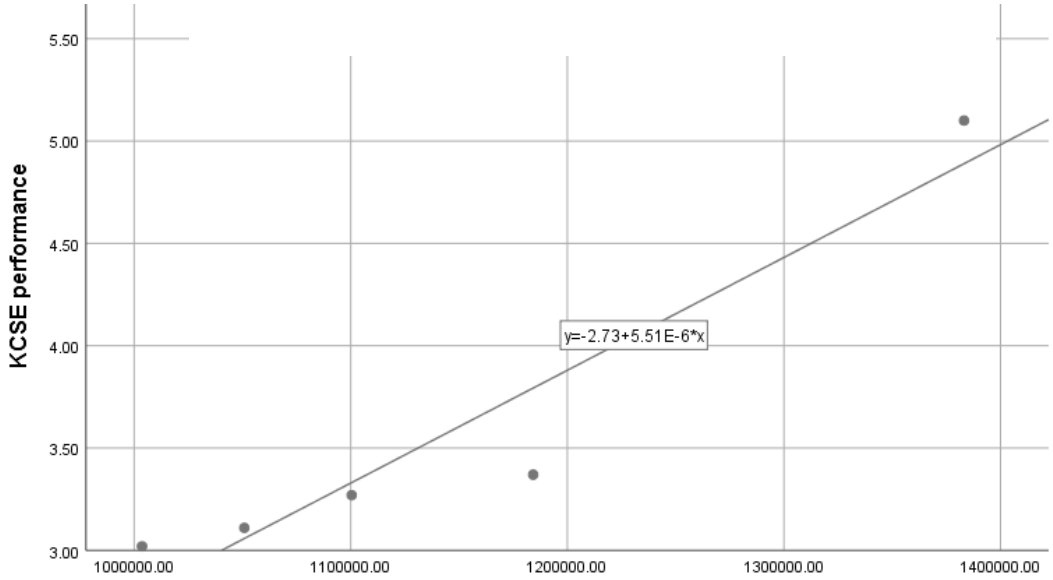

Figure 4.10: ***The Scatter Graph Showing Performance by Community Financing of Lunch Programme***

Figure 4.19 shows data points, along with the positive slope of the line of best fit, indicating a positive relationship between these variables. This suggests that as "Community financing of Lunch" increases, there is a tendency for "KCSE performance" to increase.

Table 4.27(a): *Model Summary*

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.952[a]	.907	.875	.30499

a. Predictors: (Constant), Community financing of lunch

The model summary in table 4.25(a) demonstrates an exceptionally strong and statistically significant relationship between "Community financing of lunch" and "KCSE performance." The high R value of approximately 0.952 reveals an exceptionally strong positive correlation, indicating that changes in "Community financing of lunch" are closely associated with variations in KCSE performance. Furthermore, the model explains an impressive 90.7% of the variance in KCSE performance (R Square = 0.907), signifying an outstanding fit. The adjusted R Square (0.875) reinforces that the model maintains its explanatory power without unnecessary complexity. The low Std. Error of the Estimate (approximately 0.30499) attests to the model's precise predictive capabilities.

Table 4.27(b): *ANOVA*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.706	1	2.706	29.089	.012[b]
	Residual	.279	3	.093		
	Total	2.985	4			

a. Dependent Variable: KCSE performance
b. Predictors: (Constant), Community financing of lunch

The ANOVA in Table 4.25(b) reveals that the regression model, which includes "Community financing of lunch" as a predictor of "KCSE performance," is statistically significant at the 0.05 significance level. This implies that the observed relationship between "Community financing

of lunch" and "KCSE performance" is highly unlikely to be due to random chance, and there is a meaningful statistical association between the two variables. The F-statistic of 29.089 indicates that the model effectively explains a significant amount of the variance in KCSE performance, and "Community financing of lunch" plays a substantial role in this explanation.

Table 4.27(c) :*Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-2.733	1.177		-2.321	.103
	Community financing of lunch	5.511E-6	.000	.952	5.393	.012

a. Dependent Variable: KCSE performance

The coefficients table sheds light on the relationship between "Community financing of lunch" and "KCSE performance" within the regression model. The constant term suggests that when there is no community financing for lunch programs, the baseline KCSE performance may not be statistically different from zero, although the marginal significance level (p-value of 0.103) suggests some uncertainty. However, the primary focus is on "Community financing of lunch," which exhibits a substantial and statistically significant effect on KCSE performance. For every incremental unit of community financing for lunch programs, KCSE performance is expected to increase by a tiny amount (approximately 5.511E-6), as indicated by the small coefficient value. Importantly, the Beta value of 0.952 highlights a strong and positive relationship, signifying that increased community financing positively impacts KCSE performance. Thus the statistical model takes the form $Y = B_0 + B_1 X_1 + \ldots\ldots e$. Where Y represents the outcome variable while X represents the predictor variable i.e $Y = 2.73 + 5.511E\text{-}6X_1$

This study findings are similar to Kiiru, Mange & Otieno (2020) study on Lunch Programme Management and their Influence on Educational Outcomes in Public Day Secondary Schools in Mombasa and Kilifi Counties, Kenya the study found that found that a majority of schools

(59%) had a food safety program, which positively influenced educational outcomes by ensuring students consumed hygienic food. The relationship between improved performance and various educational outcomes was statistically significant, with correlations such as: Improved performance and improved discipline: 0.983 Improved performance and improved time management: 0.996 Improved discipline and health status: 0.732. the findings of this study indicate strong associations between monitoring practices and positive educational outcomes, suggesting that effective oversight contributes to better student performance.

