SCHOOL ADMINISTRATORS' CONTRIBUTION TO STUDENTS' ACADEMIC PERFORMANCE IN SECONDARY SCHOOLS IN EMUHAYA AND VIHIGA SUB-COUNTIES, KENYA

BY

ELIZABETH GLORIA ANINDO WANYAMA

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DECLARATION

DECLARATION BY THE CANDIDATE

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

Signature …… Date ……..…

ELIZABETH GLORIA ANINDO WANYAMA

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DECLARATION BY THE SUPERVISORS

This thesis has been submitted with our approval as University Supervisors

Signature …… Date ……..…

PROF. E.M.W. SIMATWA

Department of Educational Management and Foundations,

Maseno University.

Signature ……..… Date ……

DR. T. O. OKWACH

Department of Curriculum Instruction,

Kaimosi Friends' University College.

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ABSTRACT

Studies have revealed that school administrators contribute to students' academic performance by enhancing instructional supervision, teacher motivation, teaching /learning resources and physical facilities. Notwithstanding this assertion, in some countries academic performances have been found to be low despite this administrators' contribution. In Kenya the average performance for the years 2010 to 2014, only 29% candidates scored above a mean score of 6.00 points. In Emuhaya and Vihiga Sub Counties 3535 (26%) and 2104 (15%) candidates respectively scored above 6.00 points compared to Hamisi and Sabatia Sub-Counties' with 3913 (28%) and 4275 (31%) candidates respectively between years 2009 and 2013. The purpose of the study was to establish administrators' contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub-Counties. The objectives of the study were to; establish the contribution of administrators to instructional supervision, teacher motivation, teaching learning resources, and physical facilities.in enhancement of students' academic performance. The study was guided by a conceptual framework in which the independent variables were administrators' contribution in form of instructional supervision, teacher motivation, teaching learning resources and physical facilities, and the dependent: variable students' academic performance. The research designs for this study were descriptive survey and correlation. The study population was 4874 and consisted of 58 principals, 58 deputy principals, 58 directors of studies, 4640 students, 58 chairpersons of the Boards of Management (BOM) and 2 Sub- County Quality Assurance and Standards Officers. Fisher's formula was used to determine sample size of 354 students. Saturated sampling technique was used to sample principals, deputy principals, chairpersons of the boards, directors of studies, and Quality Assurance and Standards Officers. Questionnaire, observation checklists, document analysis guides, interview schedules were used to collect data on administrators' contributions. Face and content validity of research instruments were determined by experts in Educational Administration. Reliability of questionnaire was determined by Cronbach's alpha whereby the coefficients for the scales were greater than .70, meaning that they were reliable. Quantitative data was analyzed using frequency counts, means, percentages and regression analysis. Qualitative data was analyzed in emergent themes and sub themes. The study established that administrators' contribution to instructional supervision was low (Adjusted R^2= 0.011) and not significant. Administrators' contribution to teacher motivation was strong (Adjusted R^2= 0.623), significant and enhanced students' academic performance by 62.3%. Administrators' contribution to teaching /learning resources and physical facilities were moderate (Adjusted R^2 = 0.343, and 0.303 respectively), and thus enhanced students' academic performance by 34.3% and 30.3% respectively. The study concluded that administrators' contribution to instructional supervision was not significant. Administrators' contribution to teacher motivation, teaching learning resources and physical facilities was significant and therefore, enhanced students' academic performance. The study recommended that administrators should increase their contribution to instructional supervision, teacher motivation, teaching learning resources and physical facilities in order to enhance students' academic performance. The study findings are of significance to school administrators, policy makers, and other stakeholders in education on ways of contributing to students' academic performance.

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LIST OF ABBREVIATIONS AND ACRONYMS

BOM	-	Board of Management
C.D.F	-	Constituency Development Fund
C.E.O	-	Chief Executive Officer
DOS	-	Director of Studies
F.P.E	-	Free Primary Education
F.S.E	-	Free Secondary Education
HOD	-	Head of Department
K.C.S.E	-	Kenya Certificate of Secondary Education
KSHS	-	Kenya Shillings
LATIF	-	Local Transfer Improvement Fund
MOE	-	Ministry of Education
MOH	-	Ministry of Health
MOEST	-	Ministry of Education Science and Technology
P.T.A	-	Parents Teachers' Association
QASO	-	Quality Assurance and Standards Officer
R.O.K	-	Republic of Kenya
S.C.D.O.E	-	Sub County Director of Education
SCQASO	-	Sub –County Quality Assurance and Standards' Officer
SDP	-	School Development Plan
SPSS	-	Statistical Package for Social Sciences
UNESCO	-	United Nations Education Science and Cultural Organization

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The desire for quality education for the development for all Kenyans is one of the major objectives of secondary education. Quality education has over the years been measured by the quality of teachers, pupil teacher ratios, pupil text book ratios and pupils' cognitive achievement in the form of examination results (Amphiah, Kwaah, Yiboe & Ababiah, 2013). In line with this, school administrators contribute to students' academic performance through instructional supervision and teacher motivation, authorizing expenditure on and ensuring that teaching learning resources and physical facilities are in place, with the aim of achieving good results. In addition, school administrators participate in classroom instruction, school discipline and are custodians of public funds received from stakeholders. In essence administrators plan, coordinate, organize and account for learning activities within schools which translate into students' academic performance.

Administration according to Homby (2012) as cited in Omeke and Onah (2012) is perceived as an activity done to plan, organize and successfully run an institution, a process or act of organizing the way something is done. It involves planning activities to fulfill goals of an organization. Similarly, management involves making use of human and non - human resources to achieve organizational goals (Onifade, 2004, as cited in Fasasi, 2004). Management of secondary schools refers to a process of making use of the available resources namely teaching learning materials, among others towards the achievement of good results. According to Numkanisorn (2008), school management is

the capacity of a school to maximize functions or the degree to which the schools perform functions when given fixed output. That is why the Commonwealth of Learning and the Southern African Development Community Ministries of Education (2000) agree that efficient and effective management of fiscal and physical resources can enhance instructional progress. All these are attributed to school administrators for purposes of enhancing academic performance. In particular the purpose of instructional supervision is to improve the quality of teaching through bettering skills of teachers which in turn enhance students' academic achievement (Samoei, 2014).

Contribution of school administrators was in this study measured in terms of the value added beyond performing their functional role of management, which is not an end in itself. Contribution in this study focused on the efforts the administrators put in place to ensure that authorized expenditure is executed and indicators are procured teaching and learning resources, physical facilities built, teacher motivation and supervision in order to enhance students' academic performance. It involved the principals' veto power in deciding, purchasing and ensuring that recommendations of the boards are executed, sourcing for resources such as extra funds, textbooks and equipment such as computers from well- wishers and providing motivational clues such as teachers' meals and cash payment for extra lessons taught in order to cover syllabi and ultimately enhance performance. The efforts of the administrators in checking teachers' professional records namely schemes of works is one of the ways of contributing to instructional supervision in the enhancement of students' academic performance. Actions administrators engage in to improve teaching learning amounted to instructional supervision and indicators were signatures, dates and meaningful comments.

Studies have shown that quality education is often indicated by levels of students' academic performance or by a school's characteristics such as conditions of the school's buildings and adequacy of teaching learning materials (Fuller, 2006). School administrators' contribution to education is one determinant of quality education since they are designated as internal quality assurance officers in schools (MOEST, 2004). Owing to the challenges that faced the Directorate of Inspection such as inadequate manpower, principals were designated as Quality Assurance and Standards Officers (QASO) in schools being entrusted with the task of instructional supervision in order to enhance performance. The Government has established Quality Assurance and Standards' Departments, provides trained teachers and funds Free Secondary Education (FSE) in all schools to attain quality education (Republic of Kenya (ROK), 2008). Despite all these measures in place Emuhaya and Vihiga Sub Counties have not been able to realize quality grades. Parents are not obtaining returns to investments. Tuition fund that is meant to assist in procurement of teaching learning resources has not has helped much, since students are asked to buy exercise books (Ahawo, 2010). Further, a look at new students' admission letters showed that they were required to bring along several 200 page exercise books, a ream of photocopy papers and a set book.

Secondary schools need to meet the national goals of education such as provision of quality education (Ekundayo, 2010a). Based on this, Townsend (1994) in Ajayi and Ekundayo (2011) posits that the criterion for measuring quality should incorporate more than achievement in written examination, but also with presence of physical facilities. In support, Uline, Miller and Moran (1998) posit that when quality is reduced to a single variable it is students' achievement in average tests score levels (Booker, 2008). School

effectiveness is also related to many other outcomes such as satisfaction of teachers, and efficient use of resources. In agreement, Rosenholtz in Uline *et al* (1998) postulate that commitment of teachers to their schools and the welfare of students has been shown to be critical aspects of performance outcome. Research has alluded to various indicators of quality grades such as curriculum, instructional materials, teachers, school atmosphere, education policy, and attitudes towards education (Bolt, 2004).

In the study on assessment of principal's supervisory roles for quality assurance in Ondo State Nigeria, Ayeni (2011) recommended that principals should collaborate with stakeholders such as old students, development partners, Parents' Teachers' Associations (P.T.A) to provide adequate instructional materials and facilities for effective teaching, learning process in secondary schools. He concluded that the attainment of quality grades is determined by effective curriculum management. Unlike this study, Ayeni (2011) linked principals' provision of adequate instructional materials to effective teaching learning process. The present study attempted to link administrators' contribution to teaching learning resources through their acquisition and utilization and how it enhances students' academic performance.

Principals in Nigeria do not involve subordinates in their daily routine administrative duties and as a result do a lot of things themselves (Ekundayo, 2010a).Secondary school performance in the context of Ajayi and Ekundayo (2011) refers to the ability of a school to achieve its predetermined desired goals (Okumbe, 1999; Sergiovanni, 1987; Obondo, Nandago and Otiende, 2005; & Fasasi, 2004). In support, Tondeur, Umuhure, Rwigare and Habaragire (2008) observe that good school management depends on the efforts of a

number of agencies that are interlinked: the regional or provincial office, the district office, the local community and the school staff, all play a part in the daily operations of the school. The head teacher is the pivotal link in this network and ultimately plays the most crucial role in ensuring good performance. According to Okumbe (1999), effectiveness in an educational institution is judged by the extent to which the school acquires the necessary materials and human resources. In a study on the challenges and strategies for management in enhancing teacher motivation in public secondary schools in Kisumu West District with focus on strategies used by management in motivating teachers, Omboto (2013) recommended that P.T.A funds meant for teacher motivation be effectively used to enhance their motivation. However, it is not clear if principals are collecting and using these funds as recommended. The principal is expected to provide the right motivation and stimulation for staff and students to enhance academic performance. Unlike this study, Omboto (2013) study linked strategies principals used in enhancing teacher motivation. Therefore, this study sought to establish the contribution of school administrators through quantifiable expenditure on the welfare of teachers and rewards for remedial teaching in an effort to motivate teachers so as to enhance of students' performance.

While studying the impact of head teachers' supervision of teachers on students' academic performance in Buret District, Too, Keter, and Kosgei (2012) concluded that supervision had positive relationship with the school's overall mean score in Kenya Certificate of Secondary Education (K.C.S.E). The study recommended that head teachers should improve on teacher supervision if schools were to register improved performance in K.C.S.E. Through supervision the teachers are guided and influenced to

strive towards desired educational goals. Whereas the focus of Too, *et al* (2012) study was on the impact of the head teachers' supervision of teacher performance on students' academic performance, the present study linked the contribution of school administrators to instructional supervision in so far as checking teachers' schemes of work and whether it enhanced learners academic performance. A scheme of work is a guideline that defines the structure and content of an academic course. It is usually an interpretation of a syllabus and can be used as a guide throughout the course to monitor progress against the original plan. It maps out clearly how resources (time, books and equipment) and class activities (teacher's talk, group work, and discussion) and assignment strategies such as home-work will be used to ensure that the learning aim and objectives of the course are met successfully.

In their study on the contribution of stakeholders to provision of teaching learning resources in enhancement of girl academic achievement in Siaya County, Ahawo and Simatwa (2015) interviews with HODs revealed that different schools varied greatly in the instructional materials they had. In the study, principals contributed past papers and revision materials. The study found out that the principals contribution was high with an overall mean rating of 4.15 and 3.8 for parents out of the total 5.0 mean. This contribution had its origin in prudent management of resources bestowed to them. The study population was 20 head teachers, 20 deputy heads teachers, 20 heads of examinations, 20 Church Sponsors, among others. Therefore, the present study attempted to determine school administrators' contribution to teaching learning resources with regard to authorization of actual expenditure on textbooks among other resources, and ensuring their use. Similarly, the Ahawo and Simatwa (2015) study narrowed itself to

girls' schools in Siaya County. The present study was done in 58 secondary schools in Emuhaya and Vihiga Sub – Counties, and thus covered both mixed, day and single sex schools, and linked principals' contribution to teaching learning resources in the enhancement of students' academic performance.

Musungu (2007) observed that involvement of head teachers in the provision of learning materials such as maps, atlases, cookers, sewing machines, helped to improve performance by 15%. The study did not measure value addition by school administrators to teaching learning resources in so far as real expenditure on textbooks, laboratory chemicals and equipment, among other factors, in the enhancement of students' academic performance, beyond the mere provision of instructional materials. While studying factors influencing academic performance in mixed day secondary schools in Kisumu East, Ahawo (2010) noted that 80% of HODs reported that schools lacked most laboratory equipment, chemicals and specimens. HODs maintained that head teachers were not providing enough exercise books and sometimes students were being forced to buy them especially graph books (Ahawo, 2010). The purchase of textbooks is a functional role of the school principals. However, principals have been known to go beyond this and initiate 'book harvest' functions during which stakeholders are invited to donate teaching learning resources. The Ahawo (2010) study did not link the contribution of school administrators to teaching learning resources in so far as actual allocation and real expenditure, and the influence this had on students' academic performance. This is the knowledge gap this study sought to fill. This study attempted to quantify real financial expenditure on textbooks, laboratory equipment and chemicals, basic needs for teachers such as teas and lunches as authorized and obtained by the principals.

Quality as measured by the state of infrastructure namely construction of classrooms, head teachers' housing, laboratories among other factors, has not been realized (Ampiah, Kwaaah, Yiboe & Ababia, 2013). School infrastructure influences quality of education hence students' performance. In Ghana, the working and living environment of teachers and students is below expectation (Akeyempong, 2013). In many counties in this country schools lack basic amenities such as piped water, electricity, staffrooms and toilets. Housing is a major issue for nearly all teachers, with only 30% of them being housed by 2003. In Kenya, the Ministry of Education (MOE) identified critical shortage of permanent classrooms, existing school infrastructure in poor conditions, poor maintenance, poor water system and sanitation which in a way affect learner performance (Ahawo, Simatwa & Ayieko, 2015).

In their study on stakeholders' contribution to infrastructure development in enhancement of girls' academic achievement in Kenya, Ahawo *et al* (2015) found out that parents, principals and BOM contributed to school infrastructure. The principals' mean of 3.13 ratings were higher than the teachers' of 2.93 out of the total mean of 5.0. Principals are the custodians of contribution made by stakeholders to the schools. The study recommended that the Kenyan Government through the MOE, to insist on infrastructural facilities before a new school is registered, and that all stakeholders be encouraged to increase their contribution to infrastructure development so as to meet the threshold in enhancement of academic performance. Therefore, the present study attempted to establish school administrators' actual expenditure on physical facilities, since they are the custodians of funds received in schools, and how this enhances students' academic

performance. The study derived responses from principals, deputy principals, director of studies and chairpersons of BOMs.

At present, secondary schools' principals are absolute Chief Executive Officers (C.E.Os) who have to manage people, have to be instructional leaders, manage multi-million dollar budgets and manage school facilities (Arne, 2009). Further, he observes that instructional leadership occupies half a principal's day, with less time for out of class activities. Though principals are human capital managers adept at recognizing, developing, rewarding and evaluating teachers, a lot more is needed for their professional development (Colvin, 2010). According to Motsamai, Jacobs and de West (2011), the mismanagement of funds by principals often leads to shortage of critical resources in schools such as money not being available for purchasing of the necessary books, equipment for games and so forth, resulting into unsatisfactory performance of teachers and students. This is further evidenced through students' strikes due to less or poor quality foods, lack of maintenance of building and facilities because finances are not there. In his study on improving school financing, the use and usefulness of school grants in Kenya, Kiplang'at (2011), established that most school head teachers did not know that funds meant for repair, maintenance and improvement of existing infrastructure were not to be used for building new ones, despite the MOE providing regular financial courses for head teachers. This study sought to establish the contribution of the principals to physical facilities construction in order to enhance students' academic performance

Students' performance which society uses to measure effectiveness of schools has witnessed unprecedented set back (Ekundayo, 2010a). Over the years there has been

concern over the mismanagement of secondary schools often resulting in poor performance of these schools in national examinations and frequent students' unrest (Ndana, 2011). According to Lydia and Nasongo (2009), statistics in western province reveal that some schools perform well than others in K.C.S.E. In keeping with the MOE vision of Quality Education for Development' the then Minister of Education appointed a Task Force to re-align the education sector to Vision 2030 and the new Constitution 2010 (ROK, 2011). Based on this report, schools were to be ranked on holistic assessment on performance indicators built around the following areas: academics, co-curricular activities, quality management, operation and maintenance of physical facilities, environmental care, learners' services and community outreach programs.

According to a new government analysis the current system is geared towards passing examination and does not enhance holistic development of learners (Maina, 2014). Besides, there is evidence of stalled P.T.A projects amid low pace of school physical development despite increased enrollment, Constituency Development Funding (C.D.F) and infrastructure fund from the MOE. According to Mulkeen (2010), supervision and monitoring of teachers is a central function of the school head. However, heads are absent from schools more than the teachers, frequently for official duties. Further, preliminary survey within the County have shown that physical facilities have not been in good shape. Buildings are too old to be renovated. Deterioration in the condition of improperly maintained buildings is very obvious (Lackney & Picus, 2011). Students are crowded in the classrooms and dormitories are furnished with triple deckers such that students do not stand a chance in event of a fire outbreak (Wanyonyi, 2012). Laboratories and halls have

missing windowpanes and the furniture in terrible state in need of repair. Playgrounds are limited in some schools. Some classrooms have been converted into libraries, laboratories, home science and computer rooms. Many schools did not have separate laboratories for science rooms.

Recently, a school in Kakamega County was ranked tops in non- academic performance (Nzioka, 2014). This category recognizes schools that had excelled in proper management, co-curricular activities, and accountability. A study by Onderi and Makori (2013) on secondary school principals in Nyamira in Kenya noted that out of the 81 principals in the study between fewer than half and just fewer than three quarters of them felt their school resources and facilities were either poor or average. The facilities under study were classrooms, administrative offices and such. There is no mention of playgrounds and play courts, and whether School Administrators contribute to their development. Further, 62% of them rated their school performance in national examination as either poor or average. Based on the provision of FSE and whether it is making any differences in terms of facilities, the principals indicated that FSE has not improved the condition level of resources.

While studying the effectiveness of BOGs on curriculum implementation in secondary schools in Keiyo District, Chelimo (2010) submitted that members of the boards supported the schools to acquire physical resources and that those with higher training being able to effectively assist schools in implementing curriculum. The study had sought to establish if the management of these institutions among other factors contributed in any way to poor performance. The study did not link the contribution of school

administrators to physical facilities in regard to authorizing expenditure with the funds provided by the Boards so as to enhance students' academic performance, an area that was pursued in this study.

According to Piggozi (2005), quality measures whether students are learning the right things so as to lead to a decent life in a fast growing world. The quality of education a school gives is manifested in students' academic results. Further, quality can also be viewed a structural and process quality (Vandell & Wolfe, 2000, as cited in La Paro, 2013). Indicators of structural quality include classroom materials, curriculum taught, teacher- education and teacher child ratio. Process quality focuses on aspects such as human interactions within the classroom between teachers and the child, and peer to peer. Williams (2003), in this regard says education quality occurs when students are learning to create value for those they serve and those who serve them. The outcome of years of students' learning is measured in terms of the mean score.

Students' academic results should be meaningful, worthwhile, responsive to individual and social needs (Grima, 2008).Results determine how much and how well children have learnt and the extent to which their education translates into a range of personal, social and developmental benefits. Good performance leads to both social and economic development of the learner (Ojiambo, 2009). The wealth of nations depends on their capacity of funds to develop their human resources and not so much on the physical ones.

Based on national examinations, performance in Emuhaya and Vihiga Sub Counties has been below the minimum university entry requirement of quality grades. From year 2009 to 2013, out of 43705 candidates who sat for Kenya Certificate Secondary Examination

(K.C.S.E), 13847 obtained mean grades C+ and above, with Emuhaya and Vihiga Sub-Counties contributing 3535 (26%) and 2104 (15%) candidates, while Hamisi and Sabatia Sub- Counties contributed 3913(28%) and 4275(31%) candidates respectively (Table 1). This means that the quality of education was low and not good enough. Nationally, the percentages of candidates who scored mean grade C+ and above in K.C.S.E during years 2010, 2011, 2012, 2013 and 2014 were 27%, 29%, 29%, 28% and 31% respectively (ROK, 2015). Since the inception of 8.4.4 system of education in Kenya, candidates who score between grades A and C+ are normally considered for placement in public universities. The country's minimum grade for accessing university education remains a C+ (Buchere, 2010).Whereas it is the responsibility of parents and communities to provide for physical facilities, payment of teachers' salaries and learning materials, the contribution of school administrators to students' academic performance in so far as authorizing expenditure on and ensuring that teaching learning resources are purchased and utilized, physical facilities are developed and maintained, instructional supervision and teacher motivation are carried out have not been studied, a gap this study sought to fill.

Table 1

Candidates who attained mean grades C+ and above, Vihiga County, 2009 - 2013

Years	2009		2010		2011		2012		2013		Totals	
Sub Cty	**Nos.**	**%**	**Nos.**	**%**	**Nos.**	**%**	**Nos.**	**%**	**Nos.**	**%**	**Nos.**	**%**
Vihiga	**321**	**15**	**378**	**15**	**443**	**15**	**433**	**16**	**529**	**16**	**2104**	**15**
Emuhaya	**537**	**25**	**645**	**26**	**75426**		**840**	**27**	**759**	**23**	**3535**	**26**
Hamisi	632	30	743	30	829	28	847	26	862	27	3913	28
Sabatia	652	30	702	28	900	31	957	38	1084	33	4275	31
TOTALS	**2142**	**100**	**2468**	**100**	**2926**	**100**	**3077**	**100**	**3234**	**100**	**13827**	**100**

Source: Vihiga County Director of Education Office (2014)

Due to financial constraints facing Kenya's education system as a result of a reduction in budgetary allocation, it would be necessary to establish the contribution of the school administrators to students' academic performance through authorized expenditure of funds on laboratory equipment and materials, textbooks, physical facilities, funding workshops, revision materials, plus their participation in instructional supervision and teacher motivation in the enhancement of students' academic performance.

1.2 Statement of the Problem

Students' academic performance has over the years been measured by their cognitive achievement in form of examination results. Secondary school performance is important because it forms a basis for decision on whether students get placement for further studies or not. Nationally, the percentages of candidates who scored mean grade C+ and above in K.C.S.E during years 2010, 2011, 2012, 2013 and 2014 were 27%, 29%, 29%, 28% and 31% respectively. Based on this, performance in K.C.S.E in Emuhaya and Vihiga Sub-

Counties has been low compared to Sabatia and Hamisi Sub-Counties. From year 2009 to 2013 the two Sub- Counties have continued to trail in K.C.S.E performance, with Emuhaya contributing 3535(26%) and Vihiga 2104 (15%) candidates with mean grade C+ and above (Table 1). The success of a school is measured in terms of national examinations, and the person responsible for this is the principal. Students' academic performance is the role of school administrators since they are the designated internal Quality Assurance and Standards Officers within schools. It is their business to ensure that students score quality grades in national examinations. Despite the Government's provision of FSE, Laboratory Equipment and Infrastructure Funds, CDF and PTA funds, which have notable impact on constructing and renovating school facilities and providing water, electricity and other services, little has been said about school administrators' contribution to physical facilities and teaching learning resources through authorization and expenditure of funds allocated, besides reaching out to well–wishers for extra funds. School administrators' contribution to instructional supervision with focus on checking teachers' professional records, and teacher motivation in so far as providing motivational clues for their welfare are concerned has also not been established through research hence, this study.

1.3 Purpose of the Study

The purpose of the study was to establish school administrators' contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub - Counties, Kenya.

1.4 Objectives of the Study

The objectives of this study relating to Emuhaya and Vihiga Sub-Counties were to:

i) Establish the contribution of school administrators to instructional supervision in enhancement of students' academic performance.

ii) Determine the contribution of school administrators to teacher motivation in enhancement of students' academic performance

iii) Determine the contribution of school administrators to teaching learning resources in enhancement of students' academic performance

iv) Establish the contribution of school administrators to physical facilities in enhancement of students' academic performance

1.5 Research Questions

The research questions with respect to enhancement of students' academic performance in Emuhaya and Vihiga Sub – Counties were:

i) What is the contribution of school administrators to instructional supervision?

ii) What is the contribution of school administrators to teacher motivation?

iii) What is the contribution of school administrators to teaching learning resources?

v) What is the contribution of school administrators to physical facilities?

1.6 Conceptual Framework

A conceptual framework that guided this study is according to Fraenkel and Wallen (2001), a mental or visual picture that a researcher develops to show relationships between and among concepts or variables (Figure 1). In the wake of emphasis on schools' performance in national examinations, a lot of focus has been directed towards

the mean grade, leaving other areas of management unattended. Yet aspects of management among other things involve relating resources to the objectives (Paisley, 1993, as cited in Commonwealth of Learning & the Southern African Development Community of Education, 2000). The study attempted to examine how administrators-independent variables (Hunt & Ellis, 2004) contribute to students' academic performance. Independent variables are characteristics that probably 'cause' or influence or affect outcome (Creswell, 2003), whereas dependent variables are those that depend on the independent, are the outcomes or results of the influence of the independent variable. Students' academic performance is dependent on school administrators' contribution to instructional supervision, teacher motivation, teaching learning resources and physical facilities. The independent variables were computed against outcomes such as K.C.S.E. mean scores. Rating scales were used to measure the frequency of checking teachers' professional records as signified by presence of signatures and meaningful comments and not just "Checked" or "Approved for use", as one way of contributing to instructional supervision. Contribution to teaching / learning resources, physical facilities and teacher motivation was measured by authorization of and cash expenditure on textbooks, meals and renovation and construction of buildings. Similarly, the presence of physical facilities such as laboratories, sanitary facilities, libraries, and administrators' contribution in ensuring that they are constructed was examined. Intervening variables according to Cresswell (2003) are those variables that stand in between the independent and dependent variables, mediating the effect of the former on the latter.

Administrators' contribution to instructional supervision as supported by Too, *et al* (2012), Yunis, *et al* (2011), Ayeni (2011) and Samoei (2014) among others, enhanced students' academic performance. According to Adeyinka, Asabi and Adedotum (2013), Omboto (2013), Gitonga (2012) and Barasa (2015), administrators' contribution to teacher motivation enhanced students' academic performance. Similarly, studies by Moses (2012), Ahawo and Simatwa (2015), Musungu, (2007), Owoeye and Yara (2011), and Ayeni (2011) indicated that administrators' contribution to teaching learning resources enhanced students' academic performance. Further, it has been indicated by Khan and Iqbal (2012), Ihuoma (2008), Doane (2008), and Ahawo, *et al* (2015) that administrators' contribution to physical facilities enhances students' academic performance. The present study went further to establish the actual contribution of the administrators through regression analysis as signified by the presence of signatures and dates in professional records, expenditure on academic trips undertaken, procured teaching learning resources and constructed physical facilities.

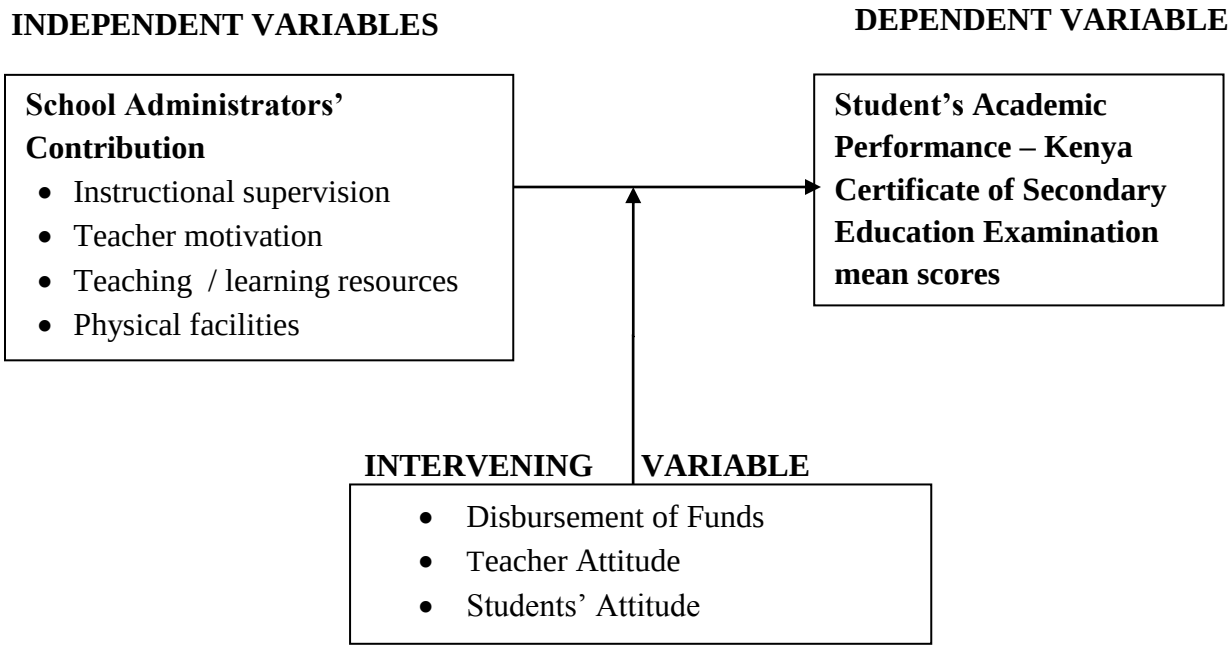

Figure 1: A Conceptual framework showing school administrators' contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub – Counties.

Source: Researcher, 2014 (Based on Literature Review)

1.7 Significance of the Study

The study is significant in that it:

i) Gives feedback to school administrators in Emuhaya and Vihiga Sub - Counties in their endeavor to contribute to students' academic performance.

ii) Forms a reference for educators, researchers, planners, and the general readers interested in school administrators' contribution to students' academic performance.

iii) Creates awareness on ways of contributing to students' academic performance.

iv) Informs stakeholders in education in Emuhaya and Vihiga Sub – Counties on ways of contributing to students' academic performance.

1.8 Assumptions of the Study

Assumptions of the study are presumed truths that have not been verified.

i) All secondary schools in Emuhaya and Vihiga Sub-Counties have school administrators who understand the role of instructional supervision for the enhancement of students' academic performance.

ii) All secondary schools in Emuhaya and Vihiga Sub-Counties have school administrators who understand their role of motivating teachers for the enhancement of Students' academic performance.

iii) All secondary schools in Emuhaya and Vihiga Sub-Counties have administrators who understand their role of procuring teaching learning resources to enhance students' academic performance.

iv) All secondary schools in Emuhaya and Vihiga Sub - Counties have school administrators who understand their role of constructing physical facilities to enhance Students' academic performance.

1.9 Scope of the Study

The scope of the study refers to the boundaries, the confines or delimitations of the study.

i) The study was confined to Emuhaya and Vihiga Sub-Counties' secondary schools because in the two Sub-Counties students' academic performance in K.C.S.E between years 2009 to 2013 was consistently below that of Sabatia and Hamisi Sub – Counties.

ii) The study used questionnaires, observation checklists, focus group discussions and interview schedules as the main methods of collecting data.

iii) The study derived responses from principals, deputy principals, DOS, chairpersons BOMs, form four students (2016), and two Sub-County Quality Assurance and Standards Officers (SCQASOs) on the contribution of school administrators to students' academic performance.

iv) The study employed descriptive survey and correlational research designs. Data on administrators' contribution was collected and correlated with students' academic performance in K.C.S.E. for the year 2016.

v) The period of study was from years 2013 – 2016, and the targeted cohort was 2013 when the students were admitted in form one.

1.10 Limitations of the Study

Two (4%) respondents did not fill some parts of the questionnaires. Information lost as a result of not filling some parts had very little effect on the data that was used in the analysis. Therefore, the outcome of the study was not significantly affected. This is because the response rate was 96%. Mugenda and Mugenda (2003) recommended that a response rate of 70% and above is good for data analysis to proceed.

