

**INFLUENCE OF LEARNERS' PARTICIPATION IN CO-CURRICULAR
ACTIVITIES ON ACADEMIC PERFORMANCE IN PUBLIC SECONDARY
SCHOOLS IN KAPENGURIA DIVISION OF WEST POKOT COUNTY**

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DECLARATION

I, the undersigned, declare that this research thesis is my original work and has not been presented for a ward of degree in any other University. No part of this thesis may be reproduced without the prior permission of the author or University of Eldoret.

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DEDICATION

To my beloved wife Selina Chemasach and my children Cheruto, Kakuko, K'ptoo, Cherono, Mtai, Poghon and Chemnyoku. May they grow to surpass both the education level as well the level of prosperity.

ABSTRACT

The purpose of this study was to investigate the influence of learners' participation in co-curricular activities on academic performance in public secondary schools in Kapenguria Division of West Pokot County. More specifically, the study was conducted to assess the influence of specific co-curricular activities that are undertaken in public secondary schools, that is, soccer, athletics and music in order to investigate whether participation in those co-curricular activities had an influence on the academic performance of students both positively and negatively. This study employed Astin's theory of involvement which posits that students learn more when they are involved in both the academic and social aspects of the collegiate experience. The study therefore, adopted the concurrent mixed methods design that sought to process the use of both quantitative and qualitative data. The target population of the study comprised of students, co-curricular activities teachers and principals of public secondary schools in Kapenguria Division of West Pokot County. Students were selected through cluster and stratified sampling, while teachers and principals were selected through purposive sampling because it targeted only co-curricular teachers and principals of the selected schools. Cluster sampling of students was based on girls and boys in their respective schools, whereby, they were put in their homogenous cluster. The basis of stratification was schools in the position of national, extra-county and sub-county schools. Thereafter, simple random sampling was used to select individual respondent. Primary data was collected through questionnaires for students and co-curricular activities teachers, and interview schedules for the principals. Data was analyzed using descriptive statistical tools, that is frequencies, standard deviation and mean and also, SPSS was employed. Three forms of validity were conducted, that is face, content and criterion validity, while reliability of the questionnaire scales was achieved by computing Cronbach's alpha coefficients on data collected through piloting of developed questionnaire among students and teachers drawn from public secondary schools in the neighbouring Kongelai Division. The overall finding of the current study is that participation in co-curricular activities has potential to influence students' academic performance in a positive way although other factors play important roles. The influence of co-curricular activities on academic performance could be attributed to its ability to stimulate physical and mental health, social wellbeing and cognitive growth. Several conclusions were made regarding learner participation in co-curricular activities and their academic performance as follows: public secondary schools in Kapenguria Division take co-curricular activities seriously knowing their utility in learners' holistic development; participation in athletics stimulate fine and gross motor growth, learner concentration and cognitive development; participation in soccer has a positive influence on academic performance and has potential to stimulate learner concentration in academic disciplines; participation in music influences learners' communication skills. The study suggests that schools to create more fields to allow various co-curricular activities take place, teachers too should encourage learners to choose at least one co-curricular activity, also co-curricular activities should be embraced if talents are to be fully exploited in learners, and the study recommends that similar studies should be replicated in public secondary schools in other divisions in the County so as to improve on generalizability of the findings. Therefore, the finding of this research study will help community, parents, teachers, principals and educational officers in enhancing students' educational achievements at secondary schools in West Pokot County and Kenya at large.

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LIST OF ABBREVIATION

CCAs	–	Co-curricular Activities
ECAs	–	Extra-curricular Activities
K.C.S.E	–	Kenya Certificate of Secondary Education
K.C.P.E	-	Kenya Certificate of Primary Education
KNEC	-	Kenya National Examination Council
NACOSTI	-	National Council for Science, Technology and Innovation
NARC	-	National Rainbow Coalition
OECD	–	Organization for Economic Co-operation and Development
PISA	–	Programme for International Students Association
TEAP	-	Total Extracurricular Activity Participation
QASO	-	Quality and Standard Officer
SPSS	-	Statistical Package for Social Sciences

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Overview

This chapter gives the background of the study; the statement of the problem; the purpose and objectives of the study. It also develops the questions that were used in the study, the study assumptions, the scope, limitation and delimitation, as well as the significance of the study. The chapter provides the theoretical and conceptual framework that guided the study, as well as the definition of operational terms used in the study.