The findings of this study echo the conclusions drawn by Kiiru, Mange, & Otieno (2020), which emphasize the importance of community financing for lunch programs in enhancing educational outcomes. Similar to their observations in Mombasa and Kilifi, this research reveals a robust and statistically significant relationship between community-funded lunch initiatives and KCSE performance. The results indicate that when communities invest in students' nutritional needs, it fosters a conducive learning environment, which is reflected in improved academic results. Moreover, the strong correlation between improved discipline and academic performance suggests that proper management of lunch programs not only supports students' health but also enhances their overall educational experience. This underscores the necessity of community involvement in funding lunch programs as a strategic approach to bolster student achievement and promote better educational outcomes.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the findings, conclusions, recommendations and suggestions for further research.

5.2 Findings

5.2.1 Community Financing of School Infrastructure in Public Secondary Schools and its effect on Academic Achievement in Kisumu County.

The study identified the following infrastructural programs being financed by the community in Kisumu County. They include administration blocks, classrooms, library, dormitories, dining halls, playgrounds and games equipment's, electricity, water projects and tree plantings, school's buses, school gates, laboratory, generator and bicycles. The total finance showed a downward trend from Ksh.35 million in 2015 to Ksh.33 million in 2019. The overall mean for principals' response on the role of community financing on infrastructure projects in Kisumu County was 3.33 (adequate). The principals were in most cases in agreement that community participation in terms of infrastructural development was in most cases inadequate. The model summary showed that approximately 81.2% (as indicated by the R Square) of the variance in the dependent variable could be explained by the predictor in the model. The Anova analysis showed a statistically significant relationship of KCSE performance and community financing of infrastructural resources at a significant level of 0.037. Furthermore, the coefficient analysis revealed a strong positive relationship denoted by a standard coefficient of 0.901. The statistical significance of the coefficient, as indicated by a p-value of 0.037 (below the conventional threshold of 0.05), further emphasized that the amount financed by the community is a significant predictor of KCSE performance. Thus, the statistical model took the form Y = B0 -

B1 X1 +……e. Where Y represents the outcome variable while X represents the predictor variable i.e Y = -9.752 +4.128E-7X1…….ei.

5.2.2 Community financing on Transport and Travelling in Public Secondary Schools and its effect on academic achievement of Schools in Kisumu County

According to the perspective of head teachers, though communities were financing transport and travelling, the financing was inadequate with an overall mean of 1.73 (inadequate). This could be interpreted to mean that community performance towards financing transport and travelling was very low and could lead to poor performance. Further analysis using regression showed that there was strong positive effect of the correlation of 0.878 between the independent and dependent variable. Alternatively, the values show that the coefficient of determination (predictor indicator) reveals that every adjustment in community financing of transport and travelling results in 77.1% change in academic performance in secondary schools in the County. The ANOVA results were reported to show that the model's ability to predict KCSE performance was marginally significant (p-value = 0.050), falling just short of conventional significance levels. The coefficient table indicated that while community financing of human resources had a statistically significant positive impact on KCSE performance, the effect size was reported to be extremely small (8.058E-6), raising questions about its practical significance. The p-value of 0.050 indicating that human resource has a statistically significant positive effect on KCSE performance. Overall, the findings were reported to indicate a noteworthy but potentially limited association between community financing and KCSE performance. Thus, the statistical model takes the form Y = B0 - B1 X1 +……e. Where Y represents the outcome variable while X represents the predictor variable i.e Y = -1.720 + 8.058X1 + …….ei.

5.2.3 Community Financing of Teaching and Learning Resources in Public Secondary Schools its Effects on Academic Achievement in Kisumu County

The principal response on the available text book ratio in the secondary schools showed that in most cases the ratio was of 1:1 in most core and compulsory services. The financing of community on learning and instructional materials ranged from Ksh. 2,452,320.00 in 2015 and decreased to Ksh. 1,793,856.00 in 2019. The overall mean for the principal response on adequacy teaching and learning resources was 2.64. (inadequate). The principal's response on availability of instructional resources was also inadequate as indicated by an overall mean of 3.16. The model summary showed that approximately 79.2% (as indicated by the R Square) of the variance in the dependent variable could be explained by the predictor in the model. The Anova analysis showed a statistically significant relationship of KCSE performance and community financing of learning and instructional materials at a significant level of 0.043. Furthermore, the coefficient analysis revealed a strong positive relationship denoted by a standard coefficient of 0.890. However, it's important to note that the coefficient itself was very small in magnitude (1.275E-6), suggesting that the change in KCSE performance for each unit change in the predictor variable was quite tiny, despite its statistical significance. Therefore, as amount of money is spent on purchase of in teaching and learning resources declines by one-unit, academic performance in K.C.S.E score increase by 1.275E-6. Thus, the statistical model took the form $Y = B_0 + B_1 X_1 + \ldots\ldots e$. Where Y represented the outcome variable while X represents the predictor variable i.e $Y = 1.563 + 1.275E\text{-}6 \ldots\ldots ei^i$.