1.11 Operational Definition of Terms

Achievement: summary of cognitive measure of what a student had learnt as a result of many units or months of work and is usually measured through mean scores.

Administration: is a process of a school acquiring and using resources such as human and funds to attain quality K.C.S.E. grades, participate in co-curricular activities develop and improve physical facilities.

Instructional Supervision: refers to checking teachers' professional records such as schemes of work, students' progress records so as to improve students' academic performance in secondary schools

School administrators: these are persons in-charge of secondary schools. Also known as the Principals who authorize the utilization of funds paid in by stakeholders in order to carry out supervision and teacher motivation activities, procure and ensure use of teaching learning resources, among other administrative roles.

School administrators' contribution: this is value added by the school administrators to instructional supervision, teacher motivation, teaching learning resources, and physical facilities that translates into improvement of students' academic performance**.** Value addition to instructional supervision was measured using a 5 point rating scale in terms of efforts put in place by administrators as evidenced by signatures, meaningful comments present in teachers' professional records and ensuring that every document is checked and approved page by page. To be able to quantify value addition

so as to establish contribution, value addition was indicated as expenditure. Value addition to teacher motivation was measured in terms of ensuring monetary rewards to teachers in terms of cash expenditure on tokens, meals, academic trips and funding workshops. Value addition to teaching learning resources was measured in terms of ensuring expenditure on extra textbooks, revision materials, teaching learning aids, laboratory chemicals and equipment. Value addition to physical facilities was measured in terms of ensuring expenditure on construction and improvement of classrooms, libraries, laboratories, workshops and purchase of vehicles in order to enhance students' academic performance.

Students' academic performance: this is students' achievement in external examinations. It is measured in terms of mean scores which range from 1 – 12 points.

School plant: include items such as land, buildings, furniture, teaching space and ancillary rooms. They give comfort and permit learners to concentrate on their studies.

Teacher motivation: Efforts or initiatives by administrators which induce teachers to work hard and enhance learner performance

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section reviews literature from textbooks, journals, newspapers, and past research studies in the areas of School Administrators' contribution to students' academic performance in Emuhaya and Vihiga Sub - Counties. The contribution of the Principals to instructional supervision, teacher motivation, teaching learning resources and physical facilities through authorized expenditure in the enhancement of students' academic performance, formed the major highlights.

2.2 Contribution of School Administrators to Instructional Supervision

Globally, it has been shown that one determinant of excellence in public schools is the leadership of the individual school principal (King, 2006). Research on effective schools in the United States of America strongly supports the concept that the principal is a school's success or failure (Austin, 1997 as cited in King, 2006). Similarly, Ibukin (1997) as cited in both Ekundayo (2010a) and in Ajayi and Ekundayo (2011) remarks that without leadership an organization can be best described as a scene of confusion and chaos. That is why he concludes that when leadership is effective there is progress, but when the leadership is defective the organization declines and decays. According to Tounder, *et al* (2008), principals are expected to be effective managers with focus on students' achievement and facility development. The school head is the authority within the institution with the overall responsibility of its smooth running (Bunwaree, 2009). He is accountable to the higher authorities as well as to the community in relation to the use

of resources (Onderi & Makori, 2013). School resources when used prudently will enhance learner performance.

One role of the teaching staff is to prepare students and ensure their readiness for further studies and for the world of work as well as for life in a society (Bunwaree, 2009).Thus, their duties involve adequate preparation of schemes of work and weekly plans of work in respect of the subject taught, adequate planning of lesson notes, conduct examinations and mark scripts as a way of providing feedback on students' performance (Ayeni, 2012). Other roles involve improvisation of instructional materials and effective delivery of lessons planned, carrying out continuous assessment, conducting extension classes, organizing and participating in co-curricular activities, alongside engaging in adequate keeping of professional records (Bunwaree, 2009). In addition, teachers assist the school administration in attending to problems of student discipline and maintaining discipline within school premises so as to produce and enhance expected learning achievement. Other delegated functions teachers are expected to perform include; performing the role of teacher on duty, taking charge of laboratories, workshops and specialized rooms and overally ensure development of learners both morally, emotionally, and intellectually (Bunwaree, 2009). While these are being done it is expected that school administrators check teachers' professional records for relevance to show support for their work.

Fisher (2011) as cited in Alimi, *et al* (2012) defines supervision as efforts of administrators directed to provide leadership to the teachers and other education works in the improvement of instruction. It involves the stimulation of professional growth and development of teachers and other educational objectives, materials of instruction. In

Malaysia, supervision is done by the principal, the headmaster or the senior teacher empowered by the authority (Yunis, Yunis & Ishhak, 2011). In Malasya, administrators carry out supervision through examining teachers' teaching plans, examining students' work books, observing the process of teaching and learning in the classroom. In a study carried out in Central Perak District of Malasyia by Yunis *et al* (2011), on the school principal's role in teaching and supervision in selected schools, it was found out that most principals were giving more attention to the teaching materials preparation rather than other supervision tasks. The study used 140 teachers in 4 out of the 11 schools. The number of school used was insufficient to provide adequate data and the respondents not varied as with present study which used sample sizes of 58 Principals, 58 Deputy Principals, 58 DOS and 58 Chairmen of BOMs in 58 secondary schools. Data collection procedure was not indicated implying that instruments may not been validated. Like in this study, data was analyzed using Statistical Package for Social Sciences (SPSS) such as descriptive statistics, inferential and Pearson correlation. While Yunus, *et al* (2011) linked principals' role in supervision and teaching process, the study did not link their contribution to instructional supervision to the enhancement of students' academic performance, a knowledge gap this study hoped to fill.

Ayeni (2011) while studying an assessment of principals' supervisory roles for quality assurance in secondary schools in Ondo State Nigeria, found out that most principals accorded desired attention to: monitoring of teachers' attendance, preparation of lesson notes and adequacies of dairies of work, while tasks such as the provision of instructional materials, reference books, feedback and review of activities with stakeholders were least performed by many principals in secondary schools. The study used a population of 60

principals, 540 teachers, from 60 secondary schools. The study did not address the contribution of the school administrators to instructional supervision in so far as number of times principals observed lessons, an area to be pursued in this study. Supervision was derived from the Latin word 'supervidee' meaning oversee (Ofianomagbon, 2004 as cited in Okendu 2012). Overseeing the work of and duties of subordinates connotes the art of guiding, helping, coordinating and directing teachers and other instructional staff so that school programs are improved. Supervision helps a lot in improving academic performance of students since it aims at enhancing teaching and learning through proper guidance and planning and devising ways of improving teachers professionally.

In Kenya, K.C.S.E. is a valid measure of academic performance (Masya, 2009, as cited in Thinguri, Korrir, Charo, & Ogochi, 2014). University assignment and admission depend on performance of K.C.S.E. in secondary schools. In the study carried out in Njoro District Kenya, on students' school attendance and academic performance, Thinguri, et al. (2014) used a population of 169 male and 89 female teachers, 4898 boys and 3306 girls from 30 public secondary schools. Like this study, simple random sampling was used to select 156 teachers and 363 forms 3 and 4 students from 8 sampled schools. The study found out a strong negative correlation between absenteeism and academic performance. The study did not investigate the contribution of the school administrators to instructional supervision with regard to monitoring both teachers and learners' class attendance, an area this study hoped to pursue.

Supervision improves teaching and learning through deliberate emphasis on ways and means of instilling excellence in the quality of instruction. As supported by Too, *et al*. (2012), supervision offers professional services to teachers for the purpose of interacting and influencing them so as to maintain and change and improve their service delivery to the students in order enhance performance. Samoei (2014) supports this by indicating that the primary purpose of supervision is to help support teachers to be able to handle instruction in the classroom. Regular and continuous supervision checks breaches and ensures that teachers conform to stipulated standards.

2.3 Contribution of School Administrators to Teacher Motivation

School administrators have faced the challenge of motivating teachers to higher levels of performance (Oregon Schools Boards' Association, 2009). This is because the attractiveness of the teaching profession shows that teaching is not a first choice career option for most teachers (Bennell & Ntagaramba, 2008; Okumbe, 1999). According to Nwachaka (2006), teachers urge that the existing salary structure, benefits and enhanced working conditions do not meet their needs. Teacher motivation and the working climate for students in the Netherlands influence a schools performance (Bruggencate, 2009).

Likewise, Dennison and Shenton (1987) see a leader as a motivator because leadership involves influencing staff to achieve group intentions. That is why Ayeni (2012) remarks that the optimum performance the principal should motivate the teachers. In agreement, Ajayi and Ogundoye (2003) in Ekundayo (2010b) add that the principal must modify the attitudes of the staff and motivate them to put their best at achieving educational goals through effective teaching and learning process. Therefore, motivation enhances job

performance. When teachers are not motivated their level of commitment may be low and the objectives of the school may not be accomplished. People who are motivated exert a greater effort to perform than those who are not (Ud din, Tufail, Shereen, Nawaaz, & Shahbaz, 2012). According to Ud Din, *et al* (2012), motivation is an internal state that stimulates expresses and sustains behavior for a certain period of time towards a goal. It is a desire or drive within a person to achieve some goal. To motivate others is one of the most important management tasks because it is about cultivating human capital. Motivation work is very essential in the lives of teachers because it forms the fundamental reason for working (Nwachaka, 2006). Motivation of teachers to retain them at their work places through material and psychological needs is necessary as pay on its own does not increase it (Oluoch, 2006). Thus, teacher motivation in Saharan Africa is low and it is detrimental to the quality education. Teachers have both intrinsic and extrinsic needs, with the latter not only playing an important part in people's life but also very strong in influencing a person's life (Ud Din et al, 2012). Therefore, schools should build on and enhance the intrinsic motivation for teachers to teach effectively, and supply some extrinsic motivation along the way for improvement.

The main determinant of teacher motivation according to Benneell and Ntagamba (2008) include pay and other material benefits, living and working conditions, teacher training and continuous professional development. School workers continue to be paid on a standardized salary scale and districts continue to allocate funds on a per pupil basis (Whohlstetter & Mohrman, 1993). Successful schools with high enrolment get more resources even for infrastructure and development. Monetary rewards are not the only extrinsic motivation available. Others include sabbaticals or opportunities to pursue

fulltime studies or being a prestigious mentor teacher position guiding less experienced ones. Teachers further their education through professional conferences classes at colleges and universities or when involved in teacher networks focused on some aspects of teaching and assessment. Intrinsically teachers and school workers get motivated when their students achieve.

Principals cannot succeed without accepting that they must depend on their staff though team building (Louise, Leithwood, Anderson & Walstrom, 2010). Besides, people are organizations' lifeblood without whom there is no organization (Obondo, *et. al*, 2005). For effective school operation teachers are some of the most important human resources and principals influence positively the respect accorded to teachers' participation in decision affecting them (Yang, 2005).In her study on the challenges and strategies for management in enhancing teacher motivation in public secondary schools in Kisumu West District with focus on strategies used by management in motivating teachers, Omboto (2013) recommended that P.T.A funds meant for teacher motivation be effectively used to enhance their motivation. However, it is not clear if principals are collecting and using these funds as recommended. Therefore, this study sought to establish the contribution of school administrators through quantifiable expenditure on welfare of teachers and rewards for remedial teaching, in an effort to enhance students' performance.

In a study by Omboto (2013), a population of 33 principals, 33 deputy principals, 33 chairmen of BOMs, 451 teachers, and one DQASO was used. Unlike this study Omboto (2013) study did not use students as respondents. Whereas the study interviewed both the

DQASO and the chairmen BOMs, this study used FGD with the students, questionnaires with the principals, and interviews with deputy principals, DOS and two SCQASOs. In a study on the role of principals in the promotion of girl child education in mixed day secondary schools in Rongo- Ndhiwa district Kenya, Adoyo (2013) noted that principals are charged with the responsibility of securing personnel, since they are involved in their recruitment. Whereas the study examined the principal' involvement in personnel recruitment, it did not examine teacher motivation after their employment especially in regard to funding workshops for teacher professional growth, payment of remedial teaching services, the focus of this study.

In a study by Mose (2015) on effects of teacher motivation on students' academic performance in K.C.S.E. in public secondary schools in Manga, Sub –County Nyamira Kenya, with focus on finding out the effect of conducting seminars, conferences and workshops for teachers on teacher motivation, the study concluded that such trainings exposed teachers to new knowledge making them motivated to improve students' performance. The study narrowed itself on the effects of conducting seminars, workshops and conferences on teacher motivation without giving details on the amount spent on these trainings. This study sought to find out the contribution of administrators' to teacher motivation with focus on amount spent on seminars, workshops and SMASSE Programs.

In agreement, Adeyinka, *et al* (2013) observed that in-service training had a significant effect on students' academic performance in mathematics, implying that in – service programs had direct impact on students' academic performance. In essence when they come back from these trainings, they are energized and have the drive, and move with

interest to transfer new skills learned to students hence, performance is enhanced. Head teachers should therefore, support teachers to attend seminars so as to obtain some insights. However, Adeyinka *et.al* (2013) study focused on one subject. The present study covered all subjects and any other training that the teachers may have been supported to engage in, with quantified expenditure. Motivated teachers have inner drives which prompts them to act in certain ways, directing their behavior towards particular goals, in this case students' academic performance. With these increased effort and energy teachers then get determined to give their best to achieve maximum output leading to increased learner performance (DoubleGist, 2017). Motivated teachers need not be prompted to attend lessons, especially remedial ones. In fact from this study, teachers are keen not to miss these extra lessons. They 'fight' over them because there is a regular reward or a good meal at the end of the exercise.

According to Murithi (2015) the practice of sponsoring teachers to attend academic workshops and seminars accounted for 63% as initiatives for teacher motivation as reported by the principals in Tigania West Sub County. Attendance of SMASSE project seminars which emphasizes on learner centered preparation and presentation of lessons makes students' interested in science subjects thereby leading to better performance. However, Murithi (2015) study did not quantify the amount principals spent on SMASSE training programs, the focus of this study. In the context of Gbollie and Keamu (2017) motivation is what gets you going, keeps you going and determines where you are trying to go. It is a fundamental recipe for academic success, stimulating desire and energy in people to be continually interested and connected to the job, role or subject to make an effort to attain goals. In this study initiates by administrators to offer tea as early as 6a.m.

makes teachers to come early to school to teach, have breakfast and pursue more lessons past 6p.m. because supper is also offered. Extra teaching is sustained as long as administrators keep on offering incentives and is further sustained and cupping itup when students' produce quality grades. In a nutshell good students' performance also motivates teachers directly, since they become more than willing to sustain this activity.

2.4Contribution of School Administrators to Teaching Learning Resources

The Ministry of Education underscores the importance of teaching learning resources in secondary schools by putting their purchase under Tuition Fund (ROK, 2008).In their study on the contribution of stakeholders to provision of teaching learning resources in enhancement of girl academic achievement in Siaya County, Ahawo and Simatwa (2015) interviews with HODs revealed that different schools varied greatly in the instructional materials they had. In the study, principals contributed past papers, and revision materials. Like this study, they used descriptive research design of the survey type because it helps establish opinions, attitudes and knowledge about phenomena. The study population was 20 head teachers, 20 deputy heads teachers, 20 heads of examinations, 20 church sponsors, among others. The study found out that the Principals contribution was high with an overall mean rating of 4.15 and 3.8 for parents. This contribution has its origin in prudent management of resources bestowed to them. Therefore, the present study attempted to determine school administrators' contribution to teaching learning resources with regard to authorization of actual expenditure and ensuring use of these resources. Similarly, the study narrowed itself to girl schools. The present study was done in all the 58 schools in Emuhaya and Vihiga Sub - Counties.

While studying factors influencing academic performance in mixed day secondary schools in Kisumu East, Ahawo (2010) reported that 80% of HODs reported that schools lacked most laboratory equipment, chemicals and specimens. Similarly, 100% of the HODs reported that heads teachers were not providing enough stationery. They attributed this shortage to their head teachers' reluctance to purchase the required materials. HODS maintained that head teachers were not providing enough exercise books and sometimes students were being forced to buy them especially graph books (Ahawo, 2010). This study did not establish the contribution of school administrators to teaching learning resources in regard to funds allocation and ensuring that they are actually purchased and used, creating a need for this study. The study population used was32 head teachers, 32 heads of examinations, 1045 Form four students in 10 out of 32 sampled schools. Over and above these respondents, the present study sought responses from the 58 deputy principals and 58 DOS. In addition the opinion of 58 Chairmen BOM in 58 secondary schools in Emuhaya and Vihiga Sub Counties was sought. Ahawo (2010) recommended that head teachers to prioritize the provision of laboratory equipment since they play a vital role in the performance of learners in K.C.S.E. Therefore, the present study attempted to broaden the above study by establishing the school administrators' contribution to teaching learning resources namely laboratory chemicals and equipment, photocopying papers and writing materials, in so far as allocating funds and ensuring that they are purchased for use in enhancement of students' academic performance.

In a study on the relationship between mean performance in K.C.S.E examinations and educational resource inputs in public secondary schools in Nyando District, with focus on mean performance in K.C.S.E and expenditure per unit on textbooks. Olendo (2008)

recommended that head teachers to buy more textbooks and ensure they are properly used to achieve good scores. Availability and effective use of teaching learning resources contribute to performance of students in K.C.S.E. While the study used ex-post facto research design, the present study used descriptive design of the survey type. Her study population included 46 head teachers, 564 teachers, 1 D.E.O with sample sizes of 15, 200 and 1 D.E.O respectively. The present study in addition sought responses from deputy principals, DOS and Chairmen of BOMs on school administrators' contribution to teaching learning resources. Musungu (2007) observed that involvement of head teachers in the provision of learning materials such as maps atlases, cookers, sewing machines, helped to improve performance by 15%. There was no link between school administrators' contribution to teaching learning materials by way of funds' allocation and expenditure in the realization of quality grades, a gap this study hoped to address.

Public expenditure on education is aimed at achieving quality as one of the sixth Education for All (EFA) Goals (UNESCO, 2005). This report found out that the provision of more textbooks, reduction in class size; among other factors have positive impact on learner achievement. Obtaining quality grades in examinations and subsequent training to all Kenyans is fundamental to the success of the Government's overall strategy (ROK, 2012).Teaching/ learning resources are therefore essential in this matter at all levels of education worldwide. Onguntunse, Awe and Ajayi (2013), concluded that availability and adequacy of teaching learning resources promoted the effectiveness of schools as these are the 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 Government and private institutions to provide enough teaching learning aids to students' in order to enhance academic performance. Examples of such resources include; textbooks, computers, laboratory equipment, exercise books, photocopying paper, instructional materials such as chalk, maps, charts.

A study in Thailand indicated that textbooks were positively related to achievement (Fuller, 2006).While assessing the impact of textbooks on students' performance; Huneman (1984) as cited in Ahawo, (2010) concluded that textbooks had important effect on students' performance all over Philippines. In their study on determinants of academic performance in K.C.S.E.in public secondary schools in Kiambu County Kenya, Mwangi and Nyagah (2013) recommended that the BOGS should equip the school laboratories and libraries and put up teachers houses. While studying school based factors influencing students' performance in public secondary schools in Lari District Kenya, Macharia (2012), found out that lack of adequate teaching learning resources, and physical facilities such as classrooms, libraries and science laboratories enabled students not to perform better in K.C.S.E. The study was conducted in 29 secondary schools. She recommended that MOE should consider increasing the provision of teaching learning materials in order to improve performance. She did not study the contribution of School Administrators with regard to actual expenditure on textbooks since tuition funds are given by the MOE, creating a need for this study. Specifically, this study sought to establish if school administrators contribute to students' academic performance by authorizing the purchase and ensuring the use of teaching learning resources such as laboratory equipment and chemicals, textbooks, among others.

Further, Moses (2012) study recommended that more learning resources be provided in the schools in Tarabu State, Nigeria since they contributed significantly to students' academic achievement in science subjects. Moses (2012) study focused on the learning resources provision in the 3 science subjects, and he did not assess the contribution of school administrators in so far as the amount of cash authorized and spent on these learning resources namely textbooks, laboratory chemicals and equipment, among other teaching learning aids.

Moses (2012) agreed with Musau (2015) study on school based factors influencing students' performance in K.C.S.E. in Masinga Sub – County, Machakos, Kenya. In the study, which focused on the provision of teaching learning materials, Musau (2015) concluded that principals provided teachers with text books and other materials in order to ensure optimum curriculum delivery hence, enhanced learner performance. Out of the total 15 respondents, 93% of the Principals agreed that quality physical materials make students perform. Further, he recommended that principals to continuously provide teaching learning resources to enhance students' academic performance. However, availability and adequacy of learning teaching materials is not enough. The extent to which the administrators made effort to authorize and ensured that teaching learning resources are purchased formed the basis of this study. Musau (2015) study did not interview principals on the amount of cash schools spent so as to obtain these resources, a gap filled by this study.

Similarly, Munguti (2016) study with focus on relationship between learning resources and students' academic performance in K.C.S.E. in geography in Makueni County, Kenya concluded that access to a variety of learning resources, their availability and use

in teaching and learning promoted academic performance in geography in K.C.S.E. What was not studied is the effort of the administrators to ensure that these materials are provided for curriculum instruction at some cost, which formed the basis of this study. In addition Munguti (2016) confined his study on geography as a subject. This study encompassed all teaching learning resources namely maps, charts, textbooks and mathematical models used in all subjects in the 58 secondary schools.

As supported by Murithi (2015), principals' instructional leadership involves providing text books and other teaching learning materials because good performance is attributed to adequacy of teaching learning resources. In his study, 60% of the principals reported that they provided teaching learning resources, which as pointed out by Adewale (2014) as cited in Murithi (2015), that teaching and learning materials are determinants of quality education.

2.5 Contribution of School Administrators to Physical Facilities

School administrators are charged with the mandate of contributing to students' quality grades through infrastructure development by committing and ensuring funds are expended on putting up physical facilities in order to increase space. Studies have shown that quality education is often indicated by levels of schools' characteristics such as conditions of the school's buildings and adequacy of teaching learning materials (Fuller, 2006). School infrastructure influences quality of education hence students' performance. In Ghana, the working and living environment of teachers and students is below expectation (Akeyempong, 2013). Schools in many counties lack basic amenities such as

piped water, electricity, staffrooms and toilets. Housing is a major issue for nearly all teachers, with only 30% of them being housed by 2003.

In Kenya, the MOE identified critical shortage of permanent classrooms, existing school infrastructure in poor conditions, poor maintenance, poor water system and sanitation which in a way affect learner performance hence, quality education. (Ahawo, Simatwa & Ayieko, 2015). In their study on stakeholders' contribution to infrastructure development in enhancement of girls' academic achievement in Siaya County, Kenya, Ahawo *et al* (2015) found out that parents, principals and BOM contributed to school infrastructure. The principals' mean of 3.13 ratings were higher than the teachers' of 2.93. Principals are the custodians of contribution made by stakeholders to the schools. Therefore, the present study attempted to establish school administrators' actual expenditure on physical facilities in enhancement of students' academic performance. The Ahawo *et al* (2015) study focused on stakeholders' contribution to infrastructure development, and used 20 parents, 3 politicians, 4 church secretaries, 20 principals, six SCQASOs and 40 teachers as respondents. The study recommended that the Kenyan Government through the MOE, to insist on infrastructural facilities by stakeholders before a new school is registered, and that all stakeholders be encouraged to increase their contribution to infrastructure development so as to meet the threshold in enhancement of academic performance. However, the present study linked administrators' contribution to physical facilities to the enhancement of students' academic performance and derived responses from 58 principals, 58 deputy principals, 58 DOS, 58 chairpersons BOMs and two SCQASOs.

School administrators' contribution to education is one determinant of quality education. They are designated as internal quality assurance officers in schools (MOEST, 2004). Quality as measured by the state of infrastructure namely construction of classrooms, head teachers' housing, laboratories among other factors, has not been realized (Ampiah, *et a*l, 2013, ROK, 2008). Despite the Government's provision of funds such as CDF, Laboratory Equipment Fund, School Infrastructure development Fund, the contribution of the school administrators to infrastructure has not been established through research. It has been established that schools that experience shortage of education facilities perform dismally in exams in Kisumu County (Olendo, 2008). Facilities construction is not a major vehicle for quality enhancement, but of critical importance is in the utilization of such facilities (Ahawo, 2010). Good physical facilities effectively contribute to 9% to good results, while adequate text books and tuition equipment give 15%(Musungu, 2007).

While studying the involvement of head teachers in provision of physical facilities that promote academic achievement in Vihiga County, Musungu (2007) concluded that facilities such as offices, libraries, assembly halls, and dining halls help improve performance. Like the present study, the research design for her study was descriptive survey. The study population was 84 head teachers, 26979 students, 1280 teachers. The secondary schools that met the conditions of the study were those that had presented candidates for Kenya National Examination Council (KNEC) examinations. This present study used schools that participated in KNEC examinations between years 2009 & 2013, with 58 principals, 58 deputy principals, 58 DOS, 58 chairpersons of BOM, 4640 students and two SCQASOs as the study population. A survey design was ideal for this

study because it provided a quantitative or numerical description of trends, attitudes and opinions of a population by studying a sample of that population (Creswell, 2003). In addition, Musungu (2007) study narrowed itself to the input of the head teachers leaving out the contribution of the deputy principal and the DOS, an area that was broadened through this study. Further, the present study in addition to questionnaires used interview schedule with the deputy principals, DOS and SCQASOs to obtain in-depth data not possible with a questionnaire.

While studying the effectiveness of BOGs in curriculum implementation in secondary schools in Keiyo district in Kenya, Chelimo (2010) found out that members of BOGs supported the school to acquire physical resources and that those with higher training being able to effectively assist the school in completing curriculum. The researcher had sought to establish if management of the institution amongst other factors contributed in any way to poor performance. Her sample population was 15 heads of secondary schools, 15 HODS, 70 teachers and 65 BOG members. Data were collected using questionnaires for BOG members and teachers whereas HODs and school heads were interviewed. Data were coded using SPSS, then analyzed using descriptive statistics, frequency distribution and chi-square. She recommended that BOGs should source for funds from CDF, harambees, and PTA for physical resource development in the schools in order to foster effective learning. The focus of Chelimo (2010) study was on members of the boards' acquisition of physical facilities in order to foster learning. This study focused on the contribution of school administrators to physical facilities through quantified expenditure and how this influenced students' academic performance. This study differed in that it used a sample population of 58 secondary school principals, 58 DOS, 58 Chairmen

BOMS, 354 students of form four of year 2016 in 58 secondary schools in Emuhaya and Vihiga Sub – Counties. In addition to questionnaire and interviews, Focus Group Discussion (FDG) with students provided additional data hence, achieving triangulation (Kothari, 2003). While Chelimo (2010) study examined the effectiveness of BOGs in curriculum implementation, this study examined the contribution of school administrators to physical facilities in so far as authorizing expenditure and maintenance funds on them is concerned, and used principals, deputy principals and DOS as respondents.

In a study on the relationship between mean performance in K.C.S.E. and educational resource inputs in public secondary schools in Nyando District, Olendo (2008), noted that head teachers experienced challenges in promoting mean performance in K.C.S.E. Poor fees payment, inadequate teachers, students' indiscipline and poor syllabus coverage were a few of the challenges established. According to Ampiah.*et al* (2013), delay or irregular flow of capitation grants in Ghana is one of the challenges faced by schools. Perception that basic education is free, making parents relax in providing basic needs for their children in school was also observed. Yet, administrators need finance in order to procure building materials to either construct or improve on existing physical facilities so as to provide space for learning.

In Latin America, a report by Willins (2000) as cited in Khan and Iqbal (2012) found out that children whose schools lacked classrooms and materials, and had an inadequate library were significantly more likely to show lower test scores and higher grade repetition than those whose schools were well equipped. Therefore, he concluded that the quality of school facilities seems to have an indirect effect on learning. It is noted that schools with adequate facilities perform better in national exams especially in core

subjects such as mathematics (Onderi & Makori, 2013), creating a need for a study on school administrators' contribution to physical facilities by way of setting up these structures.

Performance in national examinations is not only a yardstick for measuring success in schools but also for evaluating curriculum both at local and national levels. A study commissioned by UNESCO on physical facilities in South African Consortium for Monitoring Educational Quality (SACMEQ) linked physical facilities to increased educational opportunities and achievement (Beynon, 1997). The study found out that the current situation of physical facilities in 13 Less Developed Countries (LDCs) such as Bangladesh, Benin, Tanzania, Togo, Uganda, Zambia, gives cause for alarm. In many of these countries, 40% or more of pupils attend schools needing major repairs or complete building according to school heads. Therefore, there is need to study the contribution of School Administrators to physical facilities by way of authorization of expenditure.

Further, Khan and Iqbal (2012) in their study in Khyber Pukhtunkhwa Province in Pakistan on the role of physical facilities in teaching learning process with a focus on the impact of lack of physical facilities on effective teaching learning process used a study population of 20 government girls' secondary schools. A sample size of 15 randomly selected schools were surveyed, with data being qualitatively and quantitatively treated. Like in this study, a check list was used to know the current status of physical facilities in all schools. Close ended questionnaire were administered to 15 principals who were the only respondents in the study. The present study derived responses from 58 principals, 58 deputy principals, 58 DOS and 58 chairpersons BOM, 354 students of form 4, plus 2

SCQASOs. Unlike the previous study, the present study used questionnaires with both closed and open ended questions.

Open ended questions allowed divergent opinion since they did not limit responses. Over and above these Focus Group Discussions and interview schedules were used to collect information that would not have been possible with a questionnaire. Data collection through interviews, observation and document analysis achieved triangulation (Kothari, 2003). A target population of 20 schools and a sample size of 15 schools created 75% representation. Compared to this present study where a population and sample size of 58 and 52 respectively were used, Khan and Iqpal (2012) study population was inadequate. Similarly, information obtained in this study was varied and well sourced, given that a sample population of 354 students was also included, unlike the above study which sourced from 20 schools in one Province. The study concluded that there was a strong need for creating an excellent and suitable learning environment where all sorts of physical facilities were available for both the teachers and the taught. The study recommended that to improve teaching learning process, the general cleaning and good maintenance of physical facilities is required. It is not known if school administrators contribute to improvement and maintenance of physical facilities. No study has been carried out on school administrators' contribution to physical facilities in the area of authorized expenditure, hence this study. Besides, the present study used a check list and safety guidelines from the MOE to check on compliance (ROK, 2008).

A recent report evaluating school facilities in Milwaukee in year 2000 completed by the Council of Educational Facility Planners International, documented that facility conditions may have a stronger effect on students' performance than the combined

influence of family background, socio – economic status school attendance and behavior (Khan & Iqbal,2012). Subsequently, Ihuoma (2008) insists that there is a direct relationship between the quality of school facilities provided and the quality of the product of the school. The quality of the education that children receive bears direct relevance to the availability or lack of physical facilities and overall atmosphere in which learning takes place. Therefore, this study sought to establish the contribution of school administrators to physical facilities with a focus on total cash amount spent on either construction or renovation of physical facilities between years 2013 and 2016.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section deals with procedures and methods that were used to obtain data needed for the study. It focused on research design, description of the study area, the study population, sample size, sampling techniques, instruments for data collection, methods of data collection and data analysis.

3.2 Research Design

The research designs that were adopted in this study were descriptive survey and correlation. Descriptive survey involves collecting data in order to test hypothesis or answer questions concerning the current status of the subject of the study. It entails description of the state of affairs as it exists (Kisilu & Tromp, 2006). It was suitable for this study because it allowed the researcher to adopt a holistic approach in the study of selected roles of School Administrators and how they enhanced students' academic performance through contribution to: instructional supervision, teacher motivation, teaching learning resources and physical facilities. It was easy in application of research tools like questionnaires and interview schedules, as well as allowing for the collection of data from a large number of respondents in a relatively short period of time (Fraenkel & Wallen, 2000).

Correlation research design describes in quantitative terms the degree to which variables are related (Mugenda & Mugenda, 2003), with the aim of predicting a subject's score on one variable given his or her score in another variable. In this study administrators'

contribution to instructional supervision, teacher motivation, teaching learning resources and physical facilities were each correlated against students' academic performance in each school. Acorrelation coefficient was used to show the strength and direction of the relationship between the variables. A perfect correlation yields a correlation of -1 or +1, and a no relationship is denoted by a zero. The design also enabled the researcher to analyze the relationships amongst a large number of variables in a single study (Borg & Gall, 2007).