1.1 Background of the Study

History of co-curricular activities in schools show that educators were skeptical of participation in co-curricular activities, believing that school should focus solely on narrowly defined academic outcomes. Non academic activities were viewed as being primarily recreational and therefore were detrimental to academic achievement and consequently were discouraged (Marsh & Kleitman, as cited in Coakley, 2016). Deam and Bear, the early experts on co-curricular activities, said, co-curricular activities supplement and extend those contacts and experiences found in the more formal part of the program of the school day (Millard, 1930). It was not until recently that Educational practitioners and researchers have taken a more positive perspective arguing that co-curricular activities may have positive effects in life skills and may also benefit academic accomplishment, (Marsh & Kleitman, as cited in Coakley, 2016). Co-curricular activities have an impact on academic performance and education in general ever since their inception. Concern is on the influence of co-curricular activities on academic performance today in schools in West Pokot County

because there are some students who participate in co-curricular activities yet there is little research done on influence of their participation in co-curriculum activities on academic performance.

Studies have been conducted concerning the relationship between co-curricular activities and academic performance. Total Extracurricular Activity Participation (TEAP) or participation in co-curricular activities in general, is associated with an improved grade point average (GPA), higher educational aspirations, increased college attendance and reduced absenteeism (Cilesiz & Drotos, 2014). Kariyana, Maphosa & Mapuranga (2017) in looking at the previous research on this subject, the researchers have found positive associations between co-curricular participation and academic achievement; although researchers agree that co-curricular activities do, in fact, influence academic performance. Study conducted by the national educational longitudinal study, found that participation in some activities improves achievement, while participation in others diminishes achievement (Cilesiz & Drotos, 2014).

Co-curricular activities have been divided into informal and formal activities. The formal activities include activities which are relatively structured such as participation in athletics or learning to play music instruments. Informal activities, on other hand, also known as leisure activities includes less structured activities, such as watching television. Some literature on leisure studies has suggested that formal and informal activities setting have different influences on motivation and feelings of competence, two factors which influence academic performance (Kariyana, Maphosa & Mapuranga (2017). Study carried out found that more time in leisure activities was related to poorer academic grades, poorer work habits, and poorer emotional

adjustments, while more time in structured groups and less time watching T.V were associated with higher test scores and school grades (Livazovic, 2010). This study investigated influence of learners' participation in co-curricular activities on their academic performance in Kapenguria Division of West Pokot County.

Therefore, this study was important in West Pokot County because findings showed that participation in co-curricular activities influence academic performance in a positive way; it is not a precursor to academic performance. Therefore, there is still more need to do research on influence of learners' participation in co-curriculum activities on academic performance in schools of West Pokot County. It was also noted that there are some prominent footballers, athletes and musician in West Pokot County, in the research findings there was no significant different in scores obtained by students who participate in co-curricular activities and those who do not, therefore learners should not be compelled to participate in co-curricular activities with the imagination of improving performance but rather gain physical fitness and to stimulate mental growth; hence it was of importance to carry a research to get findings of influence of learners' participation in co-curriculum activities on academic performance in public secondary schools in Kapenguria Division of West Pokot County.

1.2 Statement of the Problem

Investment in education has been seen as a key element in development process, as it enhance skills, knowledge and motivation needed for social economic development (Rafiei, & Davari, 2015). The normal curriculum can only go so far as to teach and educate students theoretically. But students whose only experience of school or

college is one of rigid academic study may not be able to apply what they have learned in practice. If the co-curricular activities were given an equal footing in student life, there will be an improvement in the student ability to grasp things as a whole, because students will have received a more rounded education. Co-curricular activities are particularly good at providing opportunities for students to work in teams, to exercise leadership, and to take the initiative themselves.

Although schools are concerned with the students' sufficient development in both academic and social aspects, somehow more efforts have been given to their academic performance (LaFontana, & Cillessen, 2010).). In West Pokot County, the researcher has not come across studies that indicate the influence of learners' participation in co-curricular activities on academic performance. A consensus on whether or not a student participating in co-curricular activities such as soccer, music and athletics, will have a positive or negative effect on academic performance has not been reached.

Through CCA, student discovers their talents while developing values and competencies that will prepare them for a rapid changing world. CCA also promote friendships among students from diverse backgrounds as they learn, play and grow together. Participating in CCA fosters social integration and deepens students' sense of belonging, commitment and sense of responsibility to school, community and nation. The concern of this study was to investigate influence of learners' participation in co-curricular activities on academic performance in public secondary schools in Kapenguria Division of west Pokot County.