5.2.4 Community Financing and Human Resources in public Secondary Schools and its effects on academic achievement in Kisumu County

The analysis of KCSE performance and community financing data was reported to reveal a positive correlation between the two variables, indicating that as community financing increased, there tended to be a corresponding increase in KCSE performance, and vice versa when community financing decreased. This trend was visually supported by the positive line of fit on the scatter plot, which indicated a linear relationship between the variables. The regression model was reported to further substantiate this relationship, showing a strong positive correlation (R = 0.879) and a substantial portion of the variance in KCSE performance explained by the independent variables (R^2 = 0.772). However, it was noted that the adjusted R-squared value of 0.695 implied that some predictors might not significantly contribute to explaining KCSE performance variance. The ANOVA results were reported to show that the model's ability to predict KCSE performance was marginally significant (p-value = 0.050), falling just short of conventional significance levels. The coefficient table indicated that while community financing of human resources had a statistically significant positive impact on KCSE performance, the effect size was reported to be extremely small (5.800E-6), raising questions about its practical significance. The p-value of 0.050 indicating that human resource has a statistically significant positive effect on KCSE performance. Overall, the findings were reported to indicate a noteworthy but potentially limited association between community financing and KCSE performance. Thus, the statistical model takes the form Y=B0+B1X1 +...+e. Where Y represents the outcome variable while X represents the predictor variable i.eY=-2.139+5.800×10−6X1+…….ei.

5.2.5 Community Financing on Lunch Program in Public Secondary Schools its Effects on Academic Achievement in Kisumu County

The data on the amount the community pay for lunch program showed a fluctuating trend with 2015 recording the highest financing at KES 1,383,164.00 and 2016 recording the lowest financing at KES 1,003,630.00. The year 2017 to 2019 showed a significant increase of community financing from KES 1,050,857.00 to KES 1,184,207.00 in 2019.The overall mean of the principals' responses regarding lunch programs was 2.57 (adequate) indicating that most schools lacked lunch facilities and resources. The model summary showed that approximately 90.7% (as indicated by the R Square) of the variance in the dependent variable could be explained by the predictor in the model. The Anova analysis showed a statistically significant relationship of KCSE performance and community financing of lunch program at a significant level of 0.012. Furthermore, the coefficient analysis revealed a Beta value of 0.952 highlighting a strong and positive relationship, signifying that increased community financing positively relate to KCSE performance. Thus the statistical model took the form Y = B0 + B1 X1 +……e. Where Y represents the outcome variable while X represents the predictor variable i.e Y = 2.73 + 5.511E-6X1…ei.

5.3 Conclusion

Community financing of educational resources are critical in determining the academic performance of students. Where educational resources are adequate, performance of learners will improve and vice versa. It is instructive therefore to conclude that the community financing of adequate educational resources significantly influences the academic performance of learners to a great extent as was established from the findings of this study. The study concludes that if secondary schools are given adequate resources by the community through community financing, Students' performance at KCSE would improve. The study concludes that the trend

in academic performance has been on the upward trend from the year 2017 to 2019. However, it experiences downward trend between 2015 to 2016.

The study identified the following infrastructural programs being financed by the community in Kisumu County. They include administration blocks, classrooms, library, dormitories and dining halls, playgrounds and games equipment's, electricity, water projects and tree plantings, school's buses, school gates, laboratory, generator bicycles among others. The mean total shows an upward trend from Ksh. 14 million in 2015 to Ksh.30 million in 2019. The overall mean was 3.07(adequate). Furthermore, the coefficient analysis revealed a strong positive relationship denoted by a standard coefficient of 0.901.

According to the perspective of school principals, though communities were financing transport and travelling, the financing was inadequate with an overall mean of 1.73 (inadequate). This could be interpreted to mean that community performance towards financing transport and travelling was very low and could lead to poor performance. The coefficient analysis revealed a strong positive relationship denoted by a standard coefficient of 0.919.

The principal response on the available text book ratio in the secondary schools show that in most cases the ratio was of 1:1 in most core and compulsory services. The financing of community on learning and instructional materials ranged from Ksh. 2,452,320.00 in 2015 and decreased to Ksh. 1,793,856.00 in 2019. The coefficient analysis revealed a strong positive relationship denoted by a standard coefficient of 0.890.

From the discussion, the data on the amount the community pay for lunch program showed a fluctuating trend with 2015 recording the highest financing at KES 1,383,164.00 and 2016 recording the lowest financing at KES 1,003,630.00. The year 2017 to 2019 showed a significant increase of community financing from KES 1,050,857.00 to KES 1,184,207.00 in 2019. The coefficient analysis revealed a strong positive relationship denoted by a standard coefficient of 0.952.

5.4 Recommendations

The study makes the following recommendations;

i. The provision of community financing to school has a positive effect on academic achievement, more resources can be mobilized from the school community.

ii. The study confirms a positive attitude by the secondary school communities in financing school inputs. A well-coordinated policy can be done to standardize for all schools.

iii. Provision of community resources such as transport and travel are solely done by parents and the school communities; these are essential for academic achievement and should be enhanced.

iv. The school community to be sensitized on the benefits of community financing, more resources to be channeled for academic achievement.

5.5 Suggestion for Further Study

The researcher suggests the following area for further research:

i A similar study to be carried out in other counties in Kenya to ascertain the relationship between community financing in public secondary schools and academic achievement.

ii The study should be conducted with a view to determine the contribution of community financing on academic achievement in other levels of education.

iii A study should be conducted on community financing on access and equity at secondary school level.

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APPENDICES

APPENDIX 1: LETTER OF INTRODUCTION

MASENO UNIVERSITY

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL MANAGEMENT AND FOUNDATIONS

MASENO

Dear Respondent

RE: RESEARCH DATA COLLECTION

This questionnaire is designed to gather information on the ***Community Financing of Public Secondary Schools and its Effect on Academic Achievement in Kisumu County, Kenya.***

This is a research thesis carried Attain a Degree of Doctor of Philosophy in Planning and Economics of Education. It is useful to you a resident of Kisumu County to Assess The Impact of Community Financing of Public Secondary Schools and its Effect on Academic Achievement in Kisumu County, Kenya.