3.3 Area of Study

The area of the study was Emuhaya and Vihiga Sub - Counties in Vihiga County (Appendix W)It lies between 0^0 equator and 0^0 15'N; and $34^0$30'E and 35^0E. They border Hamisi Sub-County to the East, Sabatia and Khwisero Sub-Counties to the North, Siaya County to the West and Kisumu County to the South. The 2 Sub Counties have two administrative districts Emuhaya and Vihiga. The altitude ranges between 1300m and 1500m above sea level sloping gently from east to west. The area is covered by undulating hills and valleys with streams flowing from North East to South west draining into Lake Victoria. The Sub-Counties experience high equatorial type of climate supporting a wide variety of crops such as tea, coffee, maize, cassava, horticulture and rearing of livestock. In all major marketing centers women are engaged in selling of various items. About 42% of the population live in absolute poverty and 60% are food poor (ROK, 2013). Provision of quality education as one of the basic social services is highly threatened by poverty amongst majority of Kenyans who total about 56% (Mualuko, 2007). From year 2009 to 2013, out of 43705 candidates who sat for K.C.S.E. in Vihiga County, 13847 obtained mean grades of C+ and above, with Emuhaya and

Vihiga Sub-Counties contributing 3535 (26%) and 2104 (15%) candidates, while Hamisi and Sabatia Sub- Counties contributed 3913(28%) and 4275(31%) candidates respectively (Table 1). The success of a school is measured in terms of national examinations and the person responsible for this is the principal. Therefore, there was need to study school administrators' contribution to students' academic performance in Emuhaya and Vihiga Sub – Counties.

3.4 Study Population

According to Creswell, (2003) a target population is a group which the researcher is interested in gaining information upon which generalization and conclusion can be drawn subsequently. The target population of the study was 58 principals, 58 deputy principals, 58 Directors of Studies (DOS), 4460 students, 58Chairpersons of BOM in 58 secondary schools (Table 3.1). These were suitable persons to give information because they work closely as a team within the schools. Deputy principals and DOS, work closely with the principals and therefore are knowledgeable on the contribution principals make towards the enhancement of learners students' performance. Therefore, they were able to answer questions asked adequately. Chairpersons of BOMs were better placed to answer questions as far as monetary allocations of funds for teacher motivation, purchase of teaching learning resources, and school construction were concerned since they chair boards where financial estimates are allocated and expenditure approved. The success or failure of an organization depends on how effective the management is (Jins, 2011). The management team is responsible for propelling the organization's growth in the right direction and accounting for learners' results. Accessible population was obtained after piloting in six schools in the two Sub- Counties (Table 3.1).

3.5 Sample Size and Sampling Technique

A sample is a finite part of a statistical population whose properties are studied to gain information on the whole (Fraenkel & Wallen, 2000). It is a sub set or small part of the total numbers that could be studied. Sampling technique is the procedure a researcher uses to gather people, places or things to study (Fraenkel & Wallen, 2001). Saturated sampling was used to select sample sizes of 52 principals, 52 deputy principals, 52 DOS, and 52chairpersons of BOMs in 52 schools with 6 (10%) having been used in a pilot study. The entire population was used because it was small. This was supported by Fraenkel and Wallen (2000). Sample size of 354 students of form 4 of year 2016 from each of the 52 public secondary schools in the two Sub-Counties was determined using Fisher's formula (Mugenda & Mugenda, 2003) indicated below:

$$\text{nf} = \frac{n}{1+\frac{n}{N}}$$

$$\text{nf} = \frac{384}{1+\frac{384}{4640}} \qquad = \frac{384}{1.086} = 354$$

Where,

nf = Desired sample size (when population >10,000)

n = sample size (when the population is < 10,000 in this case 384)

N = estimate of the population size (target population) in this case 4640

This gave 354 students as the sample

Table 3.1

Sample Frame

Categories of Respondents	Study Population	Sample Size
Principals	58	52
Deputy Principals	58	52
DOS	58	52
Chairpersons BOM	58	52
Students: Form IV	4640	354
Total	**4872**	**562**

Source: Field Data, 2016

In each school 7.6% of form four students were selected and this added upto 354 which made the sample size. The number of four students in each school was obtained by dividing 354 by 4640 and multiplying by 100%, giving 7.6%. Students of form four were selected because they had been in schools for four years (2013 - 2016) and were of age to understand and comprehend the contribution of school administrators to students' performance. K.C.S.E. results of year 2016 were correlated with administrators' contribution since it was an outcome of their contribution as from year 2013 which was the cohort.

3.6 Instruments of data collection

The instruments that were used in data collection were: questionnaires, observation checklists, Focus Group Discussions (FGD), document analysis guides and interview schedules.

3.6.1 Questionnaire

Cohen and Manion (1997) have positively identified questionnaires as crucial instruments of data collection in a descriptive research like this one. A questionnaire is a prepared document that asks the same questions of all individuals in the sample (Gall, Borg & Gall, 1996). Being the heart of any survey (Kothari, 1993), a questionnaire was suitable to this study because it allowed the researcher to reach a large sample within a limited time with no extra personnel. It also allowed the researcher to preserve anonymity of the respondents with a view of gathering more candid and objective responses (Cohen &Manion, 1997).Further, Kisilu and Tromp (2006) realized that the results of questionnaires are easily and quickly quantified through Statistical Package for Social Sciences (SPSS) and can be analyzed more scientifically and objectively than other forms of research tools. Therefore, the principal's questionnaire were to collect data.

3.6.1.1 Principals' Questionnaires (PQ)

The principals' questionnaire was made up two parts. Part A contained closed ended questions and collected background information of the Principals. The information on the background of the personnel was important as literature review reveal that demographic characteristics such as gender and work experience are related to job performance, in this case enhancing students' academic performance (Coleman, 2005; Quinones, Ford & Teachout, 1995). Part B collected specific information using open-ended and closed ended questions. Open ended questions permit a greater depth of responses (Kothari, 1993), since respondents answer in their own written words in the blank spaces provided. Closed ended questions had pre-written possible multiple and rating scale answers from which the respondents were asked to choose from. The questionnaire contained items that

examined the principal's contribution to instructional supervision in so far as checking teachers' schemes of work and lesson plans among others were concerned. Principals' contribution to teacher motivation examined items such as expenditure on academic trips and meals between years 2013 and 2016. Principals' contribution to teaching learning resources was examined through total amount spent on the purchase of textbooks, exercise books, teaching learning aids, among other teaching resources. The administrators' contribution to physical facilities was examined by asking whether they built new or improved on existing school structures namely classrooms, laboratories, libraries among other school facilities, in the enhancement of students' academic performance, in Emuhaya and Vihiga Sub- counties (Appendix A).

3.6.2 Interview schedules

According to Kothari (1993), an interview schedule is an outline of questions that form a basis for and guide in the interviewing process. Creswell (2003) defines an interview schedule as an oral asking of questions by the interviewer and oral responses by the participant or selected group. The aim is to collect data through verbal communication or through interpersonal communication between individuals or a group. Interviews were used to gather in depth information to counter check the information obtained through questionnaires (Mugenda & Mugenda, 2003). Structured interviews were carried out with the deputy principals, chairpersons BOM, DOS and 2 SCQASOS. A structured interview is where the wording and question structure is asked from one interviewee to another without changing its structure. It uses a set of pre-determined questions and of highly standardized techniques of recording (Kothari, 2003).For each category of respondents a total of 30 interviews were carried out (Morse, 1994).

3.6.2.1 Deputy principals' structured interview

The deputy principal's structured interview was made up of open ended questions. It contained items that examined the deputy principal's views on the principals' contribution to instructional supervision specifically checking and approving teachers' professional records, their contribution to teacher motivation, teaching / learning resources and physical facilities in the enhancement of students' academic performance, in Emuhaya and Vihiga Sub- Counties (Appendix B).

3.6.2.2 DOSs' and SCQASOs Structured Interviews (DODSI and SCQASOSI)

The DOSs and SCQASOs structured interviews were made up of open ended questions. They contained items that examined the DOSs' and SCQASOs' views on the contribution of school administrators' to instructional supervision in so far as whether principals check students' note books and teachers' professional records, their contribution to teacher motivation, teaching learning resources and physical facilities in the enhancement of students' academic performance, in the two Sub- Counties (Appendix C & F).

3.6.2.3 Chairpersons BOM Structured Interview (CBOMSI)

The Chairpersons' BOMs structured interview was made up of open ended questions. It contained items on Chairpersons' BOMs views on the principal's contribution to instructional supervision, teacher motivation, teaching/learning resources and physical facilities in the enhancement of students' academic performance (Appendix D). Specifically the BOMs Chairperson were required to respond to whether boards commit and approve allocation of funds to teachers' academic trips and cash reward system for

quality grades, school facility renovation and purchase of teaching/learning resource materials for the enhancement of students' academic performance.

3.6.3Students' Focus Group Discussion (SFGD)

The Students' Focus Group Discussion schedule contained items that examined the contribution of administrators to students' academic performance in the two Sub-Counties. With regard to instructional supervision discussions centered on among others, whether principals visited classrooms and checked students' note books to see whether notes were written and assignment marked, and whether teaching staff and principals set subject mean score targets for learners (Appendix E). A total of 52 groups were selected with each group consisting of 6 – 8 students of form four, 2016 (Mugenda & Mugenda, 2003). In smaller schools of one or two streams,6 students were selected while in larger schools of 3 streams and above 7 or 8 students were selected.

3.6.4 Document Analysis Guide

The study examined the following school documents: teachers' schemes of work, lesson plans, records of work covered, students' progress records and laboratory inventories. Teachers' personal files were also perused to ascertain if principals were writing letters of recommendations. Copies of school budgets and records of minutes of BOMs deliberation on teacher motivation were also perused (Appendix I).

3.6.5 Observation Checklists

Observation checklists were used to establish the kind of funds received in the schools, books of accounts kept, records on inspection and inventories of physical facilities. K.C.S.E results of years 2009 to 2013 formed the basis for preliminary survey for the

study, while the K.C.S.E results of 2016 for each school were correlated with Administrators' contribution to students' academic performance. A checklist of available physical facilities was also used (Appendix G).

3.7 Validity of the Instruments

The purpose of research is to produce research results that are valid and robust (Kisilu & Tromp, 2006).Validity is defined by Gall and Borg (1996) as the appropriateness, meaningfulness and usefulness of the specific inferences made from the test scores. It is the accuracy and meaningfulness of inferences which are based on research results (Mugenda & Mugenda, 2003). It is the degree to which results obtained from the analysis of the data actually represent the phenomena under study. Both content and face validity were examined. Face validity refers to the structure and appearance of the instrument and whether they can measure what they purport to measure. Content validity refersto whether instruments provide adequate coverage of objectives under study (Ary,*et al*, 1986). The instruments to be used were given to three experts from the School of Education, Maseno University to establish whether they would be able to measure what they purported to measure as content validity. Validation involved assessing the structure of the instruments and verification of the adequacy of the content, and the weighting of the responses expected from the respondents (Omeke & Onah, 2012). The experts' comments and suggestions were incorporated in the instruments to make them more meaningful and accurate, hence valid. Their recommendations were used to improve the instrument and make them comfortable for data analysis.

3.8 Reliability of Research Instruments

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials. It is the degree to which results obtained from the analysis of the data actually represent the phenomena under study (Mugenda & Mugenda, 2003). To enhance reliability four different types of instruments on six target groups were used to collect data. There were four structured interview schedules for the deputy principals, DOS, Chairpersons BOM, and SCQASOs. Document analysis guides and questionnaires were used to collect data from the principals. Focus Group Discussions (FGD) were used to collect data from the students. This ensured that weaknesses of each tool were made up by mutually enhancing each other. Similarly the six groups provided more complete and comprehensive reliable data which might be more satisfying (Blease & Bryman, 1986).

Reliability of the instruments was also determined by piloting in 6 (10.34%) secondary schools. The aim was to eradicate any inconsistencies making them yield the same results when repeated (Koul, 1988). With regard to questionnaire reliability was tested by assessing the scales' internal consistency, that is, the degree to which the items "hang" together. This was done using Cronbach's Alpha α coefficient. (Hinton, Brownlow, McMurvay, & Cozens, 2004). The research computed the reliability of the multi items separately for the four sub scales in the principals' questionnaire. According to Orodho (2009), a questionnaire has a good internal consistency if the Cronbach Alpha coefficient is of a scale above0.70 (Table 3.2).

Table 3.2

Internal Consistency in the Questionnaire

Scales	No. of Items	Cronbach' Alpha α
1.Contribution to Instructional Supervision	5	0.75
2. Contribution to Teacher Motivation	11	0.73
3. Contribution to Teaching / Learning Resources	6	0.73
4. Contribution to Physical Facilities	13	0.82

Source: Field Data, 2017

From Table 3.2 it can be seen that the sub scale in the independent variable namely administrators' contribution to instructional supervision had an internal consistency of Cronbach Alpha α coefficient of 0.75. All the items in the sub scales were worth of retention. Similarly, the sub scale in the independent variable administrators' contribution to teacher motivation had an internal consistency of Cronbach Alpha α coefficient of 0.73. All the items in the sub scales were worth of retention. The sub scale in the independent variable administrators' contribution to teaching learning resources had an internal consistency of Cronbach Alpha coefficient of 0.73. All the items in the sub scales were worth of retention. The sub scale in the independent variable administrators' contribution to physical facilities had an internal consistency of Cronbach Alpha coefficient of 0.82. Consequently, all the items in the sub scales were worth of retention. This shows that the questionnaire was suitable for the study in regard to its reliability.

3.8 Data Collection Procedures

Before going out to the field to collect data permission was sought from the National Commission for Science, Technology and Innovation (NACOSTI) through Maseno University, School of Graduate Studies (Appendices T & V). The researcher then visited52 sampled schools to make appointments and establish rapport with respondents (Appendix U). The respondents were then visited on the agreed dates and the correct instruments used to collect data. The questionnaires were given to the principals who then filled them as the researcher waited. Permission was sought from the principals to check teachers' professional records. Interviews with DOS and deputy principals were carried out while the principals filled the questionnaires where possible. Interviews with both the SCQASOs and Chairpersons BOMs were carried on appointed dates. Schools were visited for a second time to examine if administrators checked and approved teachers' professional records with appropriate remarks, and to examine other documents such as the school budgets and laboratory inventories. Observation check lists were used to collect data at the time of collecting the filled in questionnaires. A total of 52 FGD were carried out in 52 schools. After having discussions with 26 groups, students started repeating responses. Therefore, further discussions were recorded for analysis.

3.9 Methods of Data Analysis

Data analysis is the process of bringing order, structure and meaning to mass of information collected (Mugenda & Mugenda, 2003). Quantitative data derived from closed ended questionnaire items and document analysis guides was analyzed using descriptive statistics whereby the tallied data was organized into frequencies and percentages to allow for further analysis. Frequencies and percentages were preferred

because they easily communicated research findings to the majority of readers. Responses obtained from close –ended questions were coded such that a question requiring a response of Very High (VH) was coded 5, Very Low (VL) as 1. These were transferred into summary sheets, tabulated and tallied to establish frequencies which were then converted into percentages. Responses from the open-ended questions were recorded word for word. Frequency was determined by the number of each respondent giving similar answers with relative level of opinions. The 5 response opinions given on a rating scale of 1 – 5 were given numerical codes to enable analysis and interpretation thus: Very High (VH) = 5, High (H) =4, Moderate=3, Low (L) =2 and Very Low (VL) =1. A mean score of 1.00 – 1.44 meant that the respondents' level of contribution was Very Low, a mean score of 1.45 – 2.44, meant that the level of contribution was low, a mean score of 2.5 – 3.44 meant the level of contribution was moderate, a mean score of 3.55 – 4.44 meant that the contribution level was high, and a mean sore of 4.55 – 5.00 meant that the principals' contribution level was very high.

The results of the questionnaires were quantified and analyzed through SPSS. Multiple regression analysis was conducted to assess the influence of components of administrators' contribution on students' academic performance. Pearsonr coefficient was computed to establish the strength and direction of the relationship. The actual influence of administrators' contribution to students' academic performance was established through regression. Regression analysis is a quantitative research method which is used when the study involves modeling and analyzing several variables where the relationship includes a dependent variable in this case students' academic performance, and one or

more independent variables, such as administrators' contribution to instructional supervision, teacher motivation and physical facilities.

Documents checked (Appendix I) were analyzed for presence of administrators' contribution to instructional supervision as indicated by signatures, comments, rubber stamps and checking page by page. Each indicator had a maximum score of one mark, adding up to a total of 5 marks for schemes of work, records of work, students' progress records, students' note books and lesson plans. Total scores obtained from the five documents were then divided by five to obtain mean ratings for the administrators (Appendix J). Contribution index of 1.00 – 1.44 meant that the respondent's level of contribution was Very Low, 1.45 – 2.44, meant that the level of contribution was low, 2.5 – 3.44 meant the level of contribution was moderate, 3.55 – 4.44 meant that the contribution level was high, and a mean of4.55 – 5.00 meant that the principals' contribution level was very high (Table 4.4).

To establish administrators' contribution to instructional supervision in the enhancement of students' academic performance, administrators' contribution were regressed against students' academic performance in K.C.S.E 2016. The K.C.S.E results of year 2016 were used because they were more credible and reliable given that the administrators' contribution had been assessed for the period between years 2013 and 2016 culminating into students' performance. School budgets (Appendix I) were analyzed for expenditure on workshops, teachers' meals, remedial teaching, quality grades and academic trips. Contribution for each administrator was computed (Appendix L), and expenditure on

teacher motivation kitty for each school was regressed against students' academic performance to help quantify administrators' contribution. Expenditure on teaching learning resources kitty with focus on teaching learning aids, laboratory chemicals and equipment and text and exercise books, stationery, maps and charts for each school was regressed against students' academic performance to help quantify administrators' contribution (Appendix N). Expenditure on physical facilities kitty with focus on construction or improvement of classrooms, science laboratories, libraries, dining halls, among other facilities for each school was regressed against students' academic performance to help quantify administrators' contribution (Appendix O).

Coefficient of determination was used to establish the actual contribution of administrators to each variable. Analysis of variance (ANOVA) was computed to establish whether school administrators' contribution was a significant predictor of students' academic performance. Qualitative data derived from open ended questionnaire items and interviews was analyzed for content as themes such as administrators' contribution to instructional supervision, and sub themes such as checking teachers' lesson plans, emerged. Responses from the structured interviews were transcribed and organized according to the study objectives.

3.10 Ethical Consideration

Before the study commenced the researcher visited schools to seek consent, make appointment sand establish rapport with the respondents (Appendix V). Participants were promised confidentiality and there was no coercion of any nature. Some principals found it uncomfortable to release information on school finances. However, respondents were

assured of confidentiality of their responses by the researcher and they eventually responded. They were assured of anonymity since their identities were concealed. They were also free to withdraw because the study was voluntary. The County Commissioner and the County Director of Education, Vihiga County, were both informed and gave consent before visiting schools. The Vihiga County officials were the custodians of data namely K.C.S.E. results and maps of all the Sub-Counties used in the study. All data obtained from other researchers were acknowledged to avoid plagiarism. The respondents were assured of the right to access the study findings as soon the research report was out, and were subsequently thanked after filling the questionnaires.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This section presents demographic characteristics of the respondents, results and discussion of the findings of the study. The study objectives were to:

i) Establish the contribution of school administrators to instructional supervision in the enhancement of students' academic achievement,

ii) Determine the contribution of school administrators to teacher motivation in enhancement of students' academic performance,

iii) Determine the contribution of school administrators to learning resources in the enhancement of students' academic performance.

iv) Establish the contribution of school administrators to physical facilities in the enhancement of students' academic performance.

Contribution of school administrators was measured in terms of the value they added beyond their stipulated functional roles of management to ensure that authorized expenditure is executed and indicators are procured teaching learning resources, physical facilities built, teacher motivation and supervision. The efforts of the administrators in checking teachers' professional records namely schemes of works was one of the ways of contributing to students' academic performance. Actions administrators engaged in to improve teaching learning is what amounted to instructional supervision. Continuous effective supervision is a powerful tool in terms of checking breaches and it ensures conformity with set standards (Macharia, 2012). Initiatives such as cash payment for extra lessons taught in order to induce teachers to act academically is what amounted to

teacher motivation. To determine this, principals were issued with questionnaires. Questionnaire return rate is the proportion of the questionnaire returned after they had been issued to the respondents. The rate of return of questionnaire was as shown in Table 4.1.

Table 4.1

Return Rate of Questionnaires

No. of Questionnaires Issued	No. of Questionnaires Returned	Percentage (%)
52	52	100

Source: Field Data, 2016

From Table 4.1 it can be seen that 52 (100%) questionnaires were returned. This was good for this study as supported by Mugenda and Mugenda (2003) who note that when more than 70% of the respondents return the questionnaires then this is very good acceptable response rate. It gives the researcher adequate data to proceed. Response rate refers to the percentage of subjects who respond to a questionnaire. Non respondents of 30%or more is considered low and can affect the results of the study especially if the non- respondents are similar in characteristics that are critical to the study. The 100% return rate was partly realized because the researcher administered the questionnaires personally, waited for them to be filled and handed back to her.

4.2 Demographic Characteristics of Respondents

Demographic characteristics of school administrators in Emuhaya and Vihiga Sub Counties as reported by principals (n=52) were as follows:

Table 4.2

Demographic characteristics of secondary school administrators

Characteristics	**Frequency (f)**	**Percentage (%)**
Gender:		
Female	22	42
Male	30	58
Total	**52**	**100**
Age in Years:		
31 – 40	01	02
41 - 50	23	45
Above 50	28	53
Total	**52**	**100**
Teaching Experience in Years		
6 – 10	01	02
11 – 20	10	20
20 – 30	33	63
Over 30	08	15
Total	**52**	**100**
Number of Lessons taught per week		
Less than 6	05	10
6 – 12	15	27
Over 12	32	63
Total	**52**	**100**

Experience as Administrator in Years		
Less than 1	01	02
1 – 2	05	10
3 – 4	07	14
5 - 9	22	43
10 - 15	17	31
Total	**52**	**100**
Highest Level of Education:		
Master's Degree	13	25
Bachelor's Degree	38	73
Diploma	01	02
Total	**52**	**100**
Management Courses Attended		
KEMI / KESI	48	92
Non Attendance	04	08
Total	**52**	**100**

Source: Field Data, 2016

From Table 4.2 it can be observed that 30 (58%) of school administrators were male whereas 22 (42%) were female, with 28 (53 %) being aged above 50 years. This implies that the gender parity had not been realized in secondary school administration, with 28(53%) retiring in the next 10 years. However, 23 (45%) of the administrators were aged between 41 – 50 years with only 1(2%) aged below 40 years. Further, 33 (63%) administrators had teaching experience of between 21 – 30 years, implying that they had

been in the teaching profession for some time to understand how schools run. Similarly, 10 (20%) administrators had a teaching experience of between 11 – 20 years, while 8 (16%) have a teaching experience of over 30 years meaning that they had matured in the profession. Concerning one's experience as an administrator, 22 (43%) reported that they had between 5 to 9 years of experience in leadership, while 17 (31%) had between 10 - 15 years. Only 7 (14%) had an experience of between 2 – 4 years. Job experience is defined as length of experience in a given occupation (MacDaniel, Schmidt & Hunter, 1988). Studies have shown correlation between job experience and job performance to be positive. In the context of Rice (2010), experience matters. The impact of experience is strongest during the first few years of principals' leadership during which everyone wants to commit more funds on school activities, after that marginal returns diminish.

As concerns the number of lessons taught per week, 32 (63%) of the administrators reported that they taught over 12 lessons per week. This is in keeping with TSC policy on curriculum instruction that ensures that school administrators are in touch with what goes on in the classroom. Further, 15 (28%) of the administrators indicated that they taught between 6 – 12 lessons a week, whereas 5 (10%) taught less than 6 lessons a week. In terms of the highest level of education attained, 38 (73%) of administrators had a bachelors' degree while 13(26%) and 1(2%) had masters' degree and a diploma respectively. In so far as attendance of management courses was concerned, 48 (92%) school administrators had attended management courses. This implies that majority of school administrators are endowed with management skills gained from these training.

Table 4.2 is important to this study in that it gives credibility of respondents used. Characteristics such as age show maturity levels of administrators. Contribution rises with age to optimum levels and then starts to decline as age progresses. Gender shows that information was obtained from both male and female. Gender of respondents indicates that leadership in schools is held by both male and females implying that both sexes are contributing to students' academic performance. Contribution by female administrators is mainly channeled to girls' schools, whereas contribution made by male administrators is mainly channeled to both mixed and boys' schools. However, women remain strongly underrepresented in senior school headship (Fuller, 2017). Although there are changes in the number of women holding senior leadership positions in secondary schools, a man teacher has a greater chance of being a head than a woman (Coleman, 2005). Women are favored as heads in all girls' schools. Becoming a woman head of a co-ed or boys' schools was comparatively difficulty. With most of the school administrators being above 41 years, it is expected that they are mature and credible enough to give trusted responses that can be relied on. Those below 41 years still have expectations to perform better in life. With 68% of the administrators having a teaching experience of over 20 years, they understand what teachers are expected to do especially as concerns preparation of teachers' professional records. Therefore, such administrators are bound to be knowledgeable enough to supervise teachers under them.

It is the policy that the principal must teach a number of lessons. As noted over 90% of administrators teach between 6 – 12 lessons a week. This enables them understand the kind of teaching learning resources needed for proper curriculum implementation. They have a taste of what goes on in the classroom and prepare, use and maintain teachers'

professional records such as students' progress records. Head teachers should have manageable teaching loads so as to deal with paperwork in the offices (Sherrington, 2013). Workloads for principals can have detrimental effects on the quality of teaching, the support they can offer to colleagues, and their health. Overloaded principals would be incapable of effectively carrying out their core work of administration (Ingvarson, Kleinhenz, Beavis, Barwick, Carthy & Wilkison, 2005).

Experience is what you gain when you are in the field (Nandwah, 2011). Having been in the school system long enough both as teachers and leaders, Administrators are capable of evaluating themselves better in terms of supervising staff under them. This experience enables them to understand what motivates and demotivates teachers within these schools, the essence of providing the necessary adequate teaching learning resources, and ultimately proving adequate space to house these essential materials. Work experience is related to job performance (Quinones, *et al*. 1995).

With 73% of the administrators having a Bachelor's degree, it is expected that they have a deeper understanding of what needs to be acquired in so far as curriculum teaching learning materials are concerned, how to interact with and supervise teachers for the sake of enhancing students' academic performance. Higher education plays an important lesson in enhancing personal achievement in one's career. Higher college graduates contribute more than others to social wellbeing in terms of efficiency (Baum & Payer, 2005). A knowledgeable, honest and satisfied teacher will command respect and produce hard working, efficient and honest citizens (Shah, 2007).

With knowledge acquired in school management, administrators are expected to buy the right instructional materials for curriculum implementation, build classrooms and other physical facilities to provide space for students, do classroom visitations to monitor, motivate and inspire teachers to enhance students' academic performance. KESI was a product of the Mungai Report of 1978. Currently KESI has been transformed into KEMI which offers In-service training to principals, deputy principals and HODS in schools, but does not prepare teachers aspiring to be principals. Courses are offered in 2 weeks (April, August and December) which seems to be too short (Nandwah, 2011).

4.3 School Data

The study was conducted in 52 secondary schools of which 29 were from Emuhaya Sub – County and 23 from Vihiga Sub – County. Out of these 37 were mixed day schools, 10 girls' schools and 5 boys' schools. The students' population was as shown in Table 4.3.

Table 4.3: Students' Population

Category	Frequency (F)	Percentage (%)
Below 200	06	12
201-300	12	13
301-400	10	19
401-500	09	17
501-600	06	12
601-700	06	12
Above 701	03	05
Total	**52**	**100**

Source: Field Data, 2016

From Table 4.3 it can be seen that 6 (12%) schools had students' population of below 200 students, with another 6 (12%) having between 501 – 600, and another 6 (12%) having a student population ofbetween601-700. Only 12 (23%) schools had a student population ranging between 201–300, and another 10(19%) schools had a population ranging between 301 – 400students. Further, it can be noted that 9 (17%) schools had a population of between 401- 500 students, while 3(5%) schools had a student population of above 700.

School population cuts across board where school administrators are making contribution right from schools with low population to schools with large population. Therefore, the study gives realistic data on administrators' contribution at various levels regardless of school population. This then makes a true representation of contribution of principals in both Emuhaya and Vihiga Sub - Counties. With a high population the principal has ample financial support from both MOE and parents to provide teaching and learning resources such as textbooks. Extra funds received can also be used to construct needed physical facilities such as science laboratories so as to expand access, employ extra personnel such as security firms to secure that which they have acquired, and even create unauthorized boarding sections for form four students. With extra physical facilities, teaching and learning resources students are expected to perform better. On the contrary schools with low population leave administrators with tied hands because of lack of money.

4.4School Administrators' Contribution to Instructional Supervision in enhancement of Students' Academic Performance

The research question responded to was: What is the contribution of school administrators to instructional supervision in the enhancement of students' academic performance? School administrators' contributions to instructional supervision were rated in their schools based on document analysis guide. The indicators were comments, dates and signatures and rubber stamps on documents that support supervision namely schemes of work, records of work, lesson plans and progress records. The results were as shown in Table 4.4.

Table 4.4

School Administrators' Contribution to Instructional Supervision

Administrators' Contribution Index	**Frequency (f)**	**Percentage (%)**
1.00 – 1.44	01	1.92
1.45 -2.44	22	42.31
2.45 -3.44	20	38.46
3. 45-4.44	08	15.38
4.45 -5.00	01	1.92
Total	**52**	**100**

Source: Field Data, 2017 (Appendix J)

Interpretation of administrators' contribution

1.00 – 1.44 =Very Low,

1.45 – 2.44 = Low,

2.45 – 3.44 = Moderate,

3.45 – 4.44 = High,

4.45 – 5.00 = Very High

From Table 4.4 it can be noted that 1(1.92%) school administrator contributed very little in checking schemes of work, records of work books, teachers' lesson plans, students' note books and students' progress records. Similarly, 22 (42%) administrators contributed little in checking professional records, while 20 (38%) administrators' contribution was moderate in doing the same tasks. Only 8 (15%) administrators' contribution in checking professional records was high, while 1(1.92%) administrator' contribution was very high. Continuous instructional supervision ensures that teachers adhere to set norms and standards of behavior with regard to curriculum implementation. Any breaches can be noted easily and amendments made (Macharia, 2012).

Students' academic performance in this study was measured by the mean scores obtained by the students in the 52 secondary schools' in K.C.S.E in the year 2016. In order to establish the contribution of Administrators to students' academic performance, empirical KCSE 2016 results were computed. The results were as shown in Table 4.5.

Table 4.5

Students' academic performance in K.C.S.E 2016

School's Performance Index	Frequency (f)	Percentage (%)
1.00-2.00	00	00
2.01-3.00	11	21
3.01-4.00	25	48
4.01-5.0	08	15
5.01-6.00	04	08
6.01-7.00	03	06
7.01-8.00	00	00
8.01-9.00	01	02
Total	**52**	**100**

Source: Emuhaya and Vihiga Sub County Offices, 2017

From Table 4.5 it can be observed that only 4 (7.7%) schools obtained mean score of above 6.01(C Plain) implying that 48 schools had below average mean score. This raises concern given that School administrators are the custodians of school resources bestowed upon them to utilize in the enhancement of students' academic performance. The outcome of stakeholders' investment in education is evidenced in students' academic performance. Poor results often cast aspersion on the kind of administration in place, hence the need for this study to find out the efforts of administrators' contribution in enhancing students' academic performance.

To establish the contribution of school administrators to instructional supervision in the enhancement of students' academic performance, contribution of administrators were

regressed against students' performance (Tables 4.4 & Table 4.5). The results were as shown in Table 4.6.

Table 4.6

Regression analysis of administrators' contribution to instructional supervision in the enhancement of students' academic performance (n=52)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.092	.008	.011	1.25610	.008	.425	1	50	.517

Predictors: (Constant Instructional supervision)

From Table 4.6 it can be noted that there was a weak, positive and not significant relationship between the administrators' contribution to instructional supervision and students' academic performance ($r = .092$, $p > .05$). This means that the administrators' contribution to instructional supervision in enhancement of students' academic performance was negligible because the p value was > 0.05.Similarly, it can also be noted that administrators' contribution to instructional supervision accounted for 1.1% variation in students' academic performance as signified by the co-efficient of Adjusted $R^2$of 0.011.This co-efficient means that administrators' activities of checking and approving professional records reduced students' academic performance instead of enhancing it. It was little or small and did not have any significant influence on students' academic performance. It is done as a matter of routine, a kind of termly ritual, done without verifying if teachers actually use these records to improve their teaching. What was being done was only theoretical without practical significance. Administrators' contribution was ineffective as signified by some professional records missing signatures and

meaningful comments. This explains why the administrators' contribution to students' academic performance was not significant. The administrators need to take further actions such engaging in classroom visitation to find out if teachers are actually using prepared schemes of work and lesson plans to teach so as to assist teachers to improve students 'academic performance.