The information in this questionnaire will be treated with confidentiality and in no instance will your identity be revealed. Furthermore the information will not be used for any other purpose other than t for the research. A copy of this researcher paper will be available upon request.

Thanks in advance.

DUNCAN OTIENO OWIYE. **DATE**

PG/PHD/078/2006

APPENDIX 2: CONSENT FORM

STUDY TITLE: **COMMUNITY FINANCING OF SECONDARY SCHOOL EDUCATION AND its EFFECTS ON QUALITY OF EDUCATION IN KISUMU COUNTY, KENYA**

This is a consent form for research involvement. It contains important information about this study and what to expect if you decide to participate. Your involvement is voluntary. Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate. If you decide to participate, you will be asked to sign this form and you can retain a copy of the form for your record

Procedure/ Tasks;

Your involvement in this study require you to;

1. Read and sign this form, and return it with your completed questionnaire(retain the second copy of this consent for your record if you wish)
2. Complete the questionnaire
3. Give back to the researcher the signed consent form and completed

You may choose to stop completing the questionnaire at any time. If you decide to stop participating there is no penalty to you.

There is no direct benefits to your involvement in this study. The subject of the research is related to community financing of secondary school education and its effects on quality of education in Kenya. There will be no physical, legal or economic risks or harm to you as a participant.

Confidentiality: You are not to write your name and efforts will be made to keep your study and response confidential.

Participants Rights: You may refuse to participate in this research without penalty.

By signing this form, you do not give up any personal rights you may have as a participant in this study.

Signing the consent form: I have read this form and aware that I am being asked to participate in this research study. I have had the opportunity to ask questions and have them answered to my satisfaction. I voluntary agree to participate in this study. I am aware that I am not giving up any of my legal rights by signing this form and am aware I will be given a copy

Sign…….….. Date……..…….

DESGINATION…… LOCATION/STATION……..…

C.C_1. Researcher

C.C_2. MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

APPENDIX 3: PRINCIPAL QUESTIONNAIRE FOR

PUBLIC SECONDARY SCHOOLS (PQPSS)

These questionnaire seeks to find out information on the status of the school in terms of background information, community financing in relation to financial resources, physical resources and human resources' instructional resources, transport and lunch fee. Kindly fill in the spaces below or Tick(√) as appropriate.

SECTION A: BACKGROUND INFORMATION

1. State your gender : Male [ ] Female [ ]
2. State your highest academic qualification……....
3. Please state how long you have been in the station…….
4. Give the status of your school (Sub County, County, Extra County, National)

   ……
5. Besides community based organization, are there individual who support your school once or regularly between the period of 2016-2019?

   a) Yes……. No……..

   b) What is the nature of the support.....

   ……

   ……

   ……
6. Please state the enrolment of student for the period 2015 – 2019

Years	**Boys**	**Girls**	**Total**
2015			
2016			
2017			
2018			
2019			

SECTION B: ACADEMIC PERFORMANCE IN KCSE FROM 2015 TO 2019

1. The principal as an agent of good academic performance contributes to provision of quality education in ways stated below.

STATEMENT	**VF**	**F**	**LF**	**R**
Does the community participate in provision of textbooks?				
Does the community participate in the provision of teaching resources?				

Section C: Community Financing and Provision of Infrastructural Facilities in Relation to Academic Achievement Secondary Schools in Kisumu County.

1. Kindly fill the table below on the amount the community has financed the following infrastructural resources in the following period:

Infrastructural facilities	**2015**	**2016**	**2017**	**2018**	**2019**
Administration block					
Classes					
Library					
Dormitories					
Dining hall and kitchen					
Playground and games equipments					
Electricity					
School gate and fencing					
School bus					
School generator					
Toilet facilities					
Others (Specify)					

2. Comment on the following statements relating to school infrastructural facilities on provision of quality education in your school by using the key below: Key =SD(Strongly Disagree) D=(Disagree) A=(Agree) SA(Strongly Agree)

Statements	**SA**	**A**	**D**	**SD**
Community Provision of adequate classrooms has an influence on KCSE performance				
Community provision of library resources improves academic performance				
Community provision school infrastructure motivates pupils to excel in academic and leads to increase in student's enrolment				
Community provision of electricity in school improves academic performance				
Community provision of Adequate supply of water to the school improves academic performance				
Community provision of staff rooms and offices improves academic performance				
Community provision of teacher houses improves academic performance				
Community provision of Enough toilets improves academic performance				
Community provision of adequate desks and chairs improves academic performance				
Community provision of text books improves academic performance				
Community provision of Adequate playground and adequate space improves academic performance				

3. Ho**w** much is government giving per student in secondary school for development from 2015 – 2019

   2015 .....

   2016 .....

   2017.....

   2018.....

   2019…….....

4. How much did the community contribute in terms of financing the school in the following years;

Items	**2015**	**2016**	**2017**	**2018**	**2019**
PTA projects					
Lunch Programme					
Fundraising					
Bursary/Scholarships					
Motivation Fee For Teachers					
Salary For BOM teachers					
Salary for BoM employees					
Prize giving day					
Others (Specify)					

5. Comment on the following statements relating to influences community financing and provision of quality education in your school by using the key below: Key =SD (Strongly Disagree) D= (Disagree) A=(Agree) SA(Strongly Agree). Kindly fill the table below using (√) as follows: SA=Strongly Agree A= agree D= disagree SD= Strongly Disagree

Statement	**SA**	**A**	**D**	**SD**
The money given by the government is adequate				
To improve academic performance, students pay additional fee				
Students are sent home from time to time for school fees				
Classes are sometimes lost when students go home for fees				
School has an income generating activities to finance its activities				
School fees payments affects students' performance in this school				
Payments of teachers employed by the BOM pose a serious challenge to this school				
Parents in this school participate actively in financing activities				

Section E: Community Financing Of Human Resource and its Effect on Academic Achievement in Kisumu County.

1.0 How much did the School pay for BOM teachers in the following years

year	Number of BOM teachers	Total salaries	Arrears
2015			
2016			
2017			
2018			
2019			

Section F: Community Financing Of Instructional Resources and its effects on Academic Achievement in Kisumu County.

1. State the textbook student ratio in the table below:

SUBJECT	**TEXT BOOK RATIO**
English	
Kiswahili	
Mathematics	
Chemistry	
Biology	
Physics	
Geography	
History	
C.R.E.	
Agriculture	
Business Studies	
Computer	
Home science	
French	
Art and Design	
German	

2. Does your school provide exercise books for students : Yes_____ No_____

3. If No in no. 2 above how do student get exercise books

   a) _____

   b) _____

   c) _____

4. Kindly fill the table below on the amount the community has financed the following learning and instructional materials

Learning and Instructional Materials	**2015**	**2016**	**2017**	**2018**	**2019**
Text Books					
Stationeries					
Exercise Books					
Charts					
Equipment					
Audio -Visual					
Others (Specify)					

5. Kindly fill the table below using (√) as follows: SA=Strongly Agree A= agree D= disagree SD= Strongly Disagree

Statements	**SA**	**A**	**D**	**SD**
School has adequate textbooks in every subjects				
School has a large number of readers and novels for English and Kiswahili				
School has adequate charts, maps for every subject				
Science subject has adequate equipment, models and structures for teaching				
School has enough tuition materials e.g chalks, exercise books, chalk boards, etc.				
Mathematics teacher has enough equipments, rulers, set squares for teaching				
School has adequate students' furniture				
School has adequate land for practical subjects (Agriculture, Biology)				

6. Kindly indicate various level of availability of the following instructional resources in your school

VA(3)=Very Available: A(2)= Available: LA(1) =Less Available: NA(0) =Not Available

No.	ITEMS	**V.A**	**A**	**LA**	**N.A.**
Audio- visual materials					
1	Radio				
2	Television				
3	Slides/films				
4	Video recording				
Two dimensional material					
1	Charts				
2	Photographs/pictures				
3	Maps				
4	Diagrams/drawings				
Three dimensional materials					
1	Globes				
2	Experimental models				
3	Castings				
4	Rocks/Minerals				
5	Plants & specimens				
6	Glass objects				
7	Measuring & monitoring instruments /weather stations				
Written descriptors					
1	Teaching aids – chalk, felt pens				
2	Reference materials				
3	Exercise books				

community participate in the provision of the above? Yes_____No_____

If Yes: How

_____

_____

_____

_____

_____

Section G: Community Financing Of Secondary School Transport and Local Travel of Students and their Effect on Provision on Academic Achievement in Kisumu County

1. a) The school has a bus yes ?_____ **No?_____**

b) If No; how do you acquire school transport?

_____

_____

_____

_____

2. Kindly fill the table below on the amount the community has financed the following Transport and travelling of students in the following years

Transport and travelling of students	**2015**	**2016**	**2017**	**2018**	**2019**
Games					
Excursions					
symposiums					
Tours and travels					
Others specify:					

3. Section H: Community Financing of Secondary Education Lunch Programmes and its effect on academic achievement in Kisumu County

1.Does the school have a lunch Programme?_____

2. How do you manage the Lunch Programme?_____

_____

_____

4. Fill the table below on the amount paid for lunch programme in the following Years

Year	**Number of students**	**Cost incurred in lunch programme**	**Deficit incurred in the lunch program**
2015			
2016			
2017			
2018			
2019			

5. Kindly fill the table below using (√) as follows: SA=Strongly Agree A= agree D= disagree SD= Strongly Disagree

Statements	**SA**	**A**	**D**	**SD**
School has enough cooks for lunch programmes				
School has adequate equipment for lunch programmes				
School has adequate plates, cooking utensils, and dining hall				
Lunch provided for student is balance diet and adequate				
The lunch programme is a success in the school				
School has enough food in the store				
The school has a dining hall				

APPENDIX 4: B.O.M CHAIRPERSON's QUESTIONNAIRE (BOMCQ)

The aim of this study is to investigate the effectiveness and implications of community financing of secondary school education. Your co-operation and openness in responding to the question will be greatly appreciated. All your responses and information obtained will be treated with utmost confidentiality and will be used for the purpose of the study only.

Where relevant use tick ( ) for yes and cross(X) for No.

1. State your gender Male [ ] Female [ ]
2. State your highest level of academic qualification …….
3. Please state how long you have served in this board …….
   c. Please quantify these projects in monetary terms by filling in the table.

Activity/ Projects	**Year**	**Value (Ksh.)**

4. Do you know any community based organization that supports secondary school education ?

   Yes…… No…….

   If yes state them…….....…….