Instruction in this study refers to teaching and learning. Supervision is an interaction between principals and teachers for the purpose of improving activities such as making schemes of work. Instructional supervision requires that principals focus mainly on teachers who implement curriculum directly through instruction. The purpose of supervision is to help principals to support teachers to be able to handle instruction in the classroom. Instructional Supervision approaches used in this study included administrators doing the following: checking and approving schemes of work, checking and approving teachers' lesson plans, checking and signing students' note books, checking and approval of records of work books, and checking and approving progress record books. Added to these, administrators are expected to do classroom visitations to oversee teacher –student interaction, guide and help teachers in matters of curriculum delivery and hence syllabus coverage, ensure that teachers are provided with what they need for classroom instruction. Further, supervision entails the administrator checking inventories to understand what needs to be provided. Through checking teachers' records, problems and weaknesses are identified and addressed (Samoei, 2014). Instructional supervision aids head teachers in coordinating, improving and maintaining high teaching and learning standards.

To confirm administrators' contribution to instructional supervision, the researcher physically checked teachers' professional records in various subjects in 52 schools. Where adequate supervision is done it enhances students' academic performance. However, the outcome from the principals' questionnaires showed that what is actually being done does not enhance performance as supported by the Adjusted $R^2$of 0.011. This finding agrees with the preliminary survey indicated in Table 1.1 where Emuhaya and Vihiga Sub Counties contributed 26% and 15% candidates respectively with quality grades for University intake. While Murithi (2015) study agreed that instructional supervision enhances students' academic performance, the present study has found out that administrators' contribution to students' academic performance in so far as checking teachers' professional records was very weak and did not add much value. Were supervision in Emuhaya and Vihiga Sub Counties effective then this could increase students' academic performance culminating into high University students' intake.

Checking and approval of schemes of works was actually done by the principals but without giving serious attention to strengths and weaknesses encountered. If administrators actually looked at the adequacy of schemes in terms of whether the content area was capturing the syllabi, correct formatting especially in regard to learning objectives and reference materials, and remarked appropriately it would enhance learner performance. However, schemes of work perused lacked concrete evidence as signified by missing principals' remarks, signatures, rubber stamps and dates. While some lacked the attention of HODs (Appendix K) some were only signed and rubber stamped on the cover and last pages, meaning that the principals did not go through them page by page to ascertain relevance

Whereas administrators approved schemes of work with such comments as “Approved for use” or “checked for use,” this was not enough substantive comment since whatever the principal had diagnonized to make it meaningful was lacking. Some of the schemes had respective HODs signatures implying that before such records are forwarded to the administrators HODs had chances of perusing as a matter of procedure. That is in line with one of the duties of the HODs which state that they are supposed to promote efficiency in the teaching process in the department with regard to syllabus grasp, schemes of work formation, record of work maintenance, and records of tests and examination. However, it must be noted that 25% of the HODS were not keen on checking and signing schemes of work, yet there was no comment coming from the principals, making supervision weak. This means that efforts by the 75% of HODS were being nullified by the 25% who did not check these records. This confirms the r of 0.092 and R Square of 0.011 obtained from this study.

Interviews with DOS found out that most schemes of work were endorsed by HODs and kept with Director of Studies (DOS). It is no wonder that in the schools visited, request for subject schemes of work was to be made to the HODs or DOS who said thus: “Yes we are the custodians of teachers’ subject schemes of work. After all it is us who check, approve and file them.” This explains why 4% of schemes of work did not have the principals’ signatures (Appendix K). In any case principals are also subject teachers and are bound to submit their schemes of work to their respective HODS for endorsement.

Interview findings with the deputy principals noted that most schemes of work had been approved and rubber stamped by the deputy principals. “We do this all the time given that

principals delegate this role to us especially when they are away attending meetings", said deputy principals. Lack of administrators' signatures in some of the schemes of work can be explained by the fact that those administrators whose signatures were missing may have had their rubber stamps used in their absence, as it is routine sometimes. There was therefore no contribution from the Administrators, thus confirming the r of 0.092 and $R^2$of .011 obtained from this study. Concerning whether administrators checked and approved schemes of work page by page so as to be aware of finer details, only 22 (42%) of the principals did this, with the rest either approving random cover or center pages. This displays the casual nature of attending to professional duties and further affirms the1.1% obtained in this study. What this means is that the administrators are merely engaging in arm chair exercises which is purely theoretical without any practical implications, making this supervision ineffective and of little significance.

Interview findings with SCQASO indicated that principals are the internal QASOs in schools confirming that heads of institutions have the responsibility of ensuring the maintenance of teaching standards and professional records maintained by a teacher including schemes of work, teachers' lesson notes, records of work and pupils' exercise books (ROK 2013). One SCQASO intoned "When we arrive in a school we expect to find principals to have checked and signed all teachers' schemes of work. Although this can be done by the HODs since they are the experts in this field, HODs should not rubber stamp them. This can be done by the principals themselves afterwards since it is their duty and stamping makes the records look official." Though this role is anchored in policy, SCQASO' assessment of the schools is irregular and therefore weak. Their

response to school assessment matters is occasional and somehow ‘knee jerk’ coming mostly after unrests or before school registration.

In contrast, a study by Murithi (2015) on the role of the principals in promoting students’ academic performance in Tigania West Sub- County, Meru Kenya, reported that on average 70% of the school principals ensured that teachers prepared schemes of works. Murithi’s study did not physically check schemes of work prepared. He relied on the opinions of the head teachers by asking them whether they checked the schemes of work, although he agreed that the practice of checking schemes of work has a positive impact on students’ performance. Perhaps supervision was going on in schools in Tigania West Sub County. However, there is no significant data obtained through regression. The present study physically went through prepared schemes of work to determine the contribution of administrators’ on students’ academic performance, and found out that while administrators indicated that they were doing it, physical checking found otherwise.

In contrast Musungu and Nasongo (2008) found out that 80% of the head teachers in high performing schools in Vihiga County checked schemes of work, as reported by the head teachers. The study did not actually check the schemes to confirm what the head teachers’ were reporting. Apart from asking the administrators whether they checked schemes of work prepared by the teachers, this study went further to check schemes of work in various subjects in 52 schools. The findings confirmed that the administrators did check schemes of work as evidenced by presence of their signatures, rubber stamps, and appropriate comments, but this had little influence on students’ academic performance

(Adjusted R^2 = 0.011). The administrators simply sat in their offices and went through the schemes of work, randomly stamping and signing pages without looking at strengths and weaknesses of the content therein. Thus, this did not enhance students' academic performance. What this means is that the administrators are merely engaging in arm chair exercises and doing paperwork, which is purely theoretical without any practical implications, making this supervision ineffective.

A record of work book is a teacher's professional record that contains a teacher's report on what has been taught in class based on the schemes of work prepared. As lead educators School Administrators are expected to check these records fortnightly to keep abreast with what the teacher is doing in the classroom. In this study records of work perused showed that administrators checked records of work books as evidenced through signatures and dates seen, rubber stamps, and approval comments indicated. However, this is not adding any value to students' academic performance, meaning that administrators needed to go beyond sitting in their offices and demanding for records of work done. Checking and approving records of work should be done alongside schemes of work prepared to confirm whether the teachers are following the syllabi as planned on the schemes.

Interviews with the DOS reported thus: "teachers hurriedly fill their records of work done upon being demanded by the administrators using lesson notes and not the schemes of work. Some even used textbooks because their schemes of work had been endorsed and filed at the DOS' office." In most instances, it is the HODS who checked and approved these records. It is understood that HODS are the subject experts in their respective

departments, and could be more knowledgeable than the administrators especially where the subject in question is not what the administrator teaches.

In contrast, a study by Murithi (2015) on the role of the principals in promoting students' academic performance in Tigania West Sub- County, Meru Kenya, reported that on average 70% of the school principals ensured that teachers filled records of works. In Murithi's study physical checking of records of work filled was not done. The study relied on the opinions of the head teachers by asking them whether they checked the records of work books, although he agreed that the practice of checking the filled records of work had a positive impact on students' performance. The study did not actually verify by checking these records of work to confirm what the head teachers' were saying. Perhaps supervision of records of work was going on in schools in Tigania West Sub County. However, there is no significant data obtained through regression to support this finding. Apart from asking the administrators whether they checked records of work filled by the teachers, this study went further to physically check these records in various subjects in 52 schools. The findings confirmed that the administrators were doing it as confirmed by the presence of rubber stamps, dates and signatures. But this was not enough to contribute to students' academic performance as confirmed by Adjusted $R^2$of 0.011.

In contrast Musungu and Nasongo (2008) found out that 70% of the head teachers in high performing schools in Vihiga County checked records of work, as reported by the head teachers. The study did not actually verify by checking these records of work to confirm what the head teachers' were saying. Apart from asking the administrators whether they

checked teachers' records of work filled, this study went further to check these records in various subjects in 52 schools. The findings confirmed that the administrators did check the filled records of work as evidenced by presence of their signatures, rubber stamps, and appropriate comments. The administrators simply sat in their offices and went through the records of work, randomly stamping and signing page by page. However, this did not enhance students' academic performance. What this means is that the administrators are merely engaging in arm chair exercises which is purely theoretical without any practical implications, making this supervision ineffective. Common comments in most of the records of work seen were: 'Seen, Approved. Checked.' This was inadequate and did not communicate much to the teacher concerned

Interviews with DO revealed that they are the ones who checked and signed filled records of work since they have this delegated responsibility, as evidenced by presence of HODS rubber stamps and signatures. The same assertion was repeated by the deputy principals who also indicated that the administrators had delegated this authority of checking and approving filled Records of work. Thus, deputy principals asserted: "Principals are ever busy attending meetings, and therefore we check, sign and rubber stamp teachers' records of work fortnightly on their behalf" said deputy principal from one of the schools. Further, SCQASOs commented thus: "We expect principals to check teachers' records of work randomly alongside students' note books to find out if they are intandem."

Students' performance in schools is recorded in form of marks scored in the mark books. It is expected that each subject being taught has a mark book in which to record students' scores attained in every Continuous Assessment Tests (CATS) done or any other

examination. Students' mark books show progress, either negative or positive, and can be a basis for educators offering guidance to the learner in an effort to enhance performance. Checking students' mark books helps the administrators identify weaknesses and strengths of learners and consequently employ strategies of improving or sustaining performance. With regard to teachers, administrators' checking of students' mark books can also identify weaknesses in classroom instruction, allowing for guidance on the same. Where principals are not concerned with students' progress records it cannot translate into good performance.

In order to determine administrators' contribution to instructional supervision, the researcher randomly checked students' mark books in various subjects in 52 schools. Reports indicated that 12 (23%) of progress records perused had HODs' signature implying that majority of these mark books had not been signed by the HODs, yet this is necessary before onward transmission to the administrators' offices. Only 29 (56%) school administrators signed progress records. This number is only half of schools visited indicating not all school are keen on checking the entries of students' marks which form a basis for future implication in performance. Similarly, while 28(54%) Administrators did rubberstamp progress records, only 19 (37%) of them commented thus: 'please show analysis' or 'next targets', implying that majority did not care whether these marks were entered or not. This was supported by the fact that a number of schools were not having students' mark books.

When DOS were asked how they maintained these important records, the answer was: "on the soft copy in the Director of Studies (DOS) office." It was also observed that subject teachers no longer maintained mark books meaning that tracking down students' performance was the duty of DOS. Students' marks were entered in and maintained on the computers. Notwithstanding, there should be a hard copy of students' marks used to make entries in the computers, which is the progress record book. Evaluating students' academic progress is one of the activities under instructional supervision (Okumbe, 2003 as cited in Samoei, 2014). Monitoring of students' academic progress by use of testing policy boosts students' academic achievement. During the FGD Students said, "we have been advised to plot all our Continuous Assessment Tests (CATs) results in graph books to show academic progress. We are also advised to set and note down targets in all subject in these books."

In contrast, a study by Murithi (2015) on the role of the principals in promoting students' academic performance in Tigania West Sub- County, Meru Kenya, reported that on average 66 % of the school principals ensured that teachers filled students' mark books, implying that there is a connection between this practice and school performance. Murithi (2015) study did not physically check and confirm that these mark books are being checked. Instead the study only sought the opinions of the head teachers of which 66% reported that they ensured that teachers filled these books. The study was merely based on perceptions because there is no concrete data obtained through regression. The practice of checking these students' progress records regularly has a positive impact on students' performance. However, this is not contributing to learner performance, meaning

that administrators' in Emuhaya and Vihiga Sub Counties need to do more than just checking and signing mark books. Where mark books are not maintained they should be obtained and then regularly filled. After checking these records the administrators should ensure they leave their comments for guidance.

Lesson plans act as a teacher's guide for classroom instruction. It shows steps such as introduction and conclusion, and resources such as time and learning activities to be followed when doing classroom instructions. Administrators' checking and approval of lesson plans helps confirm if the objectives listed are achievable and content area within syllabus. To further confirm administrators' contribution to instructional supervision, the researcher randomly checked teachers' lesson plans in various subjects in 52 schools. Observation showed that administrators checking and approval of lesson plans was below 10% (Appendix K). There was no evidence of their input with regard to substantive remarks. In the 52 schools visited, in less than 5(10%) schools teachers prepared and used lesson plans. Therefore, 90% of the schools visited did not prepare lesson plans, guides for teachers' classroom instruction. Interviews with DOS showed that with many years of teaching, teachers have lessons plans 'off head.'"Making lessons plans is limited to when teachers are to engage in Teachers' Performance Appraisal Exercise (TPAD), and those teachers who are on teaching practice," observed DOS.

Students write done what they learn in class in their note books. Students' note books are assumed to mirror that which the teachers write on the black boards so as in to be tandem with syllabus coverage. These notes are knowledge and form a basis for reference when students' are studying for examination and beyond schooling. To further confirm

administrators' contribution to instructional supervision, the researcher randomly checked students' note books in various subjects in 52 schools. In the subjects taught by the administrators the note books had some remarks in the form 'checked' or some dates, especially in the core subjects such as mathematics and English. Although the above findings are supported by Focus Group Discussions (FGD) with students which indicated that administrators made impromptu classroom visits and sampled students' note books, but there were no indications of principals checking students' note books. Students said thus: "our principal sometimes moves around classrooms during prep times and checks our note books, though she does not leave there any remark." Yet, other students retorted, "No. Ours collects notebooks and checks them from the office, though he does not stamp them, he writes the dates." The few students' note books the researcher checked lacked signatures, dates or comments, except in compulsory subjects and the subjects taught by the individual administrators. Administrators' aspect of checking Students' note books confirms whether assignments are being given and marked.

In contrast, a study by Murithi (2015) on the role of the principals in promoting students' academic performance in Tigania West Sub- County, Meru, Kenya, reported that on average73% of the school principals checked students' note books and assignments. Principals made impromptu visits to classrooms either, during free lessons or prep times. These visits had a positive impact on students' academic performance, but could not be verified in the Murithi (2015) study since there were no signatures or dates in the students' note books to show how these heads were promoting students' academic performance, as done in this study.

Murithi's (2015) study findings concurred with the findings of Sabitu and Ayandoja (2012) who revealed that there was a significant impact of class visitation by principals on students' academic performance in senior secondary schools in Ondo State, Nigeria. The study did not peruse students' note books to confirm the impact of the principals' but relied on their opinions instead. Although this study's findings are supported by Focus Group Discussions (FGD) with students' that administrators made impromptu classroom visits and sampled note books, there was no evidence of principals' doing this. "Our principal does not sign" one student said. "But she comes to class unannounced during preps and randomly checks some note books". The few students' note books this study checked lacked signatures, dates or comments, except those for individual subjects taught by the administrators. This study checked and perused students' notes and found out that most note books were not checked by administrators, although both authors agree that the practice of checking students' notes regularly has a positive impact on students' performance.

Adequate supervision is supposed to result in good performance. Similarly, the finding of this study though, that the contribution of the administrators was weak, did not expressly mean that administrators did not contribute to students' academic performance as the contribution was statistically not significant. School administrators should go beyond checking and approving professional records and instead step up classroom visitation to interact with teachers and learners to understand challenges faced in curriculum implementation. Efforts should be put in place to ensure that the prepared schemes of work are used effectively beyond being just filed. A study by Too, *et al* (2012) on the impact of head teachers' supervision of teachers on students' academic performance,

revealed that supervision had a positive relationship with the school's overall mean score in K.C.S.E. Further, they recommended that head teachers should improve on teacher supervision for schools to register improved performance in K.C.S.E. If head teachers performed this supervisory role there is bound to be remarkable efficiency in the work carried out by subordinates. On the contrary this study proved otherwise. Secondary school administrators in Emuhaya and Vihiga Sub – Counties are contributing weakly in so far instructional supervision is concerned as signified by Adjusted R^2 of 0.011. Administrators' activities of demanding for and approving teachers' schemes of work, records of work books, students' progress books, and lesson plans is merely a routine exercise in readiness for arrival of Quality Assurance and Standards Officers to inspect. The demand for these records is done beginning each term or earlier in the year.

Teachers are held responsible for the quality of students' work in their notebooks. The quality of students' notebooks and assignments given and marked show the teachers' delivery methods and the students' contribution assessment show where there has been improvement or not. As confirmed by Afalakemi and Oloyede (2007) frequent monitoring of students' progress is one important factor of an effective school. This study witnessed parents being invited for academic counseling with students termly to monitor their progress. These academic days are held for every class separately during which students are guided to set targets. Participant observation method revealed that school administrators engaged in lesson observation as part of instructional supervision when attending to Teacher Performance Appraisal and Development Tool (TPADS) under Teachers' Service Commission (TSC) appraisal system. Principals understand and know

their role to supervise teachers but they seldom have time to do so due to heavy workload. Some principals delegated this supervisory responsibility to senior assistants namely deputy principals and HODs. According to Wehmeber (2004) as cited in Too, *et al* (2012) supervision is the act of being in charge and making sure that things are done correctly and safely. According to Eshiwani (1993), supervision of teachers' and students' academic performance takes the following dimensions among other factors;

i. Inspection of lesson notes
ii. Inspection of lesson plans
iii. Inspection of records of work covered
iv. Checking of schemes of work
v. Inspection of students' progress reports
vi. Ensuring assignments are given, marked and corrected

Whereas Eshiwani (1993) insists that the principal has the responsibility of performing the above roles, the study points out that some are not doing this. If all principals were doing it, the overall performance could increase. Principals' active supervision as witnessed by participant observation schedule showed that principals got involved in this role only when the TSC TPAD Tool demanded it. It was witnessed that principals delegated the checking of schemes of work to DOS, prepared lesson plans and lesson notes to use for classroom instructions when they were to be appraised. The checking of the record of workbooks is a duty mainly carried out by the deputy principals and respective HODs. This is in disagreement with Hall (2005) who says that principals' presence can influence and improve the teaching learning process. Physical presence in the classroom where the action is can motivate performance. Instruction as defined by

Okendu (2012) refers to the interaction between persons, materials, ideas, performance and objects of the contrived curricula. As observed by Okendu (2012) in his study on the influence of instructional process and supervision on academic performance of secondary school students in Rivers State University, Nigeria, regular instructional supervision has a significant bearing on students' academic performance. Despite this, the present study confirmed otherwise.

In their study on impact of selected modes of instructional supervision activities on students' academic performance in senior secondary schools in Ondo State, Nigeria, Alimi and Akinfolarini (2012) found out that one of the major causes of poor academic performance can be ineffective instructional supervision. Their study which was based on performance in English language used descriptive method of research. A questionnaire titled Instructional Supervision and Students' Academic Performance Questionnaire (ISSAPQ) was administered to obtain data from 60 teachers from the 3 Senatorial districts in the State, while the performance of the students in English Language was obtained from the 2008 Senior Secondary School certificate results of the 60 randomly sampled schools. In that study, instructional supervision activities included the following: checking students' notes, lesson notes, class visitation, schemes of work, checking of teachers' punctuality and attendance, moderation of exam questions and marking, schemes on students' academic performance and checking of teachers' regularity in classrooms. The study noted that instructional supervision is necessary at secondary school level because many career decisions are taken at this level of education. The study further concluded that there were significant impacts of checking student's notes on

students' academic performance in English Language in senior secondary schools' certificate examination. Similarly, there was a significant impact of class visitation by principals on students' academic performance in English language in senior secondary schools in Ondo State, Nigeria. However, the findings of this study could not be quantified by presence of principals' signatures and meaningful remarks as focused in this study. Similarly, the study did not cover all subjects, but focused on English Language only and therefore cannot be generalized for use.

To further confirm whether principals' instructional supervision was a significant predictor of students' academic performance, ANOVA was computed. The results were as shown in Table 4.7

Table 4.7

ANOVA of Administrators' contribution to instructional supervision in the enhancement of students' academic performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.671	1	.671	.425	.517
	Residual	78.889	50	1.578		
	Total	79.560	51			

a. Dependent Variable: Students academic performance in KCSE

b. Predictors: (Constant Instructional Supervision)

From Table 4.7 it can be observed that principals' instructional supervision was not a significant predictor of students' academic performance (F (1, 50) = 0.425, p >0.05).Document analysis guide revealed that principals' contribution in checking teachers' professional records was moderate with a mean rating of 2.62.

Documents perused included: teachers' schemes of work, records of work books, teachers' lesson plans, students' note books, and students' progress records. School administrators' aspects of instructional supervision in this study involved: checking and approving schemes of work, checking and approving teachers' lesson plans, checking and signing students' note books, checking and approval of records of work books, and checking and approving progress record books.

Since the principals' contribution to instructional supervision was not a significant predictor of students' academic performance as signified by p value of .517, there was therefore no need to compute a linear regression to establish the actual influence of administrators' contribution to instructional supervision in the enhancement of students' academic performance (Brace, Kemp & Snelgar, 2006). Moreover, it is commonly believed that administrators' contribution to supervision enhances students' academic performance. However, their mere presence did not influence performance, since it was evidenced that principals were not helping teachers to improve students' academic performance through advice.

Interview findings supported this finding as DOS asserted that they were the ones who checked and endorsed teachers' professional records namely schemes of work, records of work, and progress records, and that principals only rubber stamped and signed them. Document analysis guide supported this finding as it was noted that most documents did not have signatures, rubber stamps and meaningful comments, meaning that principals were not checking these records. Where they assessed instructional records, their input was minimal such that teachers did not benefit much from this quality of supervision at

all. Presence of mere signatures did not imply that the principals communicated to the teachers and advised them accordingly. This finding somewhat contradicts the findings of other researchers who found out that administrators' contributions to instructional supervision enhances students' academic performance. This is because these researchers did not quantify the contributions and therefore, their findings were rather not precise. Similarly, the finding of this study though, that the contribution of the administrators was weak, did not expressly mean that administrators did not contribute to students' academic performance as the contribution was statistically not significant. In view of interview findings and document analysis guide, it was clear that principals contributed very little to students' academic performance through instructional supervision as supported by the 1.1% variation in students' academic performance.

4.5 School Administrators' Contribution to Teacher Motivation in enhancement of Students' Academic Performance

The research question responded to in this study was: What is the contribution of school administrators to teacher motivation in the enhancement of students' academic performance? To confirm the contribution of administrators' to teacher motivation, administrators' ratings from actual expenditure on teachers' workshops, meals, remedial teaching, quality grades, and academic trips were computed. The results were as shown in Table 4.8.

Table 4.8

Administrators' expenditure on teacher motivation, years 2013 –2016

Administrators' contribution to t /motivation Million(Kshs)	Frequency (f)	Percentage (%)
Less than 2.00	06	11
2.01 – 4.00	20	38
4.01 – 6.00	17	32
6.01 – 8.00	04	07
8.01 – 10.00	03	06
10.01 – 12.00	01	02
12.01 – 14.00	00	00
14.01 – 16.00	00	00
16.01 - 18.00	00	00
Above 18.01	01	02
Totals	**52**	**100**

Source: Field Data, 2017 (Appendix L).

From Table 4.8 it can be noted that 6 (11%) administrators contributed a total of less than 2 million on teacher motivation during the period between 2013 to 2016 in Emuhaya and Vihiga Sub – Counties, while another 20 (32%) contributed between 2.01 – 4.00 million on the same. Similarly, whereas 17 (32%) administrators contributed between 4.01 – 6.00 million on teacher motivation, only 5 (7%) spent been 6.01 – 8.00 millions on the same. It can also be observed that while 3 (6%) school administrators spent between 8.01 – 10.00 millions on funding workshops and seminars, meals, remedial reaching, cash

awards for quality grades, and funding trips to celebrate K.C.S.E results, another 1 (2%) and another 1 (2%) contributed between 10.01 – 12.00 and over 18 million respectively.

Aspects of administrators' contribution to teacher motivation under this study were: offering monetary rewards for quality grades obtained in K.C.S.E, issuing letters of recommendation to teachers who excel, funding workshops, seminars, SMASSE programs for purposes of improving performance, providing teas and lunches for purposes of motivating teachers, paying for setting and marking exams, paying for extra lessons taught beyond the timetable, issuing certificates of good performance to teachers, funding teachers' academic trips to celebrate quality K.C.S.E results / grades, attending to teachers' welfare, allowing teachers' time out for studies and funding academic trips for benchmarking.

To establish the contribution of school administrators to teacher motivation in the enhancement of students' academic performance, contribution of administrators were regressed against students' performance. The results were as shown in Table 4.9.

Table 4.9

Regression analysis of administrators' contribution to teacher motivation in the enhancement of students' academic performance (n=52)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.794[a]	.631	.623	.76677	.631	85.322	1	50	.000

Predictors: (Constant) Teacher motivation

From Table 4.9 it can be observed that school administrators' contribution to students academic performance was significant through teacher motivation. School administrators

had a strong, positive and significant influence on students' academic performance (r = .794,N =52 $p < 0.05$) through teacher motivation. Administrators' contribution to teacher motivation accounted for 62.3% of students' academic performance as signified by the Adjusted R^2co-efficient of .623.This means that when administrators provide meals and sponsor academic trips teachers get motivated to work harder to improve performance. Administrators who offered meals to teachers retained them in schools for purposes of teaching to enhance learner performance. Efforts of administrators to sponsor teachers' In-service trainings and pay for quality grades attained in K.C.S.E among other issues, motivates teachers to improve on students' academic performance. Administrators' contribution to teacher motivation is adding value as evidenced by Change in Statistics. This finding agrees with the preliminary survey as shown in Table 1, where Emuhaya and Vihiga Sub – Counties contributed 26% and 15% candidates respectively for University intake, which may have been supported by administrators' contribution to teacher motivation accounted for 63.2% variation in students' academic performance.

In a study by Mose (2015), on effects of teacher motivation on students' academic performance in K.C.S.E. in public secondary schools in Manga, Sub –County Nyamira Kenya, with focus on finding out the effect of conducting seminars, conferences and workshops for teachers on teacher motivation, the study concluded that such trainings exposed teachers to new knowledge making them motivated to improve students' performance. The study narrowed itself on the effects of conducting seminars, workshops and conferences on teacher motivation without giving details on the amount spent on these trainings. This study sought to find out the contribution of administrators' to teacher

motivation with focus on amount spent on seminars, workshops and SMASSE Programs. This study found out that on average schools spent Kshs.0.32 million during the years 2013 – 2016 on funding teachers' workshops, seminars, SMASSE programs, and In-service trainings. In agreement, Adeyinka, *et al* (2013) observed that In-service training had a significant effect on students' academic performance in mathematics, implying that In – service programs had direct impact on students' academic performance. In essence when they come back from these trainings, they are energized and have the drive, and move with interest to transfer new skills learned to students' hence, performance is enhanced. Head teachers should therefore, support teachers to attend seminars so as to obtain some insights.

However, Adeyinka *et.al* (2013) study focused on one subject. The present study covered all subjects and any other training that the teachers may have been supported to engage in, with quantified expenditure. Motivated teachers have inner drives which prompts them to act in certain ways, directing their behavior towards particular goals, in this case students' academic performance. With these increased effort and energy teachers then get determined to give their best to achieve maximum output leading to increased learner performance (DoubleGist, 2017). Motivated teachers need not be prompted to attend lessons, especially remedial ones. In fact from this study, teachers are keen not to miss these extra lessons. They 'fight' over them because there is a regular reward or a good meal at the end of the exercise. Between years 2013 – 2016 administrators in Emuhaya and Vihiga Sub – Counties spent on average 1.96 Million Kshs on remedial teaching and

extra lesson taught beyond the time table, being amount paid to teachers to motivate them. It is disguised as amount paid for transport, yet it is meant to induce them.

According to Murithi (2015) the practice of sponsoring teachers to attend academic workshops and seminars accounted for 63% as initiatives for teacher motivation as reported by the principals in Tigania West Sub County. Attendance of SMASSE project seminars which emphasizes on learner centered preparation and presentation of lessons makes students' interested in science subjects thereby leading to better performance. However, Murithi (2015) study did not quantify the amount principals spent on SMASSE training programs, the focus of this study. Professional growth and development of teachers can also help overcome shortcomings and keep teachers abreast of new knowledge in the field (UNICEF, 2010 as cited by Murithi, 2015) thereby having a direct impact on students' achievement. In support Anderson (2000) as cited in Murithi (2015) study noted that teachers supported with In-service as well as external workshop trainings improved significantly in their abilities to use child centered teaching and learning behaviors, thereby enhancing learner performance.

Collectively when teachers are sponsored for a trip to celebrate results they get motivated. Similarly, when specific teachers are offered monetary rewards for quality grades attained, they also get motivated besides instilling in them high levels of competition for such rewards. In this study the amount of cash spent on quality grades between years 2013 – 2016 on average in Emuhaya and Vihiga Sub – Counties secondary schools was Kshs 0.40 Million. Those who miss out on monetary rewards strive to obtain these awards next time, thereby creating healthy competition within the system.

Likewise, there was evidence in the study showing teachers competing to teach extra lessons off the timetable because there was immediate cash payment of between Kshs 100 and 250 for every lesson taught. This has its origin in Johnson's 1986 Expectancy theory of motivation which states that individuals are more likely to strive in their work if there is an anticipated reward that they value such as bonus or a promotion than if there is none (Omboto, 2013).

Monetary rewards are major rationale for working (Gitonga, 2012). Teachers who are paid more stay longer in teaching, and essentially get motivated to enhance learners' performance. In the Barasa (2015) study on influence of teacher motivational strategies on students' improved academic performance in day secondary schools in Trans Nzoia West District, out of the 224 teachers used as respondents 44% agreed with principals' giving awards to teachers to promote students' academic performance, while 40% of the respondents agreed to get rewards upon good students' performance. This form of recognition makes teachers get motivated upon receiving cash or physical rewards for work done, and is supported by Perumal (2011) as cited in Barasa (2015) study who observes that an employee recognition program may include cash prizes or additional paid vacation days as part of the reward being recognized. Although, Barasa (2015) study found out that most teachers in Trans Nzoia West lacked motivation in their work accounting for the low performance in schools, this study has established that there is a strong relation between school administrators' contribution to teacher motivation and students' academic performance as signified by the r of .794. The focus of Barasa (2015) study was on employee recognition program, making it narrow and not quantifiable in terms of expenditure. This study checked and quantified expenditure on teachers' meals

during the years 2013 – 2016 years, and found out that besides being significant it had influence on students' academic performance.

Providing meals to teachers in schools ensures that they are available to do extra teaching or are available for consultation by learners. Meals provided in these schools included morning tea, 10 o'clock tea, lunches, 4 O'clock snacks, and in some schools supper, implying that where this was done teachers only went back to their houses to sleep. Principals' contribution to teachers' meals in terms of actual expenditure ranged between Kshs 3000 to 7500 in a week with funds being sourced from boarding vote head. In her study on influence of teacher motivation on performance in K.C.S.E in public secondary schools in Imenti South District, Kenya, with regard to objective number two which sought to establish whether working conditions of the teachers has influence on K.C.S.E performance, Gitonga (2012), concluded that conducive learning environment such as provision of meals motivates teachers to enhance students' performance. In the study 62% of the teachers strongly agreed, and 37% agreed that when schools provide lunch and tea to teachers, they get motivated and work better. In the present study administrators' contributed an average of Kshs 2.234 million to teacher motivation by authorizing and spending on teachers' meals between years 2013 – 2016 per in Emuhaya and Vihiga Sub Counties.

Gitonga (2012) study did not use interviews with the principals on the amount that they committed and spent on teachers' meals in secondary schools as was done in this study. Rather she concentrated on whether the working conditions of the teachers with provision

of meals being one of them, had influence on K.C.S.E performance. In her study on challenges and strategies for management in enhancing teacher motivation in public secondary schools in Kisumu West District under strategies used by school management in monitoring teachers, Omboto (2013), recommended that; letters for promotion be given to teachers, administrative responsibilities such as the post of class teacher or games teacher, reward system in recognition for achievement for example, certificates of appraisals, trips, among others, be given after K.C.S.E results are out and finally teachers be involved in decision making especially in the management of students' discipline. She further recommended that P.T.A funds meant for teacher motivation be effectively used to enhance their motivation.