   ……

   ……

   ……

5. What are some of the reasons of community participation in school programmes?

   ……

   ……

   ……

6. Has the BOM been involved in some projects? Yes: _____No: _____

   If Yes , how did the BOM support/participate?

   ……

   ……

   ……

   ……

7. What are some of the shortcomings of these community based organization to your school?

   ……
   ……
   ……
   ……

8. What regulations have been in place in the school to govern the projects?

   ……
   ……
   ……

9. What proposals can you make to assist community financing in the school?

   ……
   ……
   ……

APPENDIX 5: COMMUNITY BASED ORGANIZATION CHAIRPERSON QUESTIONNAIRE (CBOCQ)

The aim of this study is to investigate the effectiveness and implications of community financing of secondary school education. Your cooperation and openness in responding to these questions will be greatly appreciated. All your responses and information obtained will be treated with utmost confidentiality and will be used for the purpose of the study only.

Where relevant use tick (√) and cross(X) FOR NO.

1. a) Briefly describe the membership…….

……

……

b) What are the objectives of your organization?

……

……

……

……

……..…

N/B: Additional /supportive material can be attached such as brochures, journals, handouts, website address.

2. What is the main source or organization funding?

a) ……..

b) …….

c) ……

d) …….

e) …….

3. How do they fund schools?

a) Project activities……..

……..……..

b) Criteria……

……..……

c) Implementation…….…..

……

d) Evaluation……...…

…….

4. How have you incorporated schools in making the programs?

……

……

……

…….……..

5. What are some of the problems encountered?

……

……

……

……

……

APPENDIX 6: COUNTY DIRECTOR OF EDUCATION QUESTIONNAIRE (CDEQ)

The aim of this study is to investigate the effectiveness and implications of community financing of secondary school education. Your cooperation and openness in responding to the questions will be greatly appreciated. All your responses and information obtained will be treated with utmost confidentiality and will be used for the purpose of the study only.

Where relevant use tick (√) for Yes and Cross(X) FOR NO.

1. What is your role in community financing programs in the Kisumu County 2015-2019?

……

……

……

2. How have the community project been initiated in Kisumu County 2015-2019?

……

……

……..

3. Please quantify the projects 2015-2019

Project/activity	**School**	**Year**	**Costs (ksh.)**

4. Which criteria were used to identify the project?

……

……

……

……

……...

5. What are some of the reasons for community support given by the community or permitted by your office?

   ……
   ……
   ……
   ……...

6. What government regulations are in place guiding this kind of support?

   ……
   ……
   ……
   …….

7. How is your office involved in identification, implementation and evaluation of the community financing?

   ……
   ……
   ……
   ……

8. Have you ever been on any aspect of community financing training

   Yes…… No……

   If yes, fill the table...

Title of training	**Year**	**Duration**	**Course content**

APPENDIX 7: C.D.E. INTERVIEW SCHEDULE (CDEIS)

All the information given will be strictly confidential and only used for analytical purposes.

1. What constraints does the school(s) have in regard to community financing?

2. What is the effect of community financing on students' academic achievement in secondary school(s)?

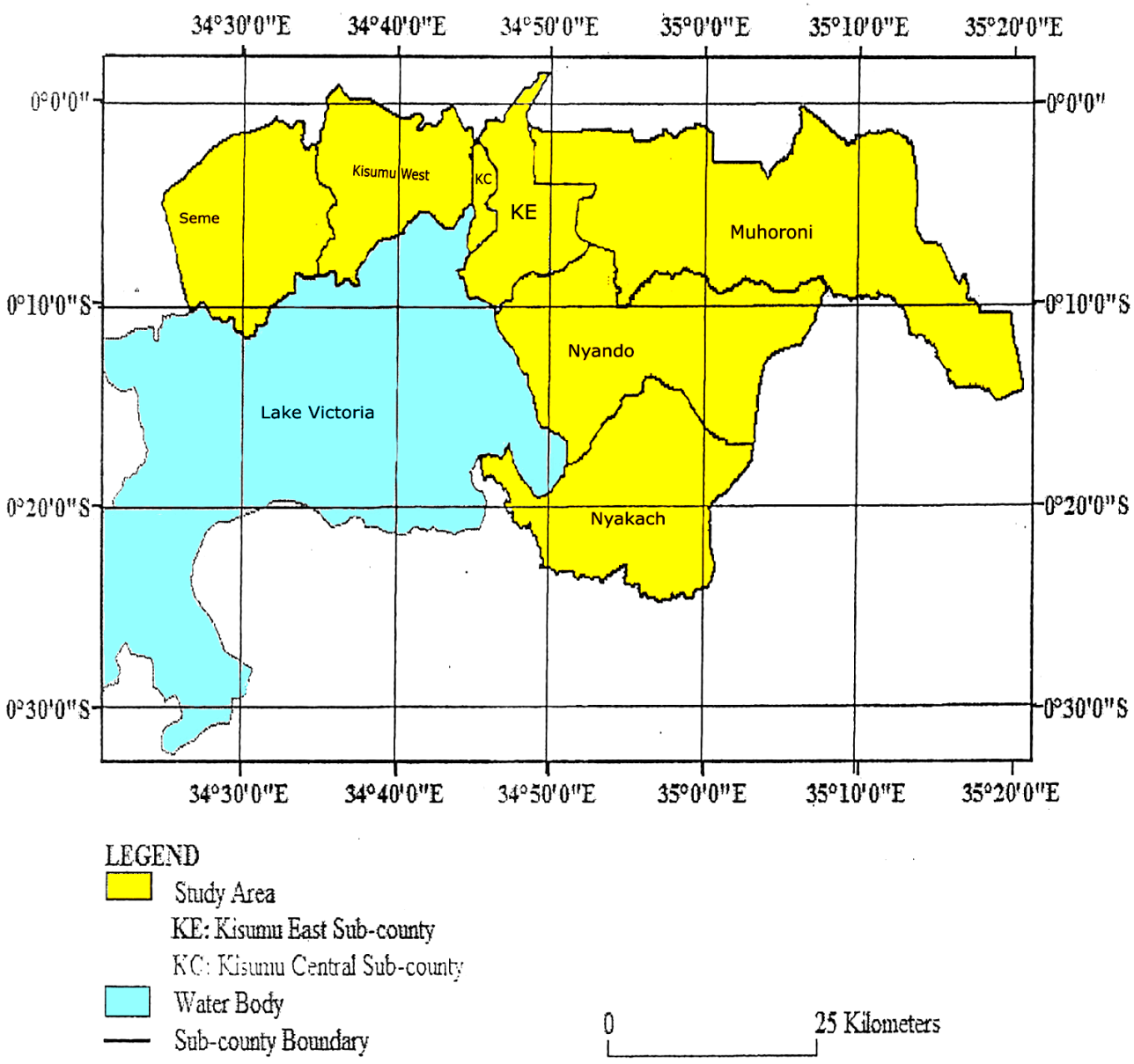
3. What are the challenges facing the provision of education in secondary schools in Kisumu County?