Recognizing best teachers of the year motivates and always inspires them. The mean rating for the reward system given was 4.0 out of 5.0, taking the form of financial cash money tied to the grades obtained in K.C.S.E with the amount varying depending on the grade obtained. Teachers even calculate before the end of year results are out. Omboto (2013) study did not check the actual amount spent on quality grades attained, and how it contributed to teacher motivation and consequently enhancing students' academic performance. In this study administrators' contribution to teacher motivation had a strong, positive relationship with students' academic performance as confirmed by r of .794.

As recommended by Gitonga (2012) study, BOMs and TSC should improve on teachers' intrinsic motivation by recognizing teachers for their achievement by writing recognition letters, and by providing teachers with opportunities for professional growth. Professional growth and advancement in itself is motivating, and where administrators support

seminars and individual studies, teachers feel appreciated and therefore strive to support learners to achieve better results. Academic trips to celebrate K.C.S.E results in the two Sub- Counties take the form of 'meet together' with members of BOMs to brain storm. Locations visited by some schools included Roddy's Hotel and Guji's Corner in Vihiga County, Bishop Nicholas Stam Pastoral and Animation Centre in Kakamega County, Nairobi, Busia, Nakuru, Mombasa, and even Kampala in Uganda.

Interview findings with DOSs revealed that principals motivated teachers in many ways. DOSs said,

> Our principals support teachers to attend subject seminars, drama workshops, and other academic trips to celebrate quality K.C.S.E results. SMASSE participation for teachers of science subjects is a must, and in both occasions money for transport and lunch is offered.

This information was further collaborated by Chairpersons BOM. They said this concerning teacher motivation:

> In our annual school budgets we ensure that we commit certain funds towards teachers' academic trips and awards for quality subject grades in terms of students' academic performance. We also ensure that cash for their daily morning teas, lunches and evening meals is considered.

Personal visits to schools by the researcher witnessed teas and lunches being served in the staffrooms, confirming that principals were providing these meals in order to motivate teachers to enhance students' academic performance. FGD with students confirmed that teachers are sponsored to attend In-service courses. For instance students said;"Whenever a teacher is absent from school the principal makes an announcement on the assembly explaining the seminar he or she has gone to attend."Document analysis guide revealed that for the period 2013 -2016 years an average school's expenditure on academic trips

was Kshs 0.09 million and on teachers' meals Kshs 2.234 million, among other aspects of administrators' contribution.

To confirm whether administrators' contribution to teacher motivation was a significant predictor of students' academic performance, NOVA was computed and the results were as shown in Table 4.10.

Table 4.10

ANOVA of Administrators' Contribution to Teacher Motivation in the Enhancement of Students' Academic Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	50.163	1	50.163	85.322	.000
	Residual	29.397	50	.588		
	Total	79.560	51			

Dependent Variable: Student academic performance in K.C.S.E
Predictors: (Constant) Teacher motivation

From Table 4.10 it can be observed that administrators 'contribution to teacher motivation was a significant predictor of students' academic performance (Sig =.000). Interview findings with teachers on teacher motivation indicated that teachers were moderately motivated.

The study further sought to establish the actual contribution of administrators' to teacher motivation in enhancement of students' academic performance, linear regression analysis was computed and the results were as shown in Table 4.11.

Table 4.11

Linear Regression Analysis of Administrators' Contribution to Teacher Motivation in the Enhancement of Students' Academic Performance (n = 52)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.423	.190		12.742	.000
	Teacher motivation	.307	.033	.794	9.237	.000

Dependent variable: Student academic performance in K.C.S.E.

Regression Equation $=\beta_{0+}\beta_1 X_1 + \ldots\Sigma$

From Table 4.11, it can be observed that administrators' contribution to teacher motivation influenced students' academic performance. For every one unit increase in administrators' contribution to teacher motivation, students' academic performance increased by .307units as signified by the coefficient of .307. This means that when administrators' either sponsored one academic trip to celebrate quality grades, or improved on teachers' meals by one unit, students' academic performance increased up by .304 units (students academic performance = 2.423 +.307X_1).

This finding agrees with Orji's (2014) study in which it was found that teacher motivation provides the desire in students to learn, and that working conditions of teachers are closely related to learning conditions of students. Teacher motivation is a term that applies to entire class of drives, desires, needs and wishes initiated for teachers by administrators in order to induce them to act in a desirable manner, in this case enhance learner performance. Under this objective the drives, desires, needs and wishes initiated by administrators in the study included the following: regular payment of remedial lessons taught, cash awards for quality grades attained in K.C.S.E, bonus on In-

service training, sponsoring academic trips to celebrate results, and providing meals to teachers.

Contribution of administrators to teacher motivation was not by chance as it was evidenced by the motivation cues such as: variety of meals provided, the number of In-service trainings that teachers attended, educational trips undertaken after release of K.C.S.E results and rewards for quality grades obtained (Appendix L). Interview findings with the principals showed that principals committed cash to be spent on quality academic grades attained by students as rewards to teachers. More cash was committed and spent on teachers' academic trips to celebrate K.C.S.E results in recreational destinations such as Kampala in Uganda, Mwanza in Tanzania and Mombasa in Kenya. Evidence from document analysis guide showed that BOMs allocated funds for academic trips and teachers' meals in the school budgets. Minutes of the BOMs discussions on teachers' academic trips supported administrators' efforts in contributing to teacher motivation. This finding agreed with the findings of other researchers who found out that administrators' contributions to teacher motivation enhances students' academic performance (DoubleGist, 2017, Gitonga, 2012). However, this study quantified actual expenditure by administrators to teacher motivation and found out that it accounted for 62.3% variation in students' academic performance.

4.6. School Administrators' Contribution to Teaching Learning Resources in enhancement of Students' Academic Performance

The research question responded to was: What is the contribution of school administrators to teaching learning resources in the enhancement of students' academic performance? To confirm the contribution of school administrators' to teaching learning resources, administrators' ratings on actual expenditure on laboratory chemicals and equipment, textbooks and exercise books, stationery, maps, charts and other teaching aids were computed. The results were as shown in Table 4.12.

Table 4.12

Administrators' expenditure on Teaching Learning Resources, years2013 - 2016

Administrators'' contribution to Teaching /Learning resources in Million (Kshs)	**Frequency (f)**	**Percentage (%)**
0.00 -1.5	00	00
1.51 – 3.00	11	22
3.01 – 4.50	09	17
4.51 – 6.00	09	17
6.01 – 7.50	07	13
7.51 – 9.00	06	12
9.01 – 10.50	08	15
10.51 – 12.00	02	04
Totals	**52**	**100**

Source: Field data, 2017 (Appendix N).

From Table 4.12, it can be seen that 11 (21%) administrators contributed between1.51 – 3.00 million Kshs towards expenditure on teaching learning resources namely text books, laboratory chemicals and equipment among others. Further, 9 (17%) administrators contributed between 3.01 – 4.50 million on teaching learning resources with a similar number 9 (17%) spending between 4.51 – 6.00 million on the same. While 7(13%) administrators committed and spent between 7.51 – 9.00 millions on purchase of teaching learning resources, another 8 (15%) administrators contributed between 9.01- 10.50 million Kshs towards the same. Only 2 (4%) school administrators spent between 10.52 – 12.00 million on teaching learning aids.

The variation in expenditure can be explained by the varied amount of capitation received from the MOE based on students' population in the individual schools. Free Secondary Education Fund (FSE) commits Kshs.3902 per student per year for purchase of exercise books among other teaching learning resources. Therefore, schools with high population are bound to receive more money to spend. The role of purchasing books is a function of the administrator What this study sought was whether principals are going out of their way to ensure to that these roles are performed as prescribed. Value addition means the principal going beyond the stipulated role of purchasing books over and above what exists. They should ensure that the books that are purchased are not only brought to schools, properly stored, well maintained and replaced, but are also properly utilized to enhance learners' academic performance.

To establish the contribution of school administrators to teaching learning resources in the enhancement of students' academic performance, administrators 'contributions were regressed against students' performance. The results were as shown in Table 4.13.

Table 4.13

Regression analysis of administrators' contribution to teaching learning resources in the enhancement of students' academic performance (n = 52)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.597	.356	.343	1.01233	.356	27.634	1	50	.000

Predictors: Constant Teaching /Learning resources

From Table 4.13 it can be observed that school administrators' contribution to students academic performance was significant through teaching /learning resources. School administrators had a strong, positive and significant influence on students' academic performance ($r = .597$, $N = 52$ $p < 0.05$) through teacher motivation. Further, it can be noted that administrators' contribution to teaching learning resources accounted for 34.3% of students' academic performance as signified by the Adjusted R^2 of .343.This means that when administrators purchased textbooks, laboratory chemicals and equipment among other teaching learning resources, teachers get motivated to use these resources to improve performance. Administrators' contribution is adding value as evidenced by Change in Statistics. This means that administrators' contribution had an influence on students' academic performance. Administrators' efforts of authorizing expenditure and ensuring that teaching learning resources are provided for curriculum implementation has a positive impact on students' academic performance. This contribution supports earlier survey which showed that the two Sub- Counties contributed 41% candidates out of the total University intake of 13847 candidates within Vihiga

County. This could be attributed to administrators' contribution to teaching learning resources.

This is further confirmed by Moses (2012) who recommended that more learning resources be provided in the schools in Tarabu State, Nigeria since they contributed significantly to students' academic achievement in science subjects. Moses (2012) study focused on the learning resources provision in the 3 science subjects, and he did not assess the contribution of school administrators in so far as the amount of cash authorized and spent on these learning resources. This study has noted that administrators' contribution to teaching learning resources accounted for 35.6% of students' academic performance as signified by Adjusted $R^2$of .346. This implies that when administrators purchased textbooks, laboratory chemicals and equipment, among other teaching learning aids, teachers got motivated to work better and improved students' academic performance by 35.6%.

This finding agrees with Musau (2015) study on school based factors influencing students' performance in K.C.S.E. in Masinga Sub – County, Machakos, Kenya. In his study, which focused on the provision of teaching learning materials, Musau (2015) concluded that principals provided teachers with text books and other materials in order to ensure optimum curriculum delivery hence enhance learner performance. Out of the total 15 respondents, 93% of the Principals agreed that quality physical materials make students perform. Further, he recommended that principals to continuously provide teaching learning resources to enhance students' academic performance. However,

availability and adequacy of learning teaching materials is not enough. The extent to which the administrators made effort to authorize and ensured that teaching learning resources are purchased formed the basis of this study. Musau (2015) study did not interview principals on the amount of cash schools spent so as to obtain these resources, a gap filled by this study.

Similarly, Munguti (2016) study with focus on relationship between learning resources and students' academic performance in K.C.S.E. in geography in Makueni County, Kenya concluded that access to a variety of learning resources, their availability and use in teaching and learning promoted academic performance in geography in K.C.S.E. What was not studied is the effort of the administrators to ensure that these materials are provided for curriculum instruction at some cost. This formed the basis of this study. In addition Munguti (2016) confined his study on geography as a subject. This study encompassed all teaching learning resources namely maps, charts, textbooks and mathematical models used in all subjects in the 58 secondary schools.

As supported by Murithi (2015), principals' instructional leadership involves providing text books and other teaching learning materials because good performance is attributed to adequacy of teaching learning resources. In his study, 60% of the principals reported that they provided teaching learning resources, which as pointed out by Adewale (2014) as cited in Murithi (2015), that teaching and learning materials are determinants of quality education. Further, Oguntunse, *et al* (2013), concluded that availability and adequacy of teaching learning resources promoted the effectiveness of schools as these

are the 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 government and private institutions to provide enough teaching learning aids to students' in order to enhance academic performance. This is being done by the Government of Kenya as evidenced through FSE Fund where purchase of teaching learning resources is put under Tuition Fund. For the year 2018 the MOE has committed Kshs 4702 per student towards the purchase of teaching learning materials and examinations (MOE, 2017). Moreover, some schools receive teaching learning donated by well-wishers which was not factored in this study. While the Government of Kenya is providing funds for the procurement of teaching learning resources, it is not clear whether administrators are using the same cash prudently to purchase the same. The present study has found out that contribution by administrators was signified by the R of 59.7.

Teaching learning resources are essential in the provision of quality education at all levels of education worldwide. Examples of such resources in the study included; textbooks, exercise books, laboratory chemicals and equipment, stationery and teaching learning aids. Public expenditure on education in most countries is aimed at achieving quality as one of the sixEducation forAll (EFA) Goals (UNESCO, 2005). In this report, provision of more textbooks, reduction in class size, among other factors have positive impact on learner achievement. The provision of quality education and training to all Kenyans is fundamental to the success of the government overall strategy (ROK, 2012). The principal's involvement in the provision of teaching learning materials such as maps, atlases, cookers and sewing machines was confirmed by Musungu (2007). However,

Musungu (2007) study did not examine how much effort in terms of cash expenditure the principals put in to acquire these resources, a focus of this study.

Textbooks provide the first reading experience to many learners and can be used as teaching aid on concrete experiences to promote child centered learning (Odhiambo, 2000 as cited in Olendo, 2008). Adequate textbooks and tuition equipment contributed 15% to students' results in K.C.S.E. However, Olendo (2008) study did not verify from the principals the total amount of school fund committed to and spent on these text books and equipment as it is the case in this study. In a study in the Philippines by Huneman (1984) as cited in Eshiwani (1993) to assess the impact of textbooks on students' performance, it was concluded that an increase in the number of textbooks had an important effect on students' performance all over the Philippines. A study in Thailand also showed that textbooks were positively related to achievement (Fuller, 2006). Therefore, the Ministry of Education (MOE) underscores the importance of textbooks by putting their purchase under tuition fund (FSE) to be used by administrators.

Textbooks are useful in further reading ahead to encourage completion of syllabus. In addition, Hallack (1990) as cited in Adoyo (2013) observed that textbooks are the instructional device par excellence and are central to teaching. In Less Developed Countries textbooks constitute 85% of recurrent expenditure of teaching materials. Students spend from 70 – 95% of classroom time using textbooks and teachers base more than 70% of their instructional decisions on them (Buhere, 2016). Text books are central to schooling at all levels. They provide the only source of information for students as well as the course of the study for the subject (Owoeye &Yara, 2011).

Students note down what is learnt in exercise books. In a study by Ahawo (2010), 60% of HODs maintained that head teachers were not providing enough exercise books and sometimes students were forced to buy especially graph books. It was observed from FGD with students that new students were advised in their joining instructions to come with exercise books which were then renewed upon being filled up. During the years 2013 – 2016 administrators in Emuhaya and Vihiga Sub- Counties spent on average Kshs.3.07 million to purchase textbooks and exercise books.

Lack of adequate laboratory chemicals and equipment negates academic performance since students did not do practicals and were only meeting some apparatus during the national exams. In one study, 80% of HODs reported that schools lacked most laboratory equipment, chemicals and specimen attributing this shortage to their heads who they noted were reluctant to purchase the required facilities (Ahawo, 2010). Ahawo (2010) study recommended that heads should prioritize the provision of laboratory equipment since they play a vital role in the performance of learners in K.C.S.E especially in science subjects. Ahawo (2010) study did not examine the efforts made by the administrators to ensure that they authorized and spent cash on the purchase of these resources, which was achieved in the present study. During the years 2013 – 2016 administrators in Emuhaya and Vihiga Sub- Counties contributed on average Kshs.1.66 million to purchase laboratory chemicals and equipment.

Teaching learning aids allow students to get the correct concepts of the topic being taught. Examples of teaching aids under this study include maps, charts and mathematical models. Stationery such as photocopying papers allowed improved performance because with these papers students are exposed to many examinations. However, the study found

out from FGD with students that students were encouraged to carry their own realm of photocopying papers yearly to boost the school supply. Failure to buy and bring meant that "equivalent would be deducted from the school fees paid" said students during FGD. During the years 2013 – 2016, Administrators in Emuhaya and Vihiga Sub- Counties spend on average Kshs 1.15 million on the procurement of teaching learning aids and other revision materials.

In their study, Ahawo and Simatwa (2015) listed teaching learning resources as follows; textbooks, laboratory chemicals and equipment, instructional materials such as past papers, revision materials, writing materials, exercise books, photocopying papers, computers and printers. Principals' contribution to these resources was high with a mean rating of 4.15. This contribution has its origin in prudent management of the resources bestowed to them. The mean ratings of the principals were significantly different from that of the teachers, $t(1776) = 2.355$, $p = 0.19$ meaning that the mean rating of principals was higher ($M = 3.00$, $sd = 1.669$), than the mean ratings of the teachers, ($M = 2.83$, $sd = 1.469$). However, Ahawo and Simatwa (2015) did not explore the contribution of the principals in so far as authorizing expenditure on and ensuring that teaching learning resources are actually bought for use to enhance learner performance. The study focused on the contribution of stakeholders namely the principals among others, in the enhancement of girls' academic achievement. This study interviewed administrators on their budgetary allocation to and actual expenditure on teaching learning resources. It found out that on average administrators in the two Sub Counties committed and spent Kshs 4.74 Million on the purchase of teaching learning resources between years 2013 – 2016.

In the opinion of Savasci and Tomul (2013) while studying the relationship between educational resources of schools and academic achievement in elementary schools in Burda province in Turkey, concluded that classroom size does not have an effect on academic achievement. Rather, presence of laboratory chemicals and equipment, teaching materials, library books among other resources did. Presence of the resources is not enough. They could have been donated. The study did not communicate how much in terms of expenditures the principals incurred in order to obtain these resources. In agreement, Ong'amo, Ondigi and Omariba (2012), in their study on effect of utilization of biology teaching and learning resources on students' academic performance in secondary schools in Siaya District, Kenya, recommended that basic teaching resources should be made available by the head teachers. They considered that this is not being done as reported by 104 (90%) of the head teachers in the study when asked about the adequacy level of teaching learning resources in their schools. The study focused on biology subject, making it narrow and limited in so far as provision of teaching learning resources are concerned. Although the Government has considered giving special funds such as laboratory equipment fund, for purchase of basic teaching learning resources, not all schools are being considered.

Interview findings with the DOS revealed principals contribute enormously to teaching learning resources in secondary schools. DOS explained thus:

> "Principals reach out to stakeholders namely sponsors, donors, well-wishers and politicians to solicit for text books, laboratory chemicals and equipment, computers, revision materials and other teaching aids."

This assertion was supported by one SCQASO who said:

> We expect principals to use Tuition Fund given by the MOE to purchase textbooks, exercise books, writing materials, and teaching learning aids. As for course books we advise them to stick to one publisher.

He added. Deputy principals also weighed in thus:

> Our principals ensure that they buy revision materials such as examination past papers, maps, charts, among others, when attending annual principals' workshops.

Chairpersons of BOMs also stated that they make personal contribution in form of either computers, textbooks, or photocopy papers.

> Yes we are normally invited to school functions such as 'Book Harvest' and are encouraged to donate any teaching learning materials to support what is budgeted for.

Cases abound where principals solicit for Laboratory Equipment Fund from the Ministry of Education in order to stock their laboratories. However, FGD with students reported differently. Students said thus: 'we buy exercise books, class readers, set books, and realms of photocopy papers before we get admitted to schools."Exercise books are replaced when they get filled up, but initially a student must buy them. Conversely, evidence from document analysis guide showed that between years 2013 and 2016 school administrators in Emuhaya and Vihiga Sub – Counties contributed on average Kshs 5.82 million on the purchase of teaching learning resources, with text and exercise books taking 3.07 Kshs million. To confirm whether the administrators' contribution to teaching learning resources was a significant predictor of students' academic performance, ANOVA was computed and the results were as shown in Table 4.14.

Table 4.14

ANOVA of administrators' contribution to teaching / learning resources in the enhancement of students' academic performance (n = 52)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	28.319	1	28.319	27.634	.000
	Residual	51.240	50	1.025		
	Total	79.560	51			

Dependent variable: Students' academic performance in K.C.S.E.

Predictors: (Constant) Teaching /learning resources

From Table 4.14 it can be observed that administrators' contribution to teaching learning resources was a significant predictor of students' academic performance, (F (1, 50) = 27.634, p = <0.05). Document analysis on school expenditure on textbooks, exercise books, and stationery revealed that textbooks on their own did not influence students academic performance very much.

The study further sought to establish the actual contribution of administrators' to teaching learning resources in enhancement of students' academic performance, linear regression analysis was computed and the results were as shown in Table 4.15.

Table 4.15

Linear regression analysis of administrators' contribution to teaching learning resources in the enhancement of students' academic performance (n = 52)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.485	1.219		-2.039	.047
	Teacher learning resources	1.803	.343	.597	5.257	.000

Dependent variable: Student academic performance in KCSE –

Regression Equation $Y = \beta_{0+} \beta_1 X_1 + \sum$

From Table 4.15, it can be observed that for every one unit increase in administrators' contribution to teaching learning resources, students' academic performance was improved by 1.803 units as signified by the coefficient of 1.803. Any teaching learning aids, laboratory chemicals and equipment, text books and exercise books that the administrators procured increased students' academic performance by 1.803 units. (students academic performance = $-2.485 + 1.803X_1$)

Contribution of administrators to teaching learning resources was not by chance as it was evidenced by the 'Book harvest' functions the administrators initiated in schools. Available textbooks had rubber stamps bearing the names and addresses of the donors meaning that administrators had made efforts of finding assistance from well-wishers with regard to donation of teaching learning resources (Appendix R). This finding agreed with the findings of other researchers who found out that administrators' contribution to teaching learning resources enhances students' academic performance (Savasci & Tumol, (2013), Ongamo *et al* 2012, Moses, 2012). However, this study went further and

established the actual contribution of the school administrators to teaching learning resources and found it accounted for 34.3% of students' academic performance.

4.7 School Administrators' Contribution to Physical Facilities

The research question responded to was: What is the contribution of school administrators to physical facilities in the enhancement of students' academic performance? To confirm the contribution of school administrators' to physical facilities, administrators' ratings on actual expenditure on construction of computer rooms, classrooms, science laboratories, libraries, among other physical facilities were computed. The results were as shown in Table 4.16.

Table 4.16

Administrators' expenditure on physical facilities, years 2013 -2016

Administrations' contribution to physical facilities in Million(Kshs).	**Frequency (f)**	**Percentage (%)**
0.00- 1.00	03	06
1.10 – 2.00	01	02
2.10 – 3.00	07	13
3.10 – 4.00	06	11
4.10 – 5.00	07	13
5.10 – 6.00	05	10
6.10 – 7.00	02	04
7.10 - 8.00	07	13
8.10 – 9.00	04	08
9.10 – 10.00	06	12
Above 10.10	04	08
TOTALS	**52**	**100**

Source: Field data, 2017 (Appendix O).

From Table 4.16 it can be noted that 3 (6%) administrators spent less than one million Kshs towards construction and improvement of physical facilities in their schools between years 2013 – 2016. Only 1 (2%) administrator spent between 1.10 – 2.0 million on the expansion of infrastructure in schools. Further, 7 (13%) administrators spent between 2.10 – 3.00 million. A similar 7(13%) spent between 4.10 – 5.00 million, and another 7 (13%) spent between 7.10 -8.00 million, on either construction of new physical facilities or renovation of existing ones. Similarly, 6 (11%) administrators contributed between 3.10 – 4.00 M, and 9.10 – 10.00 million Kshs respectively towards the same. A further 4 (8%) administrators spent between 8.10 – 9.00 million, and a similar 4 (8%) contributed above 10.10 million respectively, towards construction of physical facilities such as classrooms. In addition, whereas 5 (10%) administrators spent between 5.10 – 6.00 million on physical facilities, another 2 (4%) spent between 6.10 – 7.00 million on the same.

To establish the contribution of administrators to physical facilities in the enhancement of students' academic performance, their administrators' contribution were regressed against students' academic performance. The results were as shown in Table 4.17.

Table 4.17: Regression analysis of administrators' contribution to physical facilities in the enhancement of students' academic performance (n = 52).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.563	.317	.303	1.04254	.317	23.199	1	50	.000

Predictors: (Constant) Physical facilities

From Table 4.17 it can be observed that school administrators' contribution to students academic performance was significant through physical facilities. School administrators

had a moderate, positive and significant influence on students' academic performance (r = .563, N =52 p < 0.05) through physical facilities. Administrators' contribution accounted for 30.3% of students' academic performance as signified by the Adjusted R^2coefficient of .303. This means that when administrators construct classrooms, science laboratories, libraries and special rooms among other physical facilities, teachers get motivated to work harder in the spaces provided to improve performance. In a new and better facility students will take more pride in their schools and therefore also get motivated to work harder to improve performance. Administrators' contribution is adding value as evidenced by change in statistics. This means that administrators' contribution to structural construction has an influence on students' academic performance. Their efforts of authorizing expenditure and ensuring that physical facilities are provided for comfort during curriculum implementation has a positive impact on students' academic performance.

This finding agree with Research Clue (2013) which established that there was a significant difference between the academic performance of students' who attended schools where there were facilities and those whose schools did not have facilities. The study had sought to find out whether there was a relationship between school facilities and students' academic performance in public secondary schools in Somolu Local Government Area of Lagos State, Nigeria. The study did not pursue the contribution of administrators with regard to whether they authorize expenditure for construction of these facilities, but found out that there was a significant relationship between school facilities and students' academic performance.

Facility means the system which supports the operation of an organization to carry out its daily activities promoting growth and development. Onyeji (2000) as cited in Research Clue (2017) identifies 3 main ones namely classrooms, libraries and laboratories. Library and books give greater assistance to both learners and teachers. In a situation where secondary school students are left with no teachers, the next port of call is the library for textbooks. As defined by Owoeye and Yara (2011) a library is a building or room in which collection of books, tapes, newspapers, periodicals are kept for people to read, study and borrow. A library supports functions of school teaching learning process and provides services and guidance to learners. In their study Owoeye and Yara (2011) focused on school facilities and academic achievement of secondary school Agriculture Science in Ekiti State, Nigeria, making their study narrow. Every state ministry in Nigeria is supposed to provide funds for establishment of libraries of in all her educational institutions, train librarians and library assistants. The present study was wide as it determined the contribution of administrators to physical facilities such as libraries' in enhancement of students' academic performance in all subjects with regard to the administrators' efforts in building these facilities.

A laboratory is a room or building specifically built for teaching and demonstration of theoretical phenomena into practical terms. It is central to the teaching of sciences and the success of any science course is dependent on the laboratory provision made for it (PennState, 2015). Where laboratories are missing, schools teach biology, chemistry and physics theoretically as if they are non-science subjects without laboratories. Some schools teach with hope that they would use other schools' laboratories during

examinations. According to Owoeye and Yara (2011) learning can still occur when one interacts with the environment, of which the classroom where the learner sits is the first. Students spend an average of 13000 hours of their life time in a school building (Nigaglioni, 2005, as cited in Doane, 2008). Therefore, the condition of school building has input on students' achievement. School building in poor conditions can impact education by keeping students away from the classrooms, thereby decreasing the classroom time. Classrooms should not be overcrowded to the extent that rooms originally meant for 30-40 students take between 60-80 learners (Research Clue, 2013). Overcrowded classrooms have been linked to increased levels of aggression in students, and also associated with decreased levels of students' engagement and decreased levels of learning (PennState, 2015).

School facilities should be provided so as to give the learners the best possible learning environment. Physical facilities are plant facilities provided in schools in order to facilitate teaching learning. They include land, enough classrooms, special rooms, laboratories and libraries, provision of water, enough pit latrines, electricity, office blocks, dormitories, dining halls, among others. Excellent school facilities are basic ingredients for good educational programs and are very important for achieving the target and improving the literacy rates of a country (Khan &Iqbal, 2012, Beynon, 1997). The study concluded that there is a strong need for creating an excellent and suitable learning environment where all sorts of physical facilities were available for both the teachers and the taught. The study recommended that to improve teaching learning process, the general cleaning and good maintenance of physical facilities is required. What was not

discussed was the contribution of administrators to provision of physical facilities with regard to expenditure and renovation of existing ones, an objective this study pursued.

Physical facilities give comfort to permit learners to concentrate on their studies. They are important in both school attendance and achievement (Beynon, 1997). Without good buildings and clean environment, students' comfort will be affected and this will hinder the ability of students to learn. In Latin America a study conducted by Willins (2000) a cited in Ihuoma (2008) found out that children whose schools lacked classrooms and had inadequate libraries were significantly more likely to show lower test scores and higher grade repetition than those whose schools were well equipped.

In his study on the relationship between school facilities and the school learning environment, Vandiver (2011) noted that quality and educational facilities were statistically significant with students' performance. In her study on the need for effective facility management in schools in Nigeria, Ihuoma (2008) concluded that school facilities give meaning to the teaching learning process. Learning process takes place in an environment structured to facilitate learning hence need for school facilities. In the Ihuoma (2008) study Knezewich (1975) emphasized that the physical needs are met through provision of safe structures and adequate sanitary facilities are contributors to students' academic performance. In a similar study, parents refused to let children attend schools where sanitation was poor.

Shortage of physical facilities had an adverse effect on curriculum delivery and implementation especially lack of laboratories which led to poor performance in sciences (Chabari, 2010). Congestion due to lack of classrooms has a drawback towards teacher

interaction. In their study on stakeholders' contribution to infrastructure development in enhancement of girls' academic achievement in Kenya, a case study of Siaya County, Ahawo, *et al* (2015) found out that parents, principals and BO contributed highly to school infrastructure development. Principals mean rating was 3.13 while the teachers' mean rating was 2.93. Stakeholders' contribution to education is one determinant of provision of quality education since school principals, deputy principals and HODs are designated as internal quality insurance officers (MOE, 2004). The principals are the custodians of contribution made by stakeholders to schools, and their mean rating of 3.13 was more realistic. In this study, infrastructure discussed were classrooms, science rooms, libraries (well stocked), recreational facilities and boarding facilities. Although, the government provided CDF, the laboratory equipment fund, school infrastructure development fund (ROK, 2008), the above study did not examine the contribution of administrators with regard to expenditure on the construction and improvement of existing ones, which formed the basis of this study. Thus, school infrastructure influence quality of education, hence performance.

Interviews with Chairpersons BOMs revealed that principals undertake physical construction in schools with the approval of the board. Chairpersons of boards reported thus:

> Before we bought the school bus our principal had to write proposals to solicit for funds from Constituency Development Fund through the Area Member of Parliament and link up with stakeholders for bank loan."

Administrators are also known to travel to the MOE headquarters in Nairobi to seek for Infrastructure Funds for school development. Deputy principals who are second in command to the administrators observed thus:

> Whenever principals visit TSC headquarters for staffing matters, they must visit 'Jogoo' House to request for special grants in form of cash for school construction.

Being the chairpersons of the tender committee boards and being appointed by the principals, the deputy principals witness the level of school administrators' contribution to physical facilities in the enhancement of students' academic performance. Evidence from document analysis guide showed that between years 2013 to 2016 administrators in Emuhaya and Vihiga Sub–Counties spent on average Kshs 7.57 million on the improvement and construction of physical facilities, with classrooms taking Kshs 1.78million

To confirm whether administrators' contribution to physical facilities was a significant predictor of students' academic performance, ANOVA was computed and the results were as shown in Table 4.18.

Table 4.18

ANOVA of Administrators' contribution to physical facilities in the enhancement of students' academic performance (n=52)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.215	1	25.215	23.199	.000
	Residual	54.345	50	1.087		
	Total	79.560	51			

Dependent variable: Student academic performance in KCSE

Predictors: (Constant) Physical facilities

From Table 4.18 it can be observed that school administrators' contribution to physical facilities was a significant predictor of students' academic performance ($F (1, 50) = 23.199, p < 0.05$).

The study further sought to establish the actual contribution of administrators' to physical facilities. A linear regression analysis was computed as shown in Table 4.19.

Table 4.19

Linear regression analysis of administrators' contribution to physical facilities in the enhancement of students' academic performance (n = 52)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.395	.738		.535	.595
	Physical facilities	1.044	.217	.563	4.817	.000

Dependent variable: Student academic performance in KCSE-

Regression Equation $Y = \beta_{0+} \beta_1 X_1 + \ldots\ldots\ldots\ldots\ldots\ldots \sum$.