4. How can the current income sources be improved to enhance academic achievement in secondary schools in Kisumu County?

APPENDIX 8: DOCUMENT ANALYSIS GUIDE

Documents	**Remarks**
BOM/PA Minutes	
Cash Book	
Budgets	
Trial Balances	
KCSE Results	
Stores Records	
Inspection Reports	
Project Report	
Audit Report	

APPENDIX 9: MAP OF KISUMU COUNTY



Source:*en.m.wikipedia.org. Retrieved on 9th October, 2023*

APPENDIX 10: FEE STRUCTURE

SECONDARY SCHOOL FEES STRUCTURE

IT IS notified for the general information of the public that pursuant to section 29 (2) (*b*) as read with schedules 3 and 4 of the Basic Education Act, 2013 and the recommendations of a task force dated 26th August 2014 on affordable secondary school fees, the Cabinet Secretary, Ministry of Education, Science and Technology issues the following fees structure to all public secondary schools in Kenya as follows:

Vote heads	*Boarding Schools of all Categories (KES)*			*Day Schools (KES)*			*Special Needs Secondary Schools (KES)*		
	Government	*Parent*	*Total*	*Government*	*Parent*	*Total*	*Government*	*Parent*	*Total*
Teaching Learning Materials and exams	4,792.00	0.00	4,792.00	4,792.00	0.00	4,792.00	4,792.00	0.00	4,792.00
BES and Meals/L.	0.00	32,385.00	32,385.00	0.00	0.00	0.00	0.00	26,790.00	26,790.00
Repairs, Maintenance and Improvement	800.00	2,392.00	3,192.00	800.00	1,086.00	1,886.00	800.00	800.00	1,600.00
Local Travel and Transport	800.00	1,621.00	2,421.00	800.00	1,033.00	1,833.00	800.00	800.00	1,600.00
Administration Costs	800.00	2,516.00	3,316.00	800.00	772.00	1,572.00	800.00	600.00	1,400.00
EWC	1,500.00	6,302.00	7,802.00	1,500.00	1,651.00	3,151.00	1,500.00	1,000.00	2,500.00
Medical	278.00	508.00	786.00	278.00	411.00	689.00	278.00	860.00	1,138.00
Activity Fees	600.00	798.00	1,398.00	600.00	656.00	1,256.00	600.00	500.00	1,100.00
Personal Emolument	2,700.00	5,972.00	8,672.00	2,700.00	3,055.00	5,755.00	2,700.00	5,000.00	7,700.00
Approved PTA Development. Projects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Insurance (Medical and Property)	600.00	1,060.00	1,660.00	600.00	710.00	1,310.00	600.00	860.00	1,460.00
Top Up	0.00	0.00	0.00	0.00	0.00		19,730.00	0.00	19,730.00
Total School Fees	**12,870.00**	**53,554.00**	**66,424.00**	**12,870.00**	**9,374.00**	**22,244.00**	**32,600.00**	**37,210.00**	**69,810.00**

This fees structure takes effect from 5th January 2015.

APPENDIX 11: REGRESSION ANALYSIS DATA

1. Infrastructure

Year	2015	2016	2017	2018	2019
Administration Block	6,755,668.00	7,943,020.00	9,227,442.00	5,403,172.00	2,566,103.00
Classes	5,164,391.00	3,408,275.00	3,427,332.00	4,885,847.00	6,139,647.00
Library	3,659,919.00	1,444,184.00	1,626,664.00	1,868,118.00	2,183,917.00
Dormitories	4,629,146.00	4,365,191.00	4,613,717.00	5,518,141.00	4,149,443.00
Dining Hall and Kitchen	1,735,930.00	2,021,858.00	2,227,766.00	1,932,783.00	1,943,686.00
Playgroud / games equipment	491,846.00	209,406.00	626,147.00	778,071.00	390,375.00
Electricity	499,079.00	620,999.00	458,735.00	485,710.00	429,139.00
Water	514,992.00	610,889.00	624,433.00	674,390.00	281,616.00
Environment/Tree planting	65,097.00	62,894.00	25,731.00	45,280.00	19,109.00
school gate and fencing	733,430.00	866,510.00	856,833.00	1,530,419.00	818,969.00
School bus	4,339,825.00	3,320,179.00	3,295,512.00	2,241,741.00	6,807,278.00
Laboratory	3,616,520.00	2,743,950.00	1,581,845.00	4,023,639.00	1,583,340.00
School generator	361,652.00	223,848.00	263,640.00	215,552.00	218,391.00
Toilet Facilities	1,913,862.00	1,998,751.00	1,865,260.00	1,880,332.00	4,886,515.00
Others (Specify) – Bicycle	578,643.00	361,046.00	329,551.00	574,805.00	638,512.00
Total	**35,060,000.00**	**30,201,000.00**	**31,050,608.00**	**32,058,000.00**	**33,056,040.00**