From Table 4.19, for every one unit increase in administrators' contribution to physical facilities, students' academic performance improved by 1.044units as signified by the coefficient of 1.044. (Students' academic performance = $.395 + 1.044X_1$). Interviews findings with deputy principals revealed that, as public relation officers, the principals coordinated and mobilized stakeholders and donors in investing in school infrastructure development. Cases abound where school dormitories are named after prominent personalities who through the efforts of the principals made enormous contribution towards their construction. Similarly, new school vehicles in Emuhaya and Vihiga Sub

Counties display their sources of funding, indicating how principals reached out to CDF offices which are linked to Area Members of Parliament, and PTAs for funding. Observation revealed that where library and laboratory structures had not been constructed efforts by the administrators to improvise and make room in the existing classrooms was noted and created room for enhancement of learning. This finding agreed with the findings of other researchers who found out that administrators' contribution to physical facilities enhances students' academic performance (Owoeye & Yara, 2011)

Schools do not rely only on one aspect of administrators' contribution to students' academic performance. Therefore, the four variables namely instructional supervision, teacher motivation, teaching learning resources and physical facilities were regressed against students' performance in order to establish how they support each other in administrators' contribution to performance. The results were as shown in Table 4.20.

Table 4.20

Regression analysis of school administrators' contribution to instructional supervision, teacher motivation, teaching / learning resources and physical facilities in the enhancement of students' academic performance (n=52)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.818	.670	.642	.74764	.670	23.833	4	47	.000

Predictors: (Constant) Instructional supervision, Teacher motivation, Teaching learning and Physical facilities

From Table 4.20 it can be noted that the combined administrators' contribution to instructional supervision, teacher motivation, teaching learning resources and physical facilities was strong, positive, and significant (r = .818, p = .000).This means that administrators' efforts of contributing to students' academic performance do not act in isolation. The efforts are integrated, support each other and do not stand alone. Thus, combined administrators' contribution to the 4 variables accounted for 64.2% of students' academic performance as signified by the Adjusted R^2coefficient of .642. These values mean that administrators' activities of checking and approving professional records, providing meals and sponsoring academic trips, purchasing textbooks, laboratory chemicals and equipment among other teaching learning resources, and construct classrooms, science laboratories, libraries and special rooms among other physical facilities, teachers get motivated to work harder in the spaces provided to improve students' academic performance.

To confirm whether administrators' contribution to instructional supervision, teacher motivation, teaching learning resources and physical facilities were a significant predictor of students' academic performance, ANOVA was computed and the results were as shown in Table 4.21.

Table 4.21

ANOVA of Administrators' contribution to instructional supervision, teacher motivation, teaching learning resources, and physical facilities in the enhancement of students' academic performance (n=52).

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	53.288	4	13.322	23.83	.000
	Residual	26.272	47	.559		
	Total	79.560	51			

Dependent Variable: Student academic performance in KCSE

Predictors (Constant) Instructional supervision, Teacher motivation, Teaching learning and Physical facilities

From Table 4.21 it can be noted that when the four variables namely administrators' contribution to: instructional supervision, teacher motivation, teaching learning resources and physical facilities are used together, they are significant predictors of students' academic performance as signified by the p value of <.05.

The study further sought to establish the actual contribution of administrators' to instructional supervision, teacher motivation, teaching learning resources and physical facilities together in the enhancement of students' academic performance. This is because these variables interact such that the output is the product of the interaction, hence a prediction model was generated. The results were as shown in Table 4.22.

Table 4.22

Multiple linear regression analysis of administrators' contribution to instructional supervision, teacher motivation, teaching learning resources, and physical facilities in the enhancement of students' academic performance (n=52).

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.189	.993		.191	.850
1. Instructional supervision	-.016	.144	-.009	-.105	.917
2. Teacher motivation	.262	.043	.677	6.043	.000
3. Teacher learning resources	.758	.350	.251	2.164	.036
4. Physical facilities	.056	.252	-.030	.240	.812

Predictors (Constant) Instructional supervision, Teacher motivation, Teaching /learning resource and Physical facilities.

Regression Equation $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4) \ldots\ldots\ldots\ldots \sum$

From Table 4.22, it can be observed that principals value addition to teacher motivation and teaching learning resources influenced students' academic performance as p- values were > 0.05. However principals value addition to instructional supervision and physical facilities did not influence students' academic performance as p –values were >0.05. Administrators' contribution to physical facilities did not influence performance in this multiple regression model because of factor interaction. The four variables were acting as covariates, yet in linear regression each variable was acting individually giving each own actual influence. This means that for every one unit increase in teacher motivation students' academic performance improved by .262 units and teaching learning resources

by .758 units. The regression model therefore is: Students' academic performance =-.189 +.262X_1 + .758X_2

These findings are consistent with Murithi's (2015) who found out that availability of teaching learning resources influenced the teaching and learning process. In some cases students can perform well as long as teaching learning resources are provided even in the absence of physical facilities.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter provides summary, conclusions and recommendations of the study. The summary, conclusions and recommendations are presented thematically according to the objectives of the study.

5.2. Summary of the Findings of the Study

The summary of the findings of the study was presented according to the objectives of the study.

5.2.1 School administrators' contributions to instructional supervision in the enhancement of students' academic performance

The study established that administrators' contribution to instructional supervision was weak as signified by the Adjusted $R^2$of 0.011. This coefficient means that the administrators' contribution to instructional supervision had little influence on students academic performance as it accounted for 1.1%. Nevertheless, this contribution was not significant ($r= 0.092$, $n = 52$, $p> 0.05$), meaning that administrators' contribution to instructional supervision in the enhancement of students' academic performance could not be relied on to explain variation in students' academic performance.

Interview findings supported this finding a DOS asserted that they were the ones who checked and endorsed teachers' professional records namely schemes of work, records of work, and progress records, and that the principals only rubber stamped and signed them. Document analysis guide supported this finding as it was noted that most documents did

not have signatures, rubber stamps and meaningful comments, meaning that principals were not checking these records. Where they assessed instructional records, their input was minimal such that teachers did not benefit much from this quality of supervision at all. Presence of mere signatures did not imply that the principals communicated to the teachers and advised them accordingly. This finding somewhat contradicts the findings of other researchers who found out that administrators' contributions to instructional supervision enhances students' academic performance. This is because these researchers did not quantify the contributions and therefore, their findings were rather not precise. In view of interview findings and document analysis guide, it was clear that principals contributed very little to students' academic performance through instructional supervision.

5.2.2 School administrators' contributions to teacher motivation in the enhancement of students' academic performance

The study established that administrators' contribution to teacher motivation was strong and positive as signified by the Adjusted R^2 of .623. This coefficient means that administrators' contribution to teacher motivation accounted for 62.3% variation in students' academic performance. The contribution was significant ($p < 0.05$) meaning that administrators' contribution to teacher motivation in the enhancement of students' academic performance could be relied on to explain variation in students' academic performance.

Contribution of administrators to teacher motivation was not by chance as it was evidenced by the motivation cues such as: variety of meals provided, the number of In-

service trainings that teachers attended, educational trips undertaken after release of K.C.S.E results and rewards for quality grades obtained. Interview findings with the principals showed that principals committed cash to be spent on quality academic grades attained by students as rewards to teachers. More cash was committed and spent on teachers' academic trips to celebrate K.C.S.E results in recreational destinations such as Kampala in Uganda, Mwanza in Tanzania and Mombasa in Kenya. Evidence from document analysis guide showed that BOMs allocated funds for academic trips and teachers' meals in the school budgets. Minutes of the BOMs discussions on teachers' academic trips supported administrators' efforts in contributing to teacher motivation. This finding agreed with the findings of other researchers who found out that Administrators' contributions to teacher motivation enhances students' academic performance. However, this study determined the actual contribution of administrators to teacher motivation in the enhancement of students' academic performance.

5.2.3 School administrators' contributions to teaching learning resources in the enhancement of students' academic performance

The study established that administrators' contribution to teaching learning resources was moderate and positive as signified by Adjusted $R^2$of .343.This implies that administrators' contribution to teaching learning resources accounted for 34.3% variation in students' academic performance. The contribution was also significant ($p < 0.05$), meaning that administrators' contribution to teaching learning resources in the enhancement of students' academic performance could be relied upon to explain variation in students' academic performance.

Contribution of administrators to teaching learning resources was not by chance as it was evidenced by the 1: 3 text book to student ratio seen in the libraries, and with the 'Book harvest' functions the administrators initiated in schools. Available textbooks had rubber stamps bearing the names and addresses of the donors meaning that administrators had made efforts of finding assistance from well-wishers with regard to donation of teaching learning resources. This finding agreed with the findings of other researchers who found out that administrators' contribution to teaching learning resources enhances students' academic performance. This study further went ahead to quantify the actual contribution of administrators to teaching learning resources in the enhancement of students' academic performance.

5.2.4 School administrators' contributions to physical facilities in the enhancement of students' academic performance

The study established that administrators' contribution to physical facilities in the enhancement of students' academic performance was moderate and positive as signified by Adjusted R^2 of 0.303. This coefficient means that administrators' contribution to physical facilities accounted for 30.3% of students' academic performance. The contribution was significant ($p < 0.05$), and was evidenced in construction of physical facilities such as modern classrooms, libraries, laboratories, dormitories, among other facilities.

As public relation officers, the principals coordinated and mobilized stakeholders and donors in investing in school infrastructure development. Cases abound where school dormitories are named after prominent personalities who through the efforts of the principals made enormous contribution towards their construction. Similarly, new school

vehicles in Emuhaya and Vihiga Sub - Counties display their sources of funding, indicating how principals reached out to CDF offices which are linked to Area Members of Parliament and PTAs for funding. Observation revealed that where library and laboratory structures had not been constructed efforts by the administrators to improvise and make room in the existing classrooms was noted. This finding agreed with the findings of other researchers who found administrators' contributions to physical facilities enhances students' academic performance. However, this study further went ahead to quantify the actual contribution of administrators to physical facilities in the enhancement of students' academic performance.

5.3 Conclusion

The study concluded that school administrators' contribution to instructional supervision in the enhancement of students' academic performance was not significant. Therefore, it did enhance students' academic performance somewhat. School administrators' contribution to teacher motivation, teaching learning resources and physical facilities in the enhancement of students' academic performance was significant, and therefore, enhanced students' academic performance.

5.4 Recommendations

With regard to school administrators' contribution to instructional supervision, the study recommended that school administrators should:

i) Actually check lesson plans among others and adhere to set norms and standards to enhance students academic performance.

ii) Administrators need to be trained to acquire conceptual, interpersonal and technical skills in supervision in order to enhance students' academic performance.

With regard to school administrators' contribution to teacher motivation, the study recommended that school administrators should:

i) Step up teacher motivation initiatives in so far as supporting teachers to attend In-service trainings are in order to keep teachers abreast with current knowledge in education so as to enhance learner performance.

ii) Consider other initiatives other than provision of meals, payment for remedial teaching and academic trips that induce teachers to work better in order to enhance students' performance.

With regard to school administrators' contribution to teaching learning resources, the study recommended that:

i) The Ministry of Education should consider offering all secondary schools Laboratory Infrastructure Funds to ensure all schools procure laboratory equipment and chemicals by extension to enhance students' academic performance.

ii) Free Secondary Tuition Funds should be increased to schools to enable administrators purchase teaching learning resources such as exercise books enhance students' academic performance.

iii) A follow up exercise should be initiated by the MOE to check school inventory records to ascertain if teaching learning resources are actually being purchased and used enhance students' academic performance.

With regard to school administrators' contribution to physical facilities, the study recommended that:

i) The Ministry of Education should consider offering all secondary schools Infrastructure Fund to enable school administrators to either construct new facilities or improve on the existing ones. This will enable them expand space for access to secondary education in light of high Form 1 intake and enhance students' academic performance.
ii) Before a day school is granted a boarding wing, the MOE should ensure that boarding facilities are in place and that these facilities meet the statutory safety guidelines as stipulated by the same Ministry to enhance students' academic performance.

5.5. Suggestions for Further Studies

The study exposed the following areas that require further research:

i) Attitudes of secondary school teachers on principals' role of instructional supervision.
ii) Impact of principals' leadership style on teacher motivation in secondary schools.
iii) Safety in the use of teaching learning resources in physical and biological laboratories.
iv) Factors influencing provision of physical facilities in secondary schools.

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APPENDIX A

PRINCIPAL'S QUESTIONNAIRE

Instructions

This questionnaire helps to gather information on the principal's contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub- Counties. It is important that you give true and accurate responses as required. The information will be kept strictly confidential and used only in the study. Fill in answers or tick (√) in the spaces provided.

SECTION A: BACKGROUND INFORMATION

1. Gender: 1. Male ( ) 2.Female ( )
2. Age: Below 30 years ( ) Between 31-40 Years ( ) 41-50years ( ) Above 50 years ( )
3. Teaching experience: 1) Less than 5 Years ( ) 2. Between 6-10 Years ( )
3) Between 11-20 years ( ) 4) Between 21-30 years ( ) 5) Over 30 Years ( )
4. Number of lessons taught per week: 1 > 6 2) Between 6-12 ( ) 3) Over 12( )
5. Experience as a School Principal: 1) > year ( ) 2) Between 1-2 years ( )
3) Between 2-4 years ( ) 4) Over 5 years ( ) 5) Over 10 years ( )
6. Highest level of education: 1) Masters level ( ) 2) Bachelors ( ) 3) KACE ( )
4) Diploma ( ) 5) other(s) ( ) specify……
7. Any management course(s) attended ( ) specify……..

SPECIFIC QUESTIONS

1. Listed below are some of the contribution of the principal to students' academic performance in secondary schools Emuhaya and Vihiga Sub- Counties. Rate the contribution on a 5 point scale where 1 = Very Low (VL), 2 = Low (L), 3 = Moderate (M), 4 = High (H) and 5= Very High (VH)

1. Principals' contribution to instructional supervision in the enhancement of students' academic performance

Aspects of principal's contribution	VL1	L2	M3	H4	VH 5
1. Checking and Approving Schemes of Work with appropriate remarks 2. Checking and Approving teachers' lesson plans. 3. Checking and signing students' note books 4. Checking and Approval of Records of work books 5. Checking and Approving Progress record books. 6. Any Other important information----------					

2. Principals' contribution to teacher motivation in the enhancement of students' academic performance.

Aspects of principals' contribution	VL1	L2	M3	H4	VH 5
1. Offers monetary rewards for quality grade attained. 2. Issues letters of recommendations to teachers who excel. 3. Funds workshop, seminars, SMASSE programs for purposes of improving performance. 4. Provides teas and lunches with aim of motivating teachers. 5. Pays for setting and marking exams. 6. Pays for extra lessons taught beyond the timetable. 7. Issues certificates of good performance to teachers 8. Funds teachers academic trips to celebrate good results / grades 9. Any Other Important Information----------					

3. Principals' contribution to teaching learning resources in the enhancement of students 'academic performance

Aspects of principals' contribution	VL1	L2	M3	H4	VH 5
1. Purchase and issuance of Textbooks, Past Exams papers, Revision materials and Stationeries 2. Purchase and issuance of Exercise books. 3. Purchase of laboratory chemicals and equipment 4. Purchase and issues Set books and class readers 5. Purchases Computer papers, chalks, etc. 6. Provides maps and charts in classes. 7. Any Other Important Information----------					

4. Principals' contribution to physical facilities in enhancement of students' academic performance.

Aspects of principals' contribution	VL1	L2	M3	H4	VH 5
1.Classroom construction 2.Laboratories 3.Dormitories 4.Libraries 5.Playgrounds 6.Sanitary facilities 7.Water supply 8.Electricity supply 9.Dining Hall 10.Administration block 11.Special rooms e.g. Agriculture Work shops 12.Staff Houses 13.School vehicles 14. Any other(s)……					

APPENDIX B

DEPUTY PRINCIPAL'S STRUCTURED INTERVIEW (DPSI)

Instructions

This study helps to gather information on the principal's contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub- Counties. It is important that you give true and accurate responses as required. The information will be kept strictly confidential and used only in the study.

SPECIFIC QUESTIONS

On a scale of 1 to 5, where 1 = Very Low, 2 = Low, 3 = Moderate, 4 = High and 5 = Very High, estimate the contribution of the Principal to the following:

1. What is the contribution of school administrators to Instructional Supervision in the enhancement of students' academic performance?.....

Give reasons

……..……

……

2. What is the contribution of the principal to teacher motivation in the enhancement of students' academic performance?

Give reasons

……..……

……

3. What is the contribution of the principal to teaching learning resources in the enhancement of students' academic performance?

Give reasons

……..……

……

4.What is the contribution of the principal to physical facilities in the enhancement of students' academic performance?

Give reasons

……..……

……..

APPENDIX C

DIRECTORS OF STUDIES' STRUCTURED INTERVIEW (DOSSI)

Instructions

This structured interview schedule helps to gather information on the principals' contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub- Counties. It is important that you give true and accurate responses as required. The information will be kept strictly confidential and used only in the study.

SPECIFIC QUESTIONS

What is the contribution of school administrators to the following in so far as enhancement of Students' Academic Performance is concerned? Explain

I. Instructional supervision----------

II. Teacher motivation----------

III. Teaching learning resources----------

IV. Physical facilities----------

APPENDIX D

STRUCTURED INTERVIEWFOR CHAIRPERSONS OF BOM

Instructions

This interview schedule helps to gather information on school administrators' contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub-Counties. It is important that you give true and accurate responses as required. The information will be kept strictly confidential and used only in the study.

SPECIFIC QUESTIONS

What is the contribution of School Administrators to the following in so far as enhancement of Students 'Academic Performance?

I. Instructional Supervision----------

II. Teacher Motivation----------

III. Teaching Learning Resources----------

IV. Physical Facilities----------

APPENDIX E

STUDENTS' FOCUS GROUP DISCUSSION SCHEDULE

BACKGROUND INFORMATION

1**.** Code of the School……

2. Who is the school administrator in this school? .....

SPECIFIC INFORMATION

What is the contribution of school administrators to the following in so far as enhancement of students' academic performance?

I. Instructional Supervision

a) Do principals visit classrooms to observe teachers 'teaching.
   Probe
b) Do principals visit classrooms to check exercise books to see whether we write notes and do assignments?
   Probe
c) Do principals and Staff set Mean Scores of our schools
   Probe

II. Teacher Motivation

a) Do Principals support teachers to attend academic seminars and workshops such as SMASSE
b) Do principals provide daily meals to teaching staff in the school

III. Teaching Learning Resources

a) Do principals provide teaching learning materials such as textbooks, computer papers?
b) Do students buy exercise books?
c) Do principals renew exercise books?

IV. Physical Facilities

a) Do principals construct classrooms
b) Do principals buy school vehicles?

APPENDIX F

INTERVIEW SCHEDULE FOR THE SUB COUNTY QUALITY ASSURANCE AND STANDARDS OFFICERS

This study seeks to establish the contribution of school administrators to students' academic performance in secondary schools in Emuhaya and Vihiga Sub – Counties in enhancement of students' academic performance in so far as the following areas are concerned:

What is the contribution of the administrators to the following?

a. Instructional Supervision……
b. Teaching Learning Resources……
c. Teacher Motivation……
d. Physical Facilities…….

APPENDIX G

OBSERVATION CHECK LIST

1. Type of the School: Sub County ( ) County ( ) National ( )

2. School Status: Mixed Day Only ( ) Mixed Day & Boarding ( ) Girls' Boarding ( ) Girls' Boarding & Day ( ) Boys' Boarding ( ) Boys' Boarding & Day ( )

3. Number of Steams: Single ( ) Double ( ) Triple ( ) Quadruple ( ) >Four ( )

4. Total Number of Students: ----- Boys: ------- Girls: --------

ITEM	**REMARKS**		
	NOS.	**QUALITY**	**STATE**
a) Play grounds			
b) Dormitories			
c) Classrooms			
d) School Vehicles			
e) Water points			
f) Laboratories			
g) Library – Students' / Text book ratio			
h) Special Rooms- Computer			
- Home Science			
-Agriculture Workshop			
-Metal / Woodwork / Power Mechanics / Electrical Technology			
i) Administration Block			
j) Sanitation Blocks			
k)Dining Hall			
l) Assembly Hall			
m) Recreational Facilities			
k) Any Other : Specify----------			

APPENDIX H

INTERNAL CONSISTENCY FOR THE QUESTIONNAIRE

Nos.	Item	Cronbach's Alpha
A_1	Checking and Approval of Schemes of Work	0.72
A_2	Checking and Approval of Lesson Teachers' Plans	0.70
A_3	Checking and signing Students' Note books	0.78
A_4	Checking and Approval of Records of Work Books	0.75
A_5	Checking and Approval of Students' Progress Books	0.80
	Overall	**0.75**
B_1	Monetary Rewards	0.74
B_2	Letters of Recommendation	0.77
B_3	Funds Workshops, Seminars, SMASSE,	0.72
B_4	Provision of Meals	0.73
B_5	Payment for Setting and Marking Exams	0.74
B_6	Payment for Extra Lessons taught	0.72
B_7	Issuance of Certificates	0.70
B_8	Funding Teachers' Academic Trips	0.71
B_9	Attends to Teachers' Welfare	0.71
B_{10}	Allowing Teachers time out for Studies	0.70
B_{11}	Funding Academic Trips for Bench marking	0.76
	Overall	**0.73**
C_1	Purchase and Issuance of Text Books,	0.75
C_2	Purchase and Issuance of Exercise Books.	0.72

C_3	Issuance of Laboratory Chemicals and Equipment	0.76
C4	Purchase and Issuance of Set Books and Readers	0.70
C_5	Purchase of Photocopying Papers	0.70
C_6	Provision of Charts, Maps and Stationeries	**0.73**
	Overall	0.83
D1	Classroom Construction	0.83
D2	Construction of Laboratories	0.81
D3	Construction of Dormitories	0.80
D4	Construction of Libraries	0.80
D5	Play grounds	0.82
D6	Sanitary Facilities	0.83
D7	Water Supply	0.82
D8	Electricity Supply	0.82
D9	Dining Halls	0.88
D10	Administration Blocks	0.82
D11	Special Rooms	0.80
D12	Staff Houses	0.84
D13	School Vehicles	**0.82**
	Overall	

APPENDIX I

DOCUMENT ANALYSIS GUIDE

1. INSTRUCTIONAL SUPERVISION

Verification of the following documents:
Schemes of Work Files, Records of Work Books, Teachers' Lesson Plans, Students' Note Books, Students' Progress Records.

Rating Scale: 1=Very Low, 2= Low, 3 = Moderate, 4 = High 5= Very High

Documents Used	Principal' comments to HODs' (1)	Principal' Signature (1)	Principal' rubber stamp(1)	Principal' comments (1)	Principal' checking pg by pg (1)	Total (5)
1.Schemes of Work 2.Records of Work 3.Lesson Plans 4.Students' Progress Records Students' Note Books						

2. TEACHER MOTIVATION

Evidence of Letters of Recommendation issued in teachers' Files Approved and Actual Expenditure on the following: (Letters of Approval of BOMs Minutes) between year 2013 -2016

Aspect of Motivation	Amount Approved	Amount Acted	Documents Used
Funding –Workshops e.g. Drama SMASSE In Service Trainings Meals - Morning Tea 10 O'clock Lunch 4 O'clock			

Payment for extra lessons taught Payment for Certification Payment for setting and marking exams Monetary rewards for quality grades Educational Trips to celebrate results			

3. TEACHING LEARNING RESOURCES

Indicate Approved and Actual Expenditure on the following during period 2013-2016

T L Resources	Approved	Actual	Documents Used
i) Laboratory chemicals & Equipment. ii).Textbooks. iii).Set books and Readers. iv).Exercise Books. v.) Computer papers and Stationery vi) Maps and Charts. vii) Any other…….			

4. PHYSICAL FACILITIES

Indicate Approved and Actual Expenditure on the following period 2013 - 2016

Physical Facilities	Approved	Actual	Documents Used
Computers Classrooms. Playgrounds. Pitches; Soccer or Netball. Staffrooms. Laboratories. Libraries. Piped Water. Electricity. Sanitary blocks. Staff Houses. School Vehicle. Special Rooms. Any other			

APPENDIX J
RESULTS FROM DOCUMENT ANAYLSIS GUIDE ONADMINSTRATORS' CONTRIBUTION TO INSTRUCTIONAL SUPERVISION

S/N	ADM	In.Sup	M/sc
1	3.20	2.75	3.22
2	4.20	1.35	3.00
3	4.40	3.00	3.88
4	4.20	2.25	3.49
5	4.20	2.35	3.84
6	4.60	2.00	4.17
7	4.00	2.25	3.74
8	3.80	3.20	5.26
9	3.80	2.20	3.38
10	4.60	3.00	3.32
11	4.20	1.50	2.94
12	4.00	2.25	3.98
13	4.20	3.00	5.42
14	4.20	3.50	3.85
15	4.40	2.25	3.15
16	4.20	2.50	6.97
17	4.40	3.50	3.14
18	4.00	3.50	4.79
19	4.20	2.75	3.30
20	4.20	3.00	3.45
21	3.80	2.75	3.95
22	4.40	2.50	2.61
23	4.00	1.50	3.96
24	4.00	2.00	3.83
25	4.20	2.00	2.98
26	4.40	3.50	4.92
27	4.00	2.25	3.50
28	4.00	1.50	2.17
29	4.60	1.75	8.59
30	4.40	2.75	2.85
31	4.00	2.00	5.23
32	4.20	3.20	3.14
33	4.20	3.20	4.08
34	4.40	3.50	4.00
35	4.40	2.30	3.70
36	4.20	2.75	4.35
37	4.40	1.80	2.78
38	4.20	3.00	3.30
39	4.60	2.75	3.40
40	4.40	1.75	2.72
41	4.20	4.80	3.00
42	4.60	3.50	4.57
43	4.60	2.00	3.48
44	4.00	2.75	4.05
45	3.80	3.00	2.98
46	3.60	2.75	2.55
47	4.00	3.50	6.98
48	4.40	1.80	2.62
49	4.20	2.30	6.34
50	4.60	3.10	5.06
51	4.80	4.25	2.69
52	3.80	1.50	3.06
Mean	**4.2**	**2.62**	**3.88**

Key:

S/N=Serial number,

ADM=Administrators Mean Rating

In.Sup=Instructional Supervision

M/sc=KCSE 2016 Mean Score

APPENDIX K

ADMINISTRATORS' CHECKING OF TEACHERS' PROFESSIONAL RECORDS

a) Administrators' Checking and Approval of Schemes of Work

Aspect of Contribution	Frequency(f)	Percentage (%)
1. Comments on HODs Signature	39	75
2. Principal's Signature	50	96
3. Principal's Rubber Stamp	52	100
4. Principal's Comments	47	90
5. Completeness e.g. pg by pg	22	42

Source: Field Data, 2017

b) Administrators' Checking and Approval of Records of Work Covered.

Aspect of Contribution	Frequency(f)	Percentage (%)
1. Comments on HODs Signature	32	62
2. Principal's Signature	46	88
3. Principal's Rubber Stamp	51	98
4. Principal's Comments	47	90
5. Completeness	34	65

Source: Field Data, 2017

c) Administrators' Checking and Approving Students' Progress Records

Aspects of Contribution	Frequency(f)	Percentage (%)
1. Comments on HODs Signature	12	23
2. Principal's Signature	29	56
3. Principal's Rubber Stamp	28	54
4. Principal's comments	19	37
5. Completeness e.g. page by page	21	40

Source: Field Data, 2017

d) Administrators' Checking and Approving Lesson Plans

Aspects of Contribution	Frequency(f)	Percentage (%)
1. Comments on H.O.D Signature	04	8
2. Principal's Signature	03	6
3. Principal's Rubber Stamp	04	8
4. Principal's Comments	04	8
5. Completeness e.g. page by page	03	6

Source: Field Data, 2017

APPENDIX L

RESULTS FROM DOCUMENT ANALYSIS GUIDE ON ADMINISTRATORS' EXPENDITURE ON TEACHER MOTIVATION

(IN MILLION KSHS) BETWEEN 2013 -2016

SN	ADM	W_SHS	MEALS	REM_T	QLTY_GRADE	AC_TRIPS	TOTAL
1	3.45	0.30	0.90	2.00	0.06	0.08	**3.34**
2	4.09	0.30	1.20	2.00	0.03	0.00	**3.53**
3	3.73	0.10	1.20	1.80	0.07	0.00	**3.17**
4	3.91	0.40	1.40	2.50	0.08	0.90	**5.28**
5	3.64	0.30	1.40	2.00	0.06	0.00	**3.76**
6	4.00	0.90	2.60	2.00	0.12	0.10	**5.72**
7	4.00	0.80	2.30	2.10	0.07	0.20	**5.47**
8	4.09	0.90	2.30	3.10	0.25	0.10	**6.65**
9	4.27	0.30	1.50	1.10	0.06	0.07	**3.03**
10	3.91	0.30	1.10	1.40	0.07	0.00	**2.87**
11	3.64	0.30	2.10	2.10	0.05	0.00	**4.55**
12	3.91	0.40	1.40	2.10	0.06	0.00	**3.96**
13	3.82	0.60	1.50	2.60	0.32	0.00	**5.02**
14	4.09	0.40	4.30	3.10	0.06	0.20	**8.06**
15	4.27	0.30	1.30	2.10	0.06	0.00	**3.76**
16	4.18	0.90	6.20	4.10	0.50	0.20	**11.90**
17	3.64	0.30	0.90	1.80	0.06	0.00	**3.06**
18	4.09	0.50	4.30	3.30	0.10	0.00	**8.20**
19	3.00	0.08	0.60	0.10	0.04	0.00	**0.82**
20	4.18	0.30	1.50	1.60	0.08	0.00	**3.48**
21	3.73	0.10	1.10	0.80	0.05	0.00	**2.05**
22	3.73	0.20	0.90	1.90	0.04	0.00	**3.04**
23	3.55	0.20	2.00	1.50	0.06	0.00	**3.76**
24	3.82	0.20	1.00	1.90	0.05	0.00	**3.15**
25	3.18	0.20	1.20	2.00	0.06	0.00	**3.46**
26	4.18	0.40	4.60	4.30	0.19	0.15	**9.64**
27	3.73	0.20	1.20	2.00	0.05	0.00	**3.45**
28	3.64	0.05	0.80	0.07	0.03	0.00	**0.95**
29	4.09	1.10	9.80	6.00	1.20	1.00	**19.10**
30	3.45	0.06	1.50	0.05	0.02	0.00	**1.63**
31	4.00	0.50	1.40	1.70	0.32	0.80	**4.72**
32	4.09	0.20	2.70	1.50	0.06	0.00	**4.46**
33	3.73	0.40	4.00	3.30	0.14	0.00	**7.84**
34	4.09	0.30	2.30	2.70	0.14	0.00	**5.44**
35	3.73	0.10	1.60	1.60	0.07	0.00	**3.37**

36	4.00	0.20	2.60	1.70	0.12	0.00	**4.62**
37	3.73	0.05	4.30	0.20	0.04	0.00	**4.59**
38	3.91	0.10	3.20	2.30	0.11	0.00	**5.71**
39	4.09	0.20	3.40	2.40	0.10	0.10	**6.20**
40	3.36	0.08	0.90	0.05	0.04	0.00	**1.07**
41	3.64	0.30	2.00	1.40	0.06	0.00	**3.76**
42	3.64	0.30	1.60	2.10	0.15	0.00	**4.15**
43	3.64	0.40	2.20	3.10	0.08	0.00	**5.78**
44	3.64	0.30	1.90	1.20	0.06	0.00	**3.46**
45	3.18	0.10	0.90	1.10	0.06	0.00	**2.16**
46	2.91	0.03	0.80	0.06	0.02	0.00	**0.91**
47	3.64	0.20	2.30	2.00	0.12	0.00	**4.62**
48	2.82	0.03	0.80	0.50	0.03	0.00	**1.36**
49	4.27	0.50	6.70	4.40	1.20	0.60	**13.40**
50	4.09	0.30	2.50	3.00	0.30	0.20	**6.30**
51	4.45	0.40	2.50	1.60	0.06	0.00	**4.56**
52	3.45	0.03	1.50	1.00	0.03	0.00	**2.56**
	TOTAL	**16.41**	**116.2**	**102.33**	**7.26**	**4.7**	**246.9**
	MEAN	**0.31558**	**2.23462**	**1.96788**	**0.139615**	**0.090385**	**4.74808**

KEY:

S/N	-Serial number
ADM	-Administrators' Mean rating
W_SHS	-Workshops
MEALS	-Meals
REM_T	-Remedial Teaching
QLTY_GRADE	-Quality Grades
AC_TRIPS	-Academic trips