Year	X (*The amount the community has financed infrastructural resources)*	Y (KCSE)
2015	35,060,000.00	5.10
2016	30,201,000.00	3.02
2017	31,050,608.00	3.11
2018	32,058,000.00	3.27
2019	33,056,040.00	3.37

.

2. Transport and Travelling Resources

Activities	2015	2016	2017	2018	2019
Games	547,450.00	340,133.00	349,000.00	383,300.00	387,000.00
Excursions	175,950.00	114,950.00	115,650.00	115,500.00	134,550.00
Symposiums	23,150.00	60,000.00	50,155.00	65,000.00	31,120.00
Tours and travels	28,800.00	35,000.00	65,172.00	121,632.00	27,381.00
Others (Specify)	24,500.00	28,000.00	16,655.00	20,500.00	24,262.00
Total	**799,850.00**	**578,083.00**	**596,632.00**	**705,932.00**	**604,313.00**

	X (Community Financed Transport and Travelling)	Y(KCSE)
2015	799,850.00	5.10
2016	578,083.00	3.02
2017	596,632.00	3.11
2018	705,932.00	3.27
2019	604,313.00	3.37

6. Community Financing of Learning and Teaching Resources

	2015	2016	2017	2018	2019
Textbooks (SUM)	864,667.00	107,604.00	695,222.00	1,003,733.00	1,196,005.00
Stationeries (SUM)	58,522.00	107,027.00	32,228.00	28,251.00	33,663.00
Exercise books (SUM)	126,525.00	528,697.00	86,678.00	390,144.00	464,880.00
Charts (SUM)	17,820.00	22,138.00	8,195.00	346.00	412.00
Equipment's (SUM)	986,103.00	-	-	20,372.00	24,275.00
Audio-Visual (SUM)	398,683.00	64,896.00	477,677.00	62,624.00	74,621.00
Total	**2,452,320.00**	**830,362.00**	**1,300,000.00**	**1,505,470.00**	**1,793,856.00**

4. Community financing and human resources

Statement	Number of BOM teachers	Community Financing(Salaries)
2015	328	1,179,534.00
2016	493	835,923.00
2017	498	984,847.00
2018	454	901,453.00
2019	439	1,022,817.00

5. Community financing and lunch program

Years	Community financing of Lunch
2015	1383164
2016	1003630
2017	1050857
2018	1100416
2019	1184207

APPENDIX 12: SGS APPROVAL

MASENO UNIVERSITY
SCHOOL OF GRADUATE STUDIES

Office of the Dean

Our Ref: PG/PHD/078/2006

Private Bag, MASENO, KENYA
Tel:(057)351 22/351008/351011
FAX: 254-057-351153/351221
Email: sgs@maseno.ac.ke

Date: 7th October, 2020

TO WHOM IT MAY CONCERN

RE: PROPOSAL APPROVAL FOR DUNCAN OTIENO OWIYE PG/PHD/078/2006

The above named is registered in the Doctor of Philosophy in the School of Education, Maseno University. This is to confirm that his research proposal titled ***"Community Financing of Secondary Schools' and it's Effect on Quality of Education in Kisumu County, Kenya"*** has been approved for conduct of research subject to obtaining all other permissions/clearances that may be required beforehand.

Prof. J.O. Agure
DEAN, SCHOOL OF GRADUATE STUDIES

MASENO UNIVERSITY

APPENDIX 13: ETHICS

MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

Tel: +254 057 351 622 Ext: 3050
Fax: +254 057 351 221

Private Bag – 40105, Maseno, Kenya
Email: muerc-secretariate@maseno.ac.ke

REF: MSU/DRPI/MUERC/00900/20 **Date:** 21st December, 2020

TO: Duncan Otieno Owiye
PG/PHD/00078/2006
Department of Education Management and Foundation
School of Education, Maseno University
P. O. Box, Private Bag, Maseno, Kenya

Dear Sir,

RE: Community Financing of Public Secondary Schools' and its Effect on Quality of Education in Kisumu County, Kenya

This is to inform you that **Maseno University Ethics Review Committee (MUERC)** has reviewed and approved your above research proposal. Your application approval number is MUERC/00900/20.The approval period is 21st December, 2020 – 20th December, 2021.

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by Maseno University Ethics Review Committee (MUERC).
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to Maseno University Ethics Review Committee (MUERC) within 24 hours of notification.
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to Maseno University Ethics Review Committee (MUERC) within 24 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to Maseno University Ethics Review Committee (MUERC).

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely

MASENO UNIVERSITY APPROVED 21 DEC 2020 ETHICS REVIEW COMMITTEE

Prof. Philip O. Owuor, PhD, FAAS, FKNAS
Chairman, MUERC