APPENDIX M

OUTPUT ON TEACHERS' LEVEL OF MOTIVATION

SN.	ADR	T/M	SN.	ADR	T/M	SN.	ADR	T/M
1	3.45	2.82	40	4.00	2.66	79	4.09	3.16
2	3.45	2.92	41	4.00	2.74	80	4.09	3.19
3	3.45	3.00	42	4.00	2.62	81	4.09	3.14
4	3.45	3.05	43	4.09	2.65	82	4.09	2.82
5	3.45	2.18	44	4.09	2.46	83	4.09	2.91
6	3.45	2.43	45	4.09	2.64	84	4.09	2.96
7	4.09	2.74	46	4.09	2.63	85	4.27	2.94
8	4.09	2.80	47	4.09	2.70	86	4.27	3.16
9	4.09	2.44	48	4.09	2.68	87	4.27	3.00
10	4.09	2.63	49	4.27	2.79	88	4.27	2.74
11	4.09	2.53	50	4.27	2.56	89	4.27	3.13
12	4.09	2.78	51	4.27	2.67	90	4.27	3.09
13	3.73	2.71	52	4.27	2.72	91	4.18	3.33
14	3.73	2.73	53	4.27	2.04	92	4.18	3.31
15	3.73	2.49	54	4.27	2.16	93	4.18	2.93
16	3.73	2.59	55	3.91	2.43	94	4.18	2.81
17	3.73	2.81	56	3.91	2.63	95	4.18	2.56
18	3.73	2.09	57	3.91	2.61	96	4.18	2.54
19	3.91	2.19	58	3.91	2.56	97	3.64	3.43
20	3.91	3.10	59	3.91	2.54	98	3.64	3.26
21	3.91	2.54	60	3.91	2.69	99	3.64	3.30
22	3.91	2.57	61	3.64	3.37	100	3.64	3.42
23	3.91	2.69	62	3.64	3.26	101	3.64	3.44
24	3.91	2.79	63	3.64	3.38	102	3.64	2.51
25	3.64	2.81	64	3.64	3.48	103	4.09	2.65
26	3.64	2.83	65	3.64	3.12	104	4.09	2.58
27	3.64	2.78	66	3.64	3.25	105	4.09	2.70
28	3.64	2.84	67	3.91	3.44	106	4.09	2.71
29	3.64	2.80	68	3.91	3.00	107	4.09	2.63
30	3.64	2.76	69	3.91	3.41	108	4.09	2.60
31	4.00	2.77	70	3.91	3.31	109	3.00	2.59
32	4.00	2.81	71	3.91	3.23	110	3.00	2.55
33	4.00	2.84	72	3.91	3.01	111	3.00	2.74
34	4.00	2.76	73	3.82	3.43	112	3.00	2.64
35	4.00	2.83	74	3.82	3.22	113	3.00	2.61
36	4.00	2.82	75	3.82	3.42	114	3.00	2.57
37	4.00	2.75	76	3.82	3.60	115	4.18	2.56
38	4.00	2.90	77	3.82	3.21	116	4.18	2.62

117	4.18	2.80	158	3.73	2.74	199	4.09	2.81
118	4.18	2.91	159	3.73	2.71	200	4.09	2.93
119	4.18	2.73	160	3.73	2.84	201	4.09	2.89
120	4.18	3.14	161	3.73	2.87	202	4.09	2.81
121	3.73	3.03	162	3.73	2.91	203	4.09	2.75
122	3.73	3.11	163	3.64	2.94	204	4.09	2.65
123	3.73	2.74	164	3.64	3.17	205	3.73	2.72
124	3.73	2.55	165	3.64	3.25	206	3.73	2.80
125	3.73	2.56	166	3.64	2.82	207	3.73	2.75
126	3.73	2.86	167	3.64	3.16	208	3.73	2.73
127	3.73	2.84	168	3.64	3.00	209	3.73	2.81
128	3.73	2.79	169	4.09	3.14	210	3.73	2.84
129	3.73	2.62	170	4.09	3.44	211	4.00	2.88
130	3.73	2.69	171	4.09	3.12	212	4.00	2.90
131	3.73	2.73	172	4.09	3.30	213	4.00	2.70
132	3.73	2.77	173	4.09	3.41	214	4.00	2.74
133	3.55	2.75	174	4.09	2.99	215	4.00	2.76
134	3.55	2.99	175	3.45	2.89	216	4.00	2.80
135	3.55	3.00	176	3.45	2.79	217	3.73	2.75
136	3.55	2.81	177	3.45	3.22	218	3.73	2.79
137	3.55	2.83	178	3.45	2.84	219	3.73	2.76
138	3.55	2.71	179	3.45	3.09	220	3.73	2.75
139	3.82	2.70	180	3.45	2.96	221	3.73	2.44
140	3.82	2.61	181	4.00	2.80	222	3.73	2.51
141	3.82	2.81	182	4.00	2.83	223	3.91	2.58
142	3.82	2.72	183	4.00	2.69	224	3.91	2.62
143	3.82	2.66	184	4.00	2.65	225	3.91	2.61
144	3.82	2.70	185	4.00	2.75	226	3.91	2.59
145	3.18	2.73	186	4.00	2.82	227	3.91	2.45
146	3.18	2.63	187	4.09	2.90	228	3.91	2.49
147	3.18	2.88	188	4.09	2.92	229	4.09	2.50
148	3.18	2.81	189	4.09	2.89	230	4.09	2.43
149	3.18	2.77	190	4.09	2.91	231	4.09	2.72
150	3.18	2.76	191	4.09	2.82	232	4.09	2.64
151	4.18	2.86	192	4.09	2.94	233	4.09	2.41
152	4.18	2.91	193	3.73	2.99	234	4.09	2.55
153	4.18	2.85	194	3.73	2.95	235	3.36	2.60
154	4.18	2.87	195	3.73	2.94	236	3.36	2.59
155	4.18	2.65	196	3.73	2.86	237	3.36	2.70
156	4.18	2.64	197	3.73	2.88	238	3.36	2.73
157	3.73	2.55	198	3.73	2.79	239	3.36	2.64

240	3.36	2.60
241	3.64	3.19
242	3.64	3.05
243	3.64	3.45
244	3.64	3.10
245	3.64	3.00
246	3.64	3.15
247	3.64	3.20
248	3.64	3.25
249	3.64	3.43
250	3.64	3.40
251	3.64	3.35
252	3.64	3.25
253	3.64	3.15
254	3.64	3.17
255	3.64	3.16
256	3.64	3.18
257	3.64	3.26
258	3.64	3.24
259	3.64	3.33
260	3.64	3.34
261	3.64	2.68
262	3.64	2.69
263	3.64	2.75
264	3.64	2.74
265	3.18	2.82
266	3.18	2.76
267	3.18	2.79
268	3.18	2.80
269	3.18	2.81
270	3.18	2.82
271	2.91	2.78
272	2.91	2.76
273	2.91	2.99
274	2.91	2.91
275	2.91	2.84
276	2.91	3.00
277	3.64	3.12
278	3.64	3.43
279	3.64	3.26
280	3.64	2.88
281	3.64	2.99
282	3.64	2.95
283	2.82	2.86
284	2.82	2.85
285	2.82	2.97
286	2.82	2.87
287	2.82	2.88
288	2.82	2.96
289	4.27	2.92
290	4.27	2.91
291	4.27	2.90
292	4.27	2.89
293	4.27	2.93
294	4.27	2.94
295	4.09	2.89
296	4.09	2.86
297	4.09	2.99
298	4.09	3.01
299	4.09	3.24
300	4.09	3.06
301	4.45	2.44
302	4.45	2.60
303	4.45	2.56
304	4.45	2.61
305	4.45	2.64
306	4.45	2.57
307	3.45	2.66
308	3.45	2.65
309	3.45	2.45
310	3.45	2.47
311	3.45	2.58
312	3.45	2.68
AV.	**3.79**	**2.84**

Key:
SN=Serial number
ADR= Adminstrator mean rating
T/M= Teaccher motivation

APPENDIX N
OUTPUT FROM DOCUMENT ANALYSIS ON ADMINISTRATORS' EXPENDITURE ON TEACHING LEARNING RESOURCES IN MILLION KSHS. PERIOD 2013 - 2016

S/N	ADM	LCE	Tbk&E	SMC	TOTAL
1	4.00	1.44	2.77	0.09	**4.30**
2	3.67	2.45	3.84	4.05	**10.34**
3	3.33	1.44	0.46	0.55	**2.45**
4	3.83	2.58	5.50	0.73	**8.81**
5	3.33	2.80	0.30	1.84	**4.94**
6	3.33	0.67	0.34	1.87	**2.88**
7	3.00	1.10	4.93	0.57	**6.60**
8	3.67	1.43	6.07	0.96	**8.46**
9	3.67	0.94	0.21	0.75	**1.90**
10	3.67	1.37	2.30	0.90	**4.57**
11	3.33	1.44	1.25	0.96	**3.65**
12	3.67	0.38	3.56	0.42	**4.36**
13	3.67	1.00	5.31	0.80	**7.11**
14	3.17	0.50	2.00	2.01	**4.51**
15	3.67	0.95	1.29	0.60	**2.84**
16	4.17	2.20	3.50	1.60	**7.30**
17	4.00	1.70	2.50	1.63	**5.83**
18	3.67	0.54	7.45	1.19	**1.73**
19	2.83	0.52	1.20	0.40	**2.12**
20	3.33	0.96	1.77	0.58	**3.31**
21	3.33	0.32	0.85	0.45	**1.62**
22	3.33	0.65	1.31	0.95	**2.91**
23	3.33	0.73	3.23	0.93	**4.89**
24	3.33	0.38	5.20	1.81	**7.39**
25	3.17	0.32	1.50	1.65	**3.47**
26	3.83	0.10	7.60	1.60	**9.30**
27	3.33	2.00	3.26	1.90	**7.16**
28	3.33	0.78	0.69	0.85	**2.32**
29	4.33	3.06	5.50	2.50	**11.06**
30	3.33	0.53	4.24	0.40	**5.17**
31	3.67	2.05	3.50	1.92	**7.47**
32	3.67	2.66	3.00	1.76	**7.42**
33	3.83	3.67	4.20	2.50	**10.37**
34	3.50	3.20	4.00	2.36	**9.56**
35	2.83	0.63	1.20	0.35	**2.18**
36	3.50	5.67	3.00	0.66	**9.33**
37	3.33	2.12	4.70	0.54	**7.36**

38	3.50	3.06	4.10	0.89	**8.05**
39	4.17	1.43	3.60	0.87	**5.90**
40	3.17	1.92	1.12	0.88	**3.92**
41	3.50	6.77	2.71	0.21	**9.69**
42	3.67	2.40	4.20	2.59	**9.19**
43	3.33	1.65	3.93	0.60	**6.18**
44	4.00	1.64	2.60	0.89	**5.13**
45	3.00	0.85	1.95	0.95	**3.75**
46	2.67	0.66	2.15	0.95	**3.76**
47	4.83	1.15	5.66	1.62	**8.43**
48	2.83	0.56	2.00	1.50	**4.06**
49	4.17	3.05	5.00	1.61	**9.66**
50	3.33	4.84	5.44	0.39	**10.67**
51	4.00	0.67	4.66	0.12	**5.45**
52	3.33	0.62	1.33	0.03	**1.98**
MEAN	**3.53**	**1.66**	**3.07**	**1.15**	**5.82**
TOTAL	**183.48**	**86.55**	**156.52**	**59.73**	**302.80**

KEY:

S/N =Serial number

ADM = Administrators' Mean Rating

LCE = Lab chemicals and equipment

Tbk & E = Textbooks and exercise books

SMC =Stationary Maps and Charts

APPENDIX O
OUTPUT FROM DOCUMENT ANALYSIS GUIDE ON ADMINISTRATORS' EXPENDITURE ON PHYSICAL FACILITIES (MILLIONS KSHS.) 2013-2016

SN	ADM	Com Rm	Clasrms	Sc.Labs	Lib	Ewe	Dorms	D. H	Lat	Veh	Total
1	3.23	0.56	5.00	0.00	0.00	1.20	1.00	3.50	0.15	3.00	**14.41**
2	3.77	0.70	1.00	0.00	0.00	1.40	1.00	2.00	0.00	5.50	**11.60**
3	2.23	0.05	4.00	0.00	0.11	0.21	0.00	0.00	0.00	0.00	**4.37**
4	3.92	0.40	0.00	0.00	0.00	0.09	2.40	6.00	0.25	0.00	**9.14**
5	3.00	0.00	0.00	2.00	1.50	0.15	0.00	0.00	0.00	0.00	**3.65**
6	4.23	0.57	4.00	2.00	2.00	11.00	1.00	0.00	0.02	5.86	**26.45**
7	4.15	0.30	2.70	4.00	4.00	1.24	0.00	0.00	0.32	0.00	**12.56**
8	3.46	0.40	0.00	0.00	0.00	0.00	0.00	3.40	0.00	0.00	**3.80**
9	3.23	0.45	0.00	0.00	0.00	1.20	0.00	0.00	0.35	0.00	**2.00**
10	3.31	0.75	2.00	1.00	1.00	0.60	0.00	1.00	0.45	0.00	**6.80**
11	3.31	0.35	0.85	0.00	0.00	0.10	0.00	0.60	0.25	0.00	**2.15**
12	2.85	0.48	2.70	0.00	0.45	0.00	0.00	1.50	0.30	0.00	**5.43**
13	3.92	0.66	1.50	0.00	0.00	0.25	1.00	2.50	0.27	5.90	**12.08**
14	4.23	2.50	0.50	0.00	0.00	0.00	1.00	0.00	0.27	5.50	**9.77**
15	3.31	0.60	1.26	0.50	0.00	0.50	0.00	2.00	0.06	0.00	**4.92**
16	4.46	0.75	2.50	0.00	0.00	0.00	0.00	3.50	0.03	0.00	**6.78**
17	3.38	1.80	0.00	1.00	3.00	0.00	0.00	0.00	0.03	0.00	**5.83**
18	4.31	0.00	2.00	0.50	0.00	1.85	0.00	2.21	0.00	3.40	**9.96**
19	2.08	0.00	0.25	0.00	0.00	0.50	0.00	0.00	0.25	0.00	**1.00**
20	3.08	1.50	0.00	0.00	1.00	0.25	0.00	1.20	0.00	0.00	**3.95**
21	3.00	0.80	0.50	0.00	0.00	0.10	0.00	1.00	0.10	0.00	**2.50**
22	3.08	2.00	2.50	0.00	0.00	0.00	0.00	0.00	0.10	0.00	**4.60**
23	2.54	0.60	1.00	1.50	0.00	0.15	0.00	1.20	0.25	0.00	**4.70**
24	2.85	0.30	1.53	0.00	0.00	0.25	0.00	0.00	0.10	0.00	**2.18**
25	2.69	0.00	1.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	**1.50**
26	4.08	0.40	0.47	1.00	0.00	2.35	11.70	0.12	0.00	6.20	**22.24**
27	2.77	0.60	1.50	1.00	0.00	0.50	0.00	0.00	0.25	0.00	**3.85**
28	2.62	0.00	0.25	0.00	0.00	0.10	0.00	0.00	0.00	0.00	**0.35**
29	3.69	2.00	3.00	1.00	1.00	0.00	3.00	1.00	0.25	6.00	**17.25**
30	2.62	0.14	9.00	0.50	0.50	0.15	0.00	0.00	0.80	0.00	**11.09**
31	4.00	0.60	2.50	1.00	1.00	0.00	0.00	0.00	0.10	5.00	**10.20**
32	3.54	0.60	0.80	0.00	0.00	0.10	0.00	0.00	0.08	0.00	**1.58**
33	3.77	0.75	0.40	1.00	1.00	0.25	0.00	0.00	0.13	6.00	**9.53**
34	3.92	1.00	0.45	0.90	0.50	0.15	2.00	0.00	0.20	5.00	**10.20**
35	2.31	1.00	6.00	0.00	0.00	0.15	0.00	0.00	0.07	0.00	**7.22**
36	3.38	0.60	0.25	1.00	1.00	0.20	0.00	0.00	0.05	6.00	**9.10**
37	2.54	0.00	2.00	0.00	0.00	0.25	0.00	0.00	0.06	0.00	**2.31**
38	3.54	1.40	0.35	0.25	0.15	0.30	0.00	0.00	0.10	0.00	**2.55**

39	3.85	1.20	0.30	2.00	0.00	0.10	1.20	0.00	0.10	4.00	**8.90**
40	3.08	0.20	6.00	1.20	0.00	0.60	0.00	0.00	0.15	0.00	**8.15**
41	3.00	0.27	1.30	0.00	0.00	1.20	0.00	0.06	0.06	0.00	**2.89**
42	3.23	0.36	0.50	0.60	5.50	0.20	0.12	4.50	0.35	6.00	**18.13**
43	3.92	1.00	6.00	1.00	1.00	0.40	2.00	6.00	0.30	5.00	**22.70**
44	4.08	0.75	1.00	1.00	0.85	0.10	0.00	0.00	0.06	0.00	**3.76**
45	2.69	0.50	0.80	1.00	1.00	0.30	0.00	0.00	0.10	0.00	**3.70**
46	1.85	0.00	2.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	**2.25**
47	4.46	0.65	0.20	0.00	0.00	0.10	0.00	0.00	0.07	0.00	**1.02**
48	2.46	0.00	1.00	0.00	0.00	0.25	0.00	0.00	0.08	0.00	**1.33**
49	4.62	6.00	6.00	3.00	3.00	0.60	1.50	2.00	0.20	3.00	**25.30**
50	3.62	0.60	1.74	0.00	0.00	1.20	1.11	0.00	0.00	0.00	**4.65**
51	3.69	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	7.00	**8.00**
52	2.69	0.10	1.30	1.00	0.15	0.10	0.00	0.00	0.12	0.00	**2.77**
MEAN	3.34	0.73	1.78	0.60	0.57	0.60	0.58	0.87	0.14	1.70	**7.57**
Total	**173.64**	**37.74**	**92.40**	**30.95**	**29.71**	**31.44**	**30.03**	**45.29**	**7.23**	**88.36**	**393.15**

KEY:

SN : Serial Number of School

ADM : Administrators Mean Rating

Com Rm : Computer Rooms

Clasrms: Class rooms

Sc.labs : Science laboratories

Libs : Libraries

Ewc : Electricity and water

Dorms : Dormitories

DH : Dinning Hall

Lat : Latrines

Veh : Vehicles

APPENDIX P
TEACHERS' PROFESSIONAL RECORDS
SAMPLE CHECKED AND APPROVED SCHEME OF WORK

MATHS FORM 3 SCHEMES OF WORK – 2017

TOPICS

1. QUADRATIC EXPRESSION AND EQUATIONS.
2. APPROXIMATION AND ERRORS.
3. TRIGONOMETRY.
4. FURTHER LOGARITHMS.
5. SURDS.

REFERENCE BOOKS.

1. ADVANCING IN MATHEMATICS BOOK 3.
2. PATEL BOOK 3.
3. KLB BOOK 3.
4. OXFORD BOOK 3.

TERM 1

WK	LSN	TOPIC	SUB-TOPIC	OBJECTIVES	T/LEARNING ACTIVITIES	T/AIDS	REFERENCE	REMARKS
1	1&2	QUADRATIC EXPRESSIONS AND EQUATIONS	-Factorisation of quadratic expression	By the end of the lesson the learner should be able to: -Factorize quadratic expressions. -Use the three identities of quadratic functions.	-Class illustration. -Class discussion	C/B	Ref 1 PG 1-4 Ref. 2 pg 49-50	
	3	EQUATIONS	Perfect squares $-(a+b)^2=a^2+2ab+b^2$ $-(a-b)^2=a^2-2ab+b^2$ $-a^2-b^2=(a-b)(a+b)$	-Use three identities of quadratic functions	-Class illustration.	C/B	"	

1

WK	LSN	TOPIC	SUB-TOPIC	OBJECTIVES	T/LEARNING ACTIVITIES	T/AIDS	REFERENCE	REMARKS
	4	"	Completing the square	-Complete the square of a quadratic function by adding a term to make it a perfect square.	-Class discussion	-Math tables -C/B	Ref 3 pg 2-5	
	5	"	Quadratic equations.	-Solve quadratic equations by completing the square	-Supervised practice	-C/B -Calculate	Ref 2 pg 7-10	
	6	"	Completing the square	-Add the square of half of the coefficient of x to make a perfect square.	-Class discussion	"	Ref 1 pg 5	
	7	"	Completing the square when coefficient of x is non-unity	-Complete the square when coefficient is non-unity.	-Class illustration	-C/B -Math tables	Ref 2 pg 50-51	
2	1-7	CAT ONE						
3	1	"	The quadratic formula $x = \frac{-b \pm \sqrt{b2 - 4ac}}{2a}$	-Derive the quadratic formula.	-Class discussion	Scientific calculator	Ref 1 pg 6	
	2	"	Nature of the roots of quadratic equations.	-Use the quadratic formula to define b^2-4ac on the discriminant.	-Supervised practice	Math tables	Ref 1 pg 6-7	
	3	"	Simultaneous linear and quadratic equations	-Solve simultaneous equations involving quadratic expressions.	-Class discussion	Scientific calculator	Ref 2 pg 52 – 56	
	4	"	Problems leading to quadratic equations.	-Solve problems involving quadratic equations.	-Class demonstration	-C/B -Graph books	Ref 1 pg 8-10	
	5	"	Graph of quadratic function.	-Tabulate values of graphs of quadratic expression/ equations.	-Class demonstration	"	Ref 1 pg 8 – 10	
	6	"	Further quadratic expression.	-Draw graphs of quadratic expressions.	-Class illustration	"	Ref 3 pg 14 – 19	
	7	"	Graphical solution of quadratic equation.	-Solve quadratic equation graphically.	-Class illustration	Graph books	Ref 2 pg 60 – 64	
4	1	"	Simultaneous equation involve a linear equation and a quadratic equation.	-Solve simultaneous equation graphically.	-Class illustration	Graph books	Ref 3 pg 20 – 24	
	2	"	Further graphical methods.	-Solve problems involving real life situations that are	-Class illustration -Supervised	"	Ref 2 pg 65 - 69	

PRINCIPAL
WOMULALU SECONDARY SCHOOL
P.O. Box VIHIGA
DATE:.....SIGN:.....

WK	LSN	TOPIC	SUB-TOPIC	OBJECTIVES	T/LEARNING ACTIVITIES	T/AIDS	REFERENCE	REMARKS
				quadratic.	practice			
	3	"	Further examples on quadratic expressions and equations.	Solve on the blackboard questions involving quadratic functions/ eqns.	-Class discussion	-C/B	Ref 1, 2 and 3	
	4	"	Quiz	Solve 80% of questions of quadratic functions	-Invigilation.	-Graph books	"	
	5	APPROXIMATION AND ERRORS	Introduction	Define the functions of some of the commonly used keys on a scientific calculator.	-Supervised practiced. -Class demonstration	-Math tables. -Calculators	Ref 1 pg 19	
	6	"	Calculator	Use scientific calculators to evaluate given problems/ sums.	Supervised practice	Calculator	Ref 1 pg 20	
	7	"	Estimation	Estimate quantities when dealing with real life situation.	Class discussion	Scientific calculator.	Ref 1 pg 21	
5	1	"	Approximation	Approximate quantities when dealing with real life situation.	Class demonstration	Math tables	Ref 3 pg 25, 29	
	2	"	Counting and measuring errors.	Count and measure errors to obtain absolute errors.	"	C/B	Ref 2 pg 5 – 10	
	3	"	Rounding off and truncating and significant figures.	-Find rough estimates of given sums. -Truncate to numbers to the given significant figures.	Class discussion	-C/B -Math tables.	Ref 1 pg 11 – 12 Ref 1 pg 22	
	4	"	Absolute error	Define absolute error	Supervised practice	C/B	"	
	5	"	Relative and percentage error.	Compute relative and percentage error.	Class discussion	Calculator	Ref 1 pg 24	
	6	"	Propagation of errors. -Addition -Subtraction.	Propagate errors when adding or subtracting numbers.	"	Calculator	Ref 1 pg 25 – 27	
	7	"	Error in multiplication	Propagate errors when multiplying or diving numbers.	Class discussion	-Calculator and Math tables	Ref 1 pg 28 – 31	
6	1	GEOMETRY	Introduction	State the ratios of the sides		-Graph books	Ref 1 pg 32	

PRINCIPAL

DATE:.....SIGN.....

WK	LSN	TOPIC	SUB-TOPIC	OBJECTIVES	T/LEARNING ACTIVITIES	T/AIDS	REFERENCE	REMARKS
			SOHCAHTOA	of the right-angled triangle.		-Math tables		
	2		The unit circle.	Label the quadratic of the unit circle.	"	"	-KLB BK 3 pg 36-37 Ref 2 pg 243	
	3		Trigonometric of the unit circle.	Find rations of angles using the unit circle.	Class illustration	-Graph books -Set	Ref 1 pg 33	
	4		Trigonometric ratios of negative angles.	Find the ratios of negative angles from the unit circle.	Class demonstration	-Math tables -Graph books	Ref 1 pg 36 Ref 3 pg 42-48	
	5		Angles greater than 360°	Determine the ratios of angles greater than 360° or less than 0° using the unit circle.	"	Calculator "		
	6		Use of trigonometric tables.	Determine trigonometric ratios of angles greater than 90° using tables.	Class illustration	-Mathematical tables -Set	Ref 1 pg 37 Ref 2 pg 25	
	7		Use of scientific calculators.	Use of calculator to obtain trigonometric ratios of angles.	Class demonstration	Calculator	Ref 1 pg 39	
7	1-7	CAT TWO						
8	1		Radian measure	Use radians as a unit of measuring angles.	-Class discussion -Supervised practice	-Set -C/B -Graph books	-Ref 1 pg 39 -Ref 2 pg 49-50	
	2		Trigonometrical graphs	Draw graph of $\sin\theta$ and use the graph in evaluation.	Class illustration	-Set -Calculator	Ref 1 pg 40	
	3		Graph of $\cos\theta$	Draw the graph of $y = \cos\theta$ and use it to solve values	Supervised practice	-Set -Calculator	Ref 1 pg 42	
	4		The graph of Sin	Draw the graph of y=sin and use it to solve values.	Class discussion	C/B	Ref 1 pg 57	
	5		The sine rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = 2n$	Derive the sine rule formula.	Class discussion	C/B	-Ref 1 pg 57 -Ref 2 pg 256	
	6		Cosine rule	Derive the cosine rule $a^2 = b^2+c^2=2bc \cos A$	Class discussion	-Calculator -C/B	Ref 2 pg 68	
	7		Application of sine and cosine rule	Apply the sine and cosine rule in real life situation	Class demonstration	Calculator	Ref 2 pg 259	
9	1	SURDS	Rational and irrational numbers.	Differentiate between rational and irrational	Class illustration	Calculator	Ref 1 PG 52	

PRINCIPAL
TOMULALU SECONDARY SCHOOL
P.O. Box 307-50310, VIHIGA
DATE: 31/1/2017 SIGN:

WK	LSN	TOPIC	SUB-TOPIC	OBJECTIVES	T/LEARNING ACTIVITIES	T/AIDS	REFERENCE	REMARKS
				numbers.				
	2-3		-Surds -Simplification of surds	Define surds and write number in surd form	Class discussion	C/B	Patel pg 20	
	4		Operation of surds	Add, subtract and multiply surds.	"	"	-Ref 1 pg 53 -Ref 3 pg 77	
	5		Division of surds and rationalization	Rationalize the denominator (Monomial and Binomial)	Class illustration	C/B	Ref 2 pg 20	
	6-7		Rationalization and binomial denominator	Rationalise the denominator that is binomial.	"	C/B	Ref 1 pg 56	
10	1	FURTHER LOGARITHMS	Logarithmic notation i.e. $b = a$ $\log_a b = m$	Write down the logarithm of numbers to the stated base.	-Class discussion -Supervised practice	-C/B -Calculator	-Ref 1 pg 59 -Ref 3 pg 79	
	3-4		Laws of logarithm $\text{Log}_a x + \log_a y = \log xy$ $\text{Log}_a x - \log_a y = \log x/y$ $\text{Log}_a x = n\log_a x$	State the law of logarithms.	-Class illustration -Supervised practice	-Calculator -C/B	-Ref 1 pg 58 -Ref 2 pg 26	
	5		Simplification	Evaluate logarithmic expression.	"	-Math tables -Text books	Ref 1 pg 60	
	6		Equations involving logarithms	Compute equations involving indices and logarithms.	"	C/B	Ref 1 pg 29	
	7		Further computations using logarithmic laws	Use laws of logarithms to solve given expressions.	Class demonstration	C/B	Ref 1 pg 62	
11	1-3	SURDS AND FURTHER LOGARITHMS	Quiz	Answer 80% of the quiz questions on surds and laws of logarithms.	Invigilation	C/B	Ref 1 Ref 2 Ref 3	
	4-7	QUIZES						

Checked
PRINCIPAL
SECONDARY SCHOOL

DATE 13/11

WK	LSN	TOPIC	SUB-TOPIC	OBJECTIVES	T/LEARNING ACTIVITIES	T/AIDS	REFERENCE	REMARKS
12	1	COMMERCIAL ARITHMETIC II	Introduction	By the end of the lesson the learner should be able to define principal, interest and amount.	Class discussion	Scientific calculator	Ref 2 pg 31-38	
	2	"		Differentiate between simple and compound interest.	"	"	Ref 1 pg 68 - 69	
	2		Calculation of simple interest $S = \frac{PRT}{100}$	Compute simple interest using the formula $S = \frac{PRT}{100}$	-Class demonstration -Supervised practice	Math tables	Ref 3 pg 108 – 114	
	3		Compound interest	Calculate compound interest using step by step method.	Class discussion	C/B	Ref 2 pg 39-40	
	4		C.I. formulae $A = P(1 + R)n$ 100	Derive problems using the compound interest formula	-Class illustration -Pupils take notes	-Calculator -C/B	Ref 1 pg 71 Ref 3 pg 115 – 117	
	5		Further examples	Solve problems using the compound interest formula	Class discussion	-C/B -Calculator	Ref 3 pg 117	
	6		Depreciation	Evaluate the value of depreciation of commodities	Supervised practice	C/B	Ref 1 pg 74 Ref 3 pg 118	
	7		Appreciation $A = P(1 + R)n$ 100	Compute for appreciation value using compound interest formula.	Illustration using examples	-Calculator -Math tables	Ref 2 pg 39 – 41	
13-14	1-7	END OF TERM ONE EXAMS						

Checked
PRINCIPAL

DATE: 13/11/2017

SAMPLE CHECKED & APPROVED RECORDS OF WORK COVERED

SECONDARY SCHOOL

14, EMUHAYA

RECORD OF WORK

TERM ONE WEEK 1 YEAR 2017

FORM	LESSON	WORK COVERED	TEACHER'S NAME/SIGN	REMARKS
1A				
1B				
2 A	1-5	Kufungua kwa Shule na kufanya mitihani.	Miss Lugalia	Mitihani ilifanyika ipasavyo.
2B	1-5	Kufungua kwa shule na kufanya mitihani.	Miss Lugalia	Mitihani ilifanyika ipasavyo.
3 A	1-5	Kufungua kwa shule na kufanya mitihani	Miss Lugalia	Mitihani ilifanyika ipasavyo.
3B	1-5	Kufungua kwa shule na kufanya mitihani	Miss Lugalia	Mitihani ilifanyika ipasavyo.
4 A	1-5	Kufungua kwa shule na kufanya mitihani	Miss Lugalia	Mitihani ilifanyika ipasavyo.
4B	1-5	Kufunguliwa kwa shule na kufanya mitihani.	Miss Lugalia	Mitihani ilifanyika ipasavyo.

COMMENTS:

HOS: _____ SIGN _____ DATE 6/1/17

HOD: checked SIGN _____ DATE _____

PRINCIPAL/DHT: Seen SIGN _____ DATE 16/2/17

MOTTO : KNOWLEDGE IS POWER

SECONDARY SCHOOL

EMUHAYA

RECORD OF WORK

TERM ONE WEEK 2 YEAR 2017

FORM	LESSON	WORK COVERED	TEACHER'S NAME/SIGN	REMARKS
1A		Kuripoti shuleni.	Miss Lugalia	Idadi ndogo ya wanafunzi iliarifiwa kuripoti.
1B		Kuripoti shuleni	Miss Lugalia	Idadi ndogo ya wanafunzi iliarifiwa kuripoti
2 A		Kufanya mitihani na marudio.	Miss Lugalia	Mitihani ilifanywa na marudio yake ipasavyo.
2B		Kufanya mitihani na marudio.	Miss Lugalia	Mitihani ilifanywa na marudio yake ipasavyo.
3 A		Kufanya mitihani na marudio.	Miss Lugalia	Mitihani ilifanywa na marudio yake ipasavyo.
3B		Kufanya mitihani na marudio.	Miss Lugalia	Mitihani ilifanywa na marudio yake ipasavyo.
4 A		Kufanya mitihani na marudio.	Miss Lugalia	Mitihani ilifanywa na marudio yake ipasavyo.
4B		Kufanya mitihani na marudio.	Miss Lugalia	Mitihani ilifanywa na marudio yake ipasavyo.

COMMENTS:

HOS: _____ SIGN _____ DATE 13/1/17

HOD: Checked SIGN _____ DATE 13/1/17

PRINCIPAL/DHT: checked SIGN _____ DATE 10/1/17

MOTTO : KNOWLEDGE IS POWER

SECONDARY SCHOOL

P. O. Box , EMUHAYA

RECORD OF WORK

TERM ONE WEEK 3. YEAR 2017.

FORM	LESSON	WORK COVERED	TEACHER'S NAME/SIGN	REMARKS
1A	1-5	-Matamshi Bora - Sauti -Ufahamu - Ndoto yangu. -Konsonanti na Irabu - (Kuzianisha)	Kinyangi	Malengo yalitekelezwa.
1B	1-5.	Matamshi Bora-Sauti, Irabu, konsonanti, Silabi. -Sauti mwambatano. -Kiimbo. -Shadda.	Miss Lugalia Aflia	Wanafunzi walikuwa wachangamfu darasani
2 A	1-5	Matamshi Bora Sauti katanishi /b/ na /mb/ -Isimu Jamii - Maamkizi na mazungumzo Hotelini -Ufahamu - Urafiki.	Miss Lugalia Aflia	Malengo ya Kazi yalitekelezwa
2B	1-6.	-Matamshi Bora - Sauti katanishi /b/ na /mb/ -Isimu Jamii - Maamkizi na mazungumzo Hotelini. -Ufahamu urafiki.	Miss Lugalia Aflia.	Malengo ya kazi yalitekelezwa
3 A	1-6	-Isimu Jamii - Sajili ya Dini -Ufahamu - Asali yawa -Viulizi - Shubiri aina. -Riwaya - Kidagaa kimemwozea.	Miss Lugalia Aflia	Malengo ya Kazi yalitekelezwa
3B	1-6.	- Isimu Jamii (Sajili ya dini) - Vivumishi - Viulizi - vya idadi -Kusoma Riwaya - Kidagaa.	Kinyangi.	Malengo yalifikiwa.
4 A	1-6.	-Fasihi - Kusoma - Damu Nyeusi na Hadithi nyingine. -Kuchambua muhtasari wake. -Anwani. -Dhamira.	Miss Lugalia Aflia	Malengo ya Kazi yalitekelezwa
4B	1-6	-Fasihi - Kusoma - Damu Nyeusi na Hadithi Nyingine. -Kuchambua muhtasari wake. -Anwani. -Dhamira.	Miss Lugalia Aflia	Malengo ya Kazi yalitekelezwa

COMMENTS:

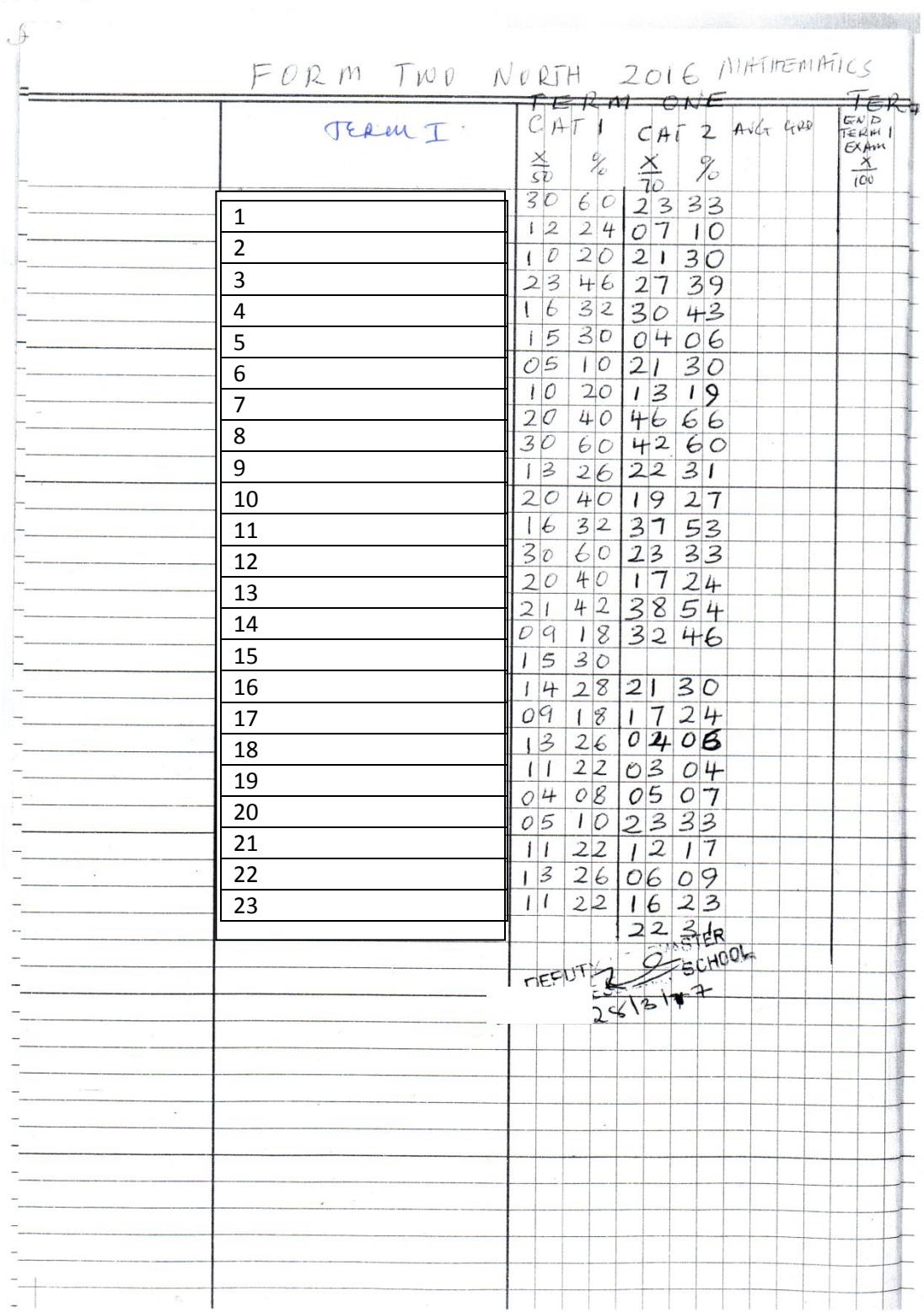
HOS: SIGN DATE 20/1/17

HOD: Checked SIGN DATE 20/1/17

PRINCIPAL/DHT: Checked SIGN DATE 20/2/17

MOTTO : KNOWLEDGE IS POWER

SAMPLE STUDENTS' PROGRESS RECORD



FORM TWO NORTH 2016 MATHEMATICS

TERM ONE

TERM I

	CAT 1		CAT 2		AVG GRD	END TERM 1 EXAM
	X/50	%	X/70	%		X/100
1	30	60	23	33		
2	12	24	07	10		
3	10	20	21	30		
4	23	46	27	39		
5	16	32	30	43		
6	15	30	04	06		
7	05	10	21	30		
8	10	20	13	19		
9	20	40	46	66		
10	30	60	42	60		
11	13	26	22	31		
12	20	40	19	27		
13	16	32	37	53		
14	30	60	23	33		
15	20	40	17	24		
16	21	42	38	54		
17	09	18	32	46		
18	15	30				
19	14	28	21	30		
20	09	18	17	24		
21	13	26	04	06		
22	11	22	03	04		
23	04	08	05	07		
	05	10	23	33		
	11	22	12	17		
	13	26	06	09		
	11	22	16	23		
			22	31		

DEPUTY MASTER SCHOOL

26/3/17

SAMPLE LESSON PLAN

SECONDARY SCHOOL

P.O BO[illegible], EMUHAYA

LESSON PLAN

TEACHER'S NAME..... TSC NO.:.....

FORM	ROLL	SUBJECT	TIME	DATE
3	35.	AGRICULTURE	11:10-11:50	10/2/2017

TOPIC ROUTINE LIVESTOCK REARING PRACTICES

OBJECTIVES By the end of the lesson, the learner should be able to: give the importance of feeding livestock animals; define flushing and steaming up; Give their importance to animals.

TEACHING AIDS

REFERENCE KLB BK 3 Pg ~~Longhorn~~ 27 – 28; Longhorn Pg

STAGE	TIME	CONTENT	TEACHING ACTIVITIES	LEARNING ACTIVITIES
Introduction	5min	Teacher reviews the previous lesson by asking questions.	- Ask questions	Students responds to the questions
Development	30 min	Teacher explains the importance of feeding livestock - defines flushing and steaming up - Gives the importance of flushing and steaming up.	- make notes on bb - Ask questions - Discuss	- Responds to the questions - Ask and Answ questions - Participate in discussion - Take notes
Summary	5min	Ask questions on what has been covered.	Ask questions	- Respond to ques
Assignment		Draw a diag of training to drink mi		

Evaluation

Motto : Knowledge is Power

APPENDIX Q

SAMPLE LETTER OF RECOMMENDATION

File

SECONDARY SCHOOL

P.O. BOX – 50307, LUANDA

TEL:

Email:esibilasecondary@yahoo.com

OUR REF NO: **DATE: 1/4/2016**

YOUR REF NO:.....

Dear Sir,

RE: APPRECIATION

On behalf of the Board of Management and myself, I wish to express sincere gratitude and congratulate you on your excellent improved performance as exhibited in the result of K.C.S.E. Maths and Chemistry in the year 2015.

6

It was because of your commitment, sacrifice and hard work that Maths and Chemistry realised a mean of 5.242 C- and 6.636 C+ respectively, which made us hit our set target of 7.212 as a school.

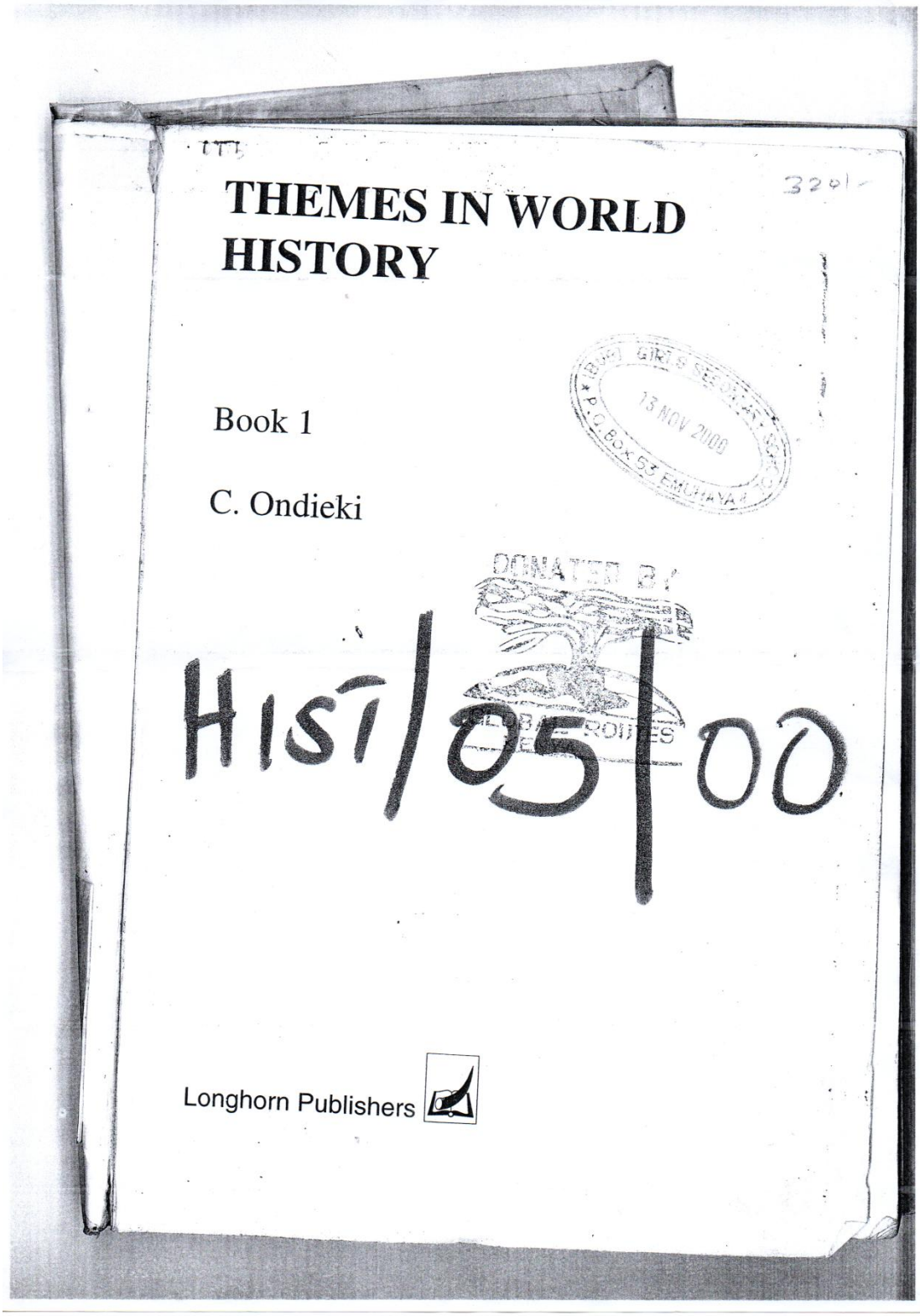
Thank you very much and keep up the good spirit.

Yours faithfully,

SEC. SCHOOL
LUANDA

PRINCIPAL.

APPENDIX R
SAMPLES OF DONATED TEXT BOOKS



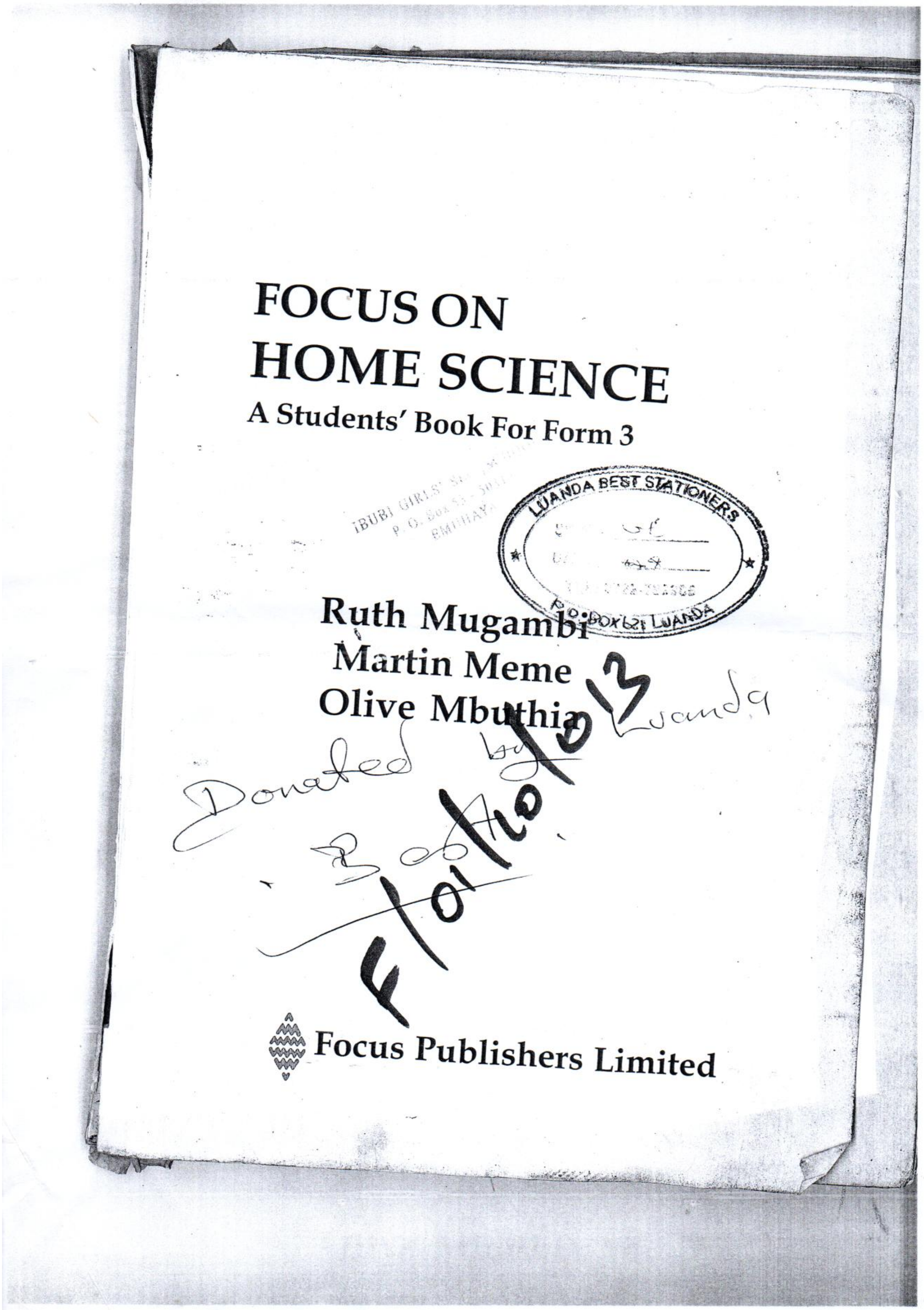
Secondary

COMMERCE

Pupils' Book

for

Form Three


FOCUS ON
HOME SCIENCE
A Students' Book For Form 3
LUANDA BEST STATIONERS
Ruth Mugambi
Martin Meme
Olive Mbuthia
Focus Publishers Limited

APPENDIX S
A SAMPLE SCHOOL BUDGET

SECONDARY SCHOOL
EMUHAYA
2017 ESTIMATES OF REVENUE

We anticipate to have an estimate of 500 students all will be boarders

a) **Boarding Fees**

Will be paid by parents at an estimate figure of Ksh – 16,400
16,400x500 = Ksh. 8,200,000.

b) **Personal Emoluments**

Parents will pay fee of 5972 Ksh. Per student
5972x 500 = Ksh. 2,986,000

c) **R.M.I**

Parents will pay fees of 2392 Ksh.
2,392 x 500 = Ksh. 1,196,000

d)**LT & T**

Will be paid by parents at fees of Ksh. 1621
1621 x 500 = Ksh.810,500

e) **Administration**

Will be paid by parents at a fee of Ksh: 2,516
2516 x 500 = Ksh. 1,258,000

f) **E W & C**

Will be paid by parents at fees of Ksh 6302
6302 X 500= Ksh. 3,151,000

g) **Medical**

Will be paid by parents at fee of Ksh. 508
508 x 500 = Ksh. 254000

h) **Activity**

Will be paid by Parents at fee of Ksh. 798
798 x 500 = Ksh.399000

i) **Insurance**

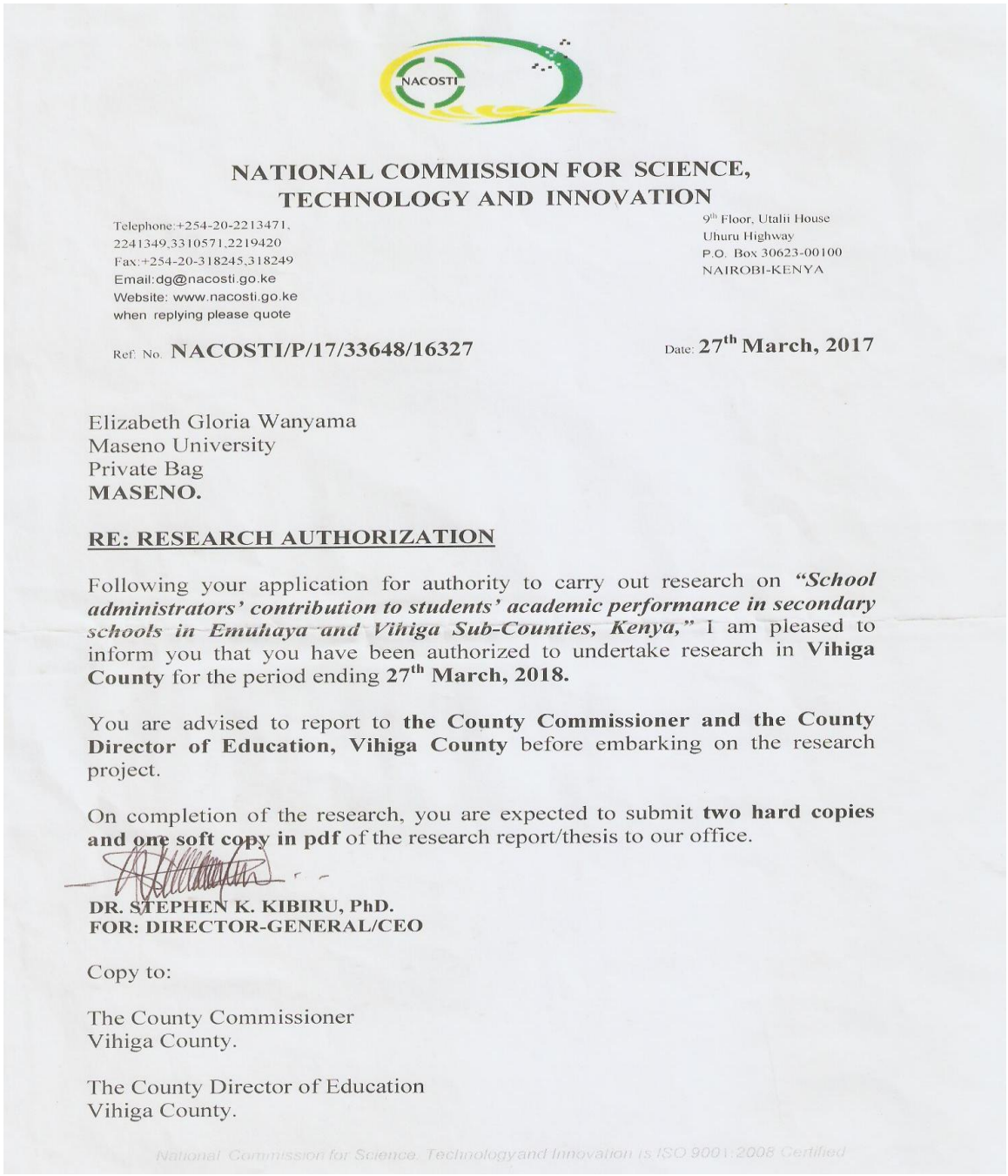
Will be paid by parents at a fee of Ksh. 1219
1219 x 500 =Ksh.609,500

ESTIMATES OF REVENUE AND EXPENDITURE 2017.

No.	Item	No. of Bags	Unit Cost	Total
1	Maize	450 - 90kgs	Ksh.3,800	Ksh.1,710,000
2	Beans	200 - 90kgs	Ksh.8,500	Ksh.1,700,000
3	Sugar	200 - 50kgs	Ksh.4,800	Ksh.960,000
4	Tea/Leaves	300pkts	Ksh.300	Ksh.90,000
5	Meat	2,050 kgs	Ksh.360	Ksh.738,000
6	Vegetables	13,000kgs	Ksh.40	Ksh.520,000
7	Rice	150 - 50kgs	Ksh.4,000	Ksh.600,000
8	Salt	150 bales	Ksh.500	Ksh.75,000
9	Fats	200 – 17kilos	Ksh1,900	Ksh.380,000
10	Soap	40 cartons	Ksh.800	Ksh.32,000
11	Firewood	35 lories of 7 tones	Ksh.16,000	Ksh.560,000
12	Steel wire rolls	18 Rolls	Ksh.150	Ksh.2 ,700
13	Matches	200	Ksh.5	Ksh.1,000
14	Brooms	60	Ksh.40	Ksh.2,400
15	Grainding of Maize	300 – 90kgs	Ksh.400	Ksh.120,000
16	Kerosin	-	-	Ksh.3,000
17	Plates,Kettle,Sufurias	-	-	Ksh.200,000
18	Repair of jikos	-	-	Ksh.150,000
19	Electrical bulbs	-	-	Ksh.5,000
20	Fruits	-	-	Ksh.80,000
21	Contingencies	-	-	Ksh.150,000
22	Disinfectant/detergent	-	-	Ksh.30,000
23	Repair of Beds		-	Ksh.90,900
24	**Total**			**Ksh.8,200,000**

APPENDIX T

RESEARCH AUTHORIZATION LETTERS



NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/17/33648/16327**

Date: **27th March, 2017**

Elizabeth Gloria Wanyama
Maseno University
Private Bag
MASENO.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"School administrators' contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub-Counties, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Vihiga County** for the period ending **27th March, 2018.**

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

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

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

Copy to:

The County Commissioner
Vihiga County.

The County Director of Education
Vihiga County.

National Commission for Science, Technology and Innovation is ISO 9001:2008 Certified

MINISTRY OF EDUCATION
STATE DEPARTMENT OF EDUCATION

Telegrams: .....
Telephone: (056) 51450
When replying please quote

COUNTY EDUCATION OFFICE,
VIHIGA COUNTY,
P.O. BOX 640,
MARAGOLI.

REF: CDE/VC/ADM/VOL.2/39/98

7th June, 2017

TO WHOM IT MAY CONCERN

RE: PERMISSION TO CONDUCT RESEARCH
ELIZABETH GLORIA WANYAMA-PG/PHD/00036/2012

Reference is made to letter dated 27th March 2017.

Permission is hereby granted to the above named PHD student at Maseno University to carry out research on **"School administrators' contribution to students' academic performance in Secondary schools in Emuhaya and Vihiga Sub counties, Vihiga County, Kenya",** to enable her write a Thesis as required of her, by the University.

THE COUNTY DIRECTOR OF EDUCATION
07 JUN 2017
P. O. Box [illegible],MARAGOLI
Sign:.....

Victoria W. Mulili
County Director of Education
VIHIGA COUNTY

Copy to:

County Commissioner
VIHIGA

MASENO UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Office of the Dean

Our Ref: PG/PHD/00036/2012

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

Date: 23rd November, 2016

TO WHOM IT MAY CONCERN

RE: PROPOSAL APPROVAL FOR WANYAMA ELIZABETH GLORIA— PG/PHD/00036/2012

The above named is registered in the Doctor of Philosophy Programme of the School of Education, Maseno University. This is to confirm that her research proposal titled "School Administrators' Contribution to Students' Academic Performance in Secondary Schools in Emuhaya and Vihiga Sub Counties" has been approved for conduct of research subject to obtaining all other permissions/clearances that may be required beforehand.

MASENO UNIVERSITY
RECEIVED
23 NOV 2016
SCHOOL OF GRADUATE STUDIES

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

REPUBLIC OF KENYA

THE PRESIDENCY

MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Email: vihigacc1992@gmail.com
Telephone: Vihiga0771866800
When replying please quote

COUNTY COMMISSIONER,
VIHIGA COUNTY,
P.O. BOX 75-50300,
MARAGOLI.

REF: VC/ED.12/1 VOL.1/253

7th June, 2017

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION – ELIZABETH GLORIA WANYAMA.

This is to introduce to you Elizabeth Gloria Wanyama who is a student of Maseno University ~~to carry out~~ research on ***" School administrators' contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub counties, Kenya,"*** for the period ending 27th March, 2018

Kindly accord her all the necessary assistance.

E. M. Keya
FOR; COUNTY COMMISSIONER
VIHIGA COUNTY.

COUNTY COMMISSIONER
VIHIGA COUNTY

APPENDIX U

LETTER OF CONSENT

P.O BOX 53,

EMUHAYA.

28 / 11 / 2016.

Dear Respondent,

REF: CONSENT FOR PARTICIPATION IN RESEARCH

I hereby write to seek your permission to participate in my study research as a respondent. I a m a student at **Maseno University** pursuing **a doctorate degree** in Educational Administration, department of Educational Management and Foundations. My research topic is '**School administrators' contribution to students' academic performance in secondary schools in Emuhaya and Vihiga Sub- Counties.'**

If you are willing please sign in the space provided.

Thank You.

Yours Faithfully,

WANYAMA ELIZABETH GLORIA

CONSENT

I accept to participate in the research.

Signature…….

APPENDIX V

RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MS. ELIZABETH GLORIA WANYAMA
of MASENO UNIVERSITY, 0-40105
MASENO,has been permitted to conduct
research in *Vihiga County*

Permit No : NACOSTI/P/17/33648/16327
Date Of Issue : 27th March,2017
Fee Recieved :Ksh 2000

on the topic: *SCHOOL ADMINISTRATORS' CONTRIBUTION TO STUDENTS' ACADEMIC PERFORMANCE IN SECONDARY SCHOOLS IN EMUHAYA AND VIHIGA SUB-COUNTIES, KENYA*

for the period ending:
27th March,2018

.....
Applicant's Signature

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

CONDITIONS

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

HARAMBEE

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

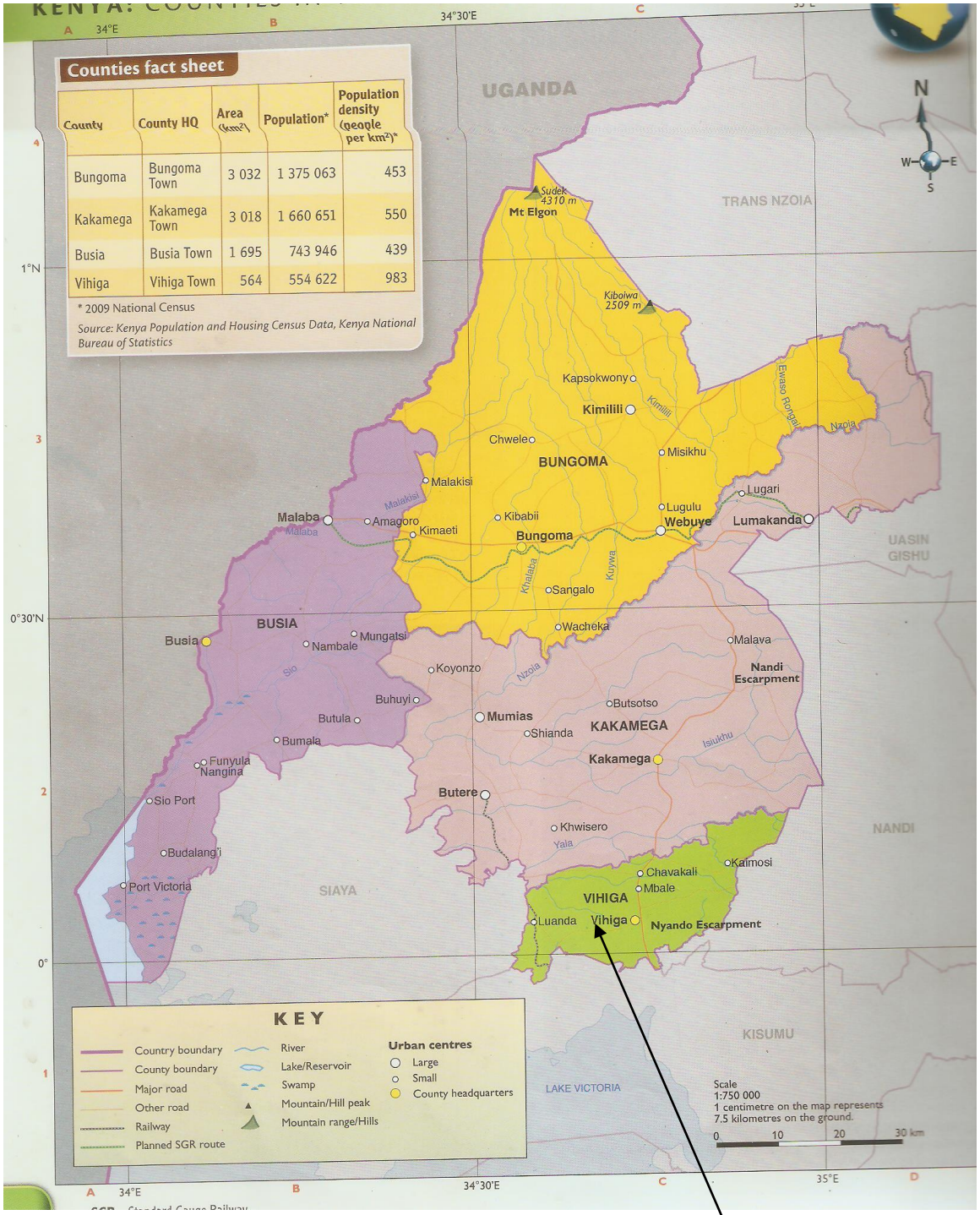
RESEACH CLEARANCE PERMIT

Serial No.A 13364

CONDITIONS: see back page

APPENDIX W

MAP OF VIHIGA COUNTY



Vihiga County