1.3. Purpose of the Study

The purpose of this research was to establish the influence of learners' participation in co-curricular activities on academic performance in public secondary schools in Kapenguria Division of West Pokot County.

1.4. Objective of the Study

- i) Identify the types and framework of co-curricular activities available to students in public secondary schools in Kapenguria Division of West Pokot County.
- ii) Establish the influence of participation in athletics on students' academic performance
- iii) Determine the influence of student participation in soccer on students' academic performance
- iv) Find out the influence of participation of students' in music on academic performance
- v) Compare academic performance of students who participate in co-curricular activities and those who do not participate.

1.5. Research Questions

- i) What is the factor structure of co-curricular activities available to students in Kapenguria Division of West Pokot County?
- ii) How does students' participation in athletics influence their academic performance in Secondary schools in West Pokot County?
- iii) How does students' participation in soccer influence their academic performance in Secondary schools in West Pokot County?

- iv) What is the influence of participation in music on students' academic performance in public secondary schools in Kapenguria Division of West Pokot County?
- v) Is there any difference in students' academic performance between students participating in co-curricular activities and those who do not participate?

1.6 Scope of the Study

The academic scope of this study is curriculum studies and instruction delimited to co-curricular activities and particularly music, soccer and athletics. Consequently the findings of study were interpreted in relation to the co-curricular activities as opposed to the main curriculum. The geographical scope of the study was public secondary schools delimited to West Pokot County, and further narrowed down to Kapenguria Division.

1.7 Theoretical and Conceptual Framework

This section recognizes the ability of theories to identify potential variables that inform research, and which for quantitative studies such as the present study can help the researcher to conceptualize expected relationships. The section therefore examines theories underpinning the study, and the subsequent conceptual framework.

1.7.1 Theoretical Framework

The study was modeled on the theory of Astin's theory advanced by Astin, who holds that involvement refers to the investment of physical and psychological energy in various objects, this occurs along a continuum. Astin's theory was predicted on five basic assumptions:

Involvement refers to the investment of physical and psychological energy in various objects: Involvement occurs along a continuum; Involvement has both quantitative and qualitative features; the amount of student learning and personal development associated with any education program is directly proportional to the quality and quantity of student involvement in that program. The effectiveness of any educational policy or practice is directly related to the capacity or practice to increase student involvement (Streeter, 2011). Astin's theory presented a paradigm for viewing student participation in co-curriculum activities, stressing the concept of commitment and time.

When compared, capable students tend to be more participative in co-curricular activities than less capable ones. They do not have to worry as much that participation in co-curricular activities might take up their time and cause distraction and hence hinder their school work. They believe that they have more buffers with their academic results which allow them to participate more than those students who are struggling in studying (Ritchie, 2018). Besides, high performing students participate more in co-curricular activities because they believe that participation in such activities can enhance their credentials. They may also attempt to ingratiate themselves with the teachers sponsoring the specific activity as well as with other who might grade their course work or write letters of recommendation (Ritchie, 2018). These students seem to know well how the co-curricular activities can enhance learning effectiveness, credentials for schools, and future career prospects.

The strength of this theory is that, students' involvement has a positive impact on development and learning while; the weakness is that, it did not show the influence of

learners' participation in co-curricular activities on academic performance. However, the theory was used by Termit Kaur Singh in Pakistan, Kohat Division (2014), on academic achievements of secondary students; therefore, the findings of the research done reflected how negatively over-scheduled involvements affect the academic performance. The Theory postulates that the effects of any educational policy or practice are directly related to the practice to increase student involvement (Streeter, 2011). The theory was used to explain Independent variables as co-curricular activities such as soccer, athletics and music that would influence Dependent variable (academic performance), while, academic performance as dependent variable. If learners will be involved in co-curricular activities there would be either positive or negative results.

1.7.2 Conceptual Framework

Conceptual framework is a scheme of concepts which researcher will be operationalized in order to achieve set objective. In essence, it is a schematic manifestation of relationships posited in the theoretical review (Regoniel, 2015). The present study focused on the influence of learners' participation in co-curricular activities on student's academic performance in schools of West Pokot County as shown in figure 1 below. This procedure will involve first identification of background characteristics (gender and location), secondly; the learners' participation of co-curricular will be established and finally, academic performance will be correlated with the participation of co-curricular activities in order to establish the extent of influence of each factor on academic performance of students in Kapenguria Division of West Pokot County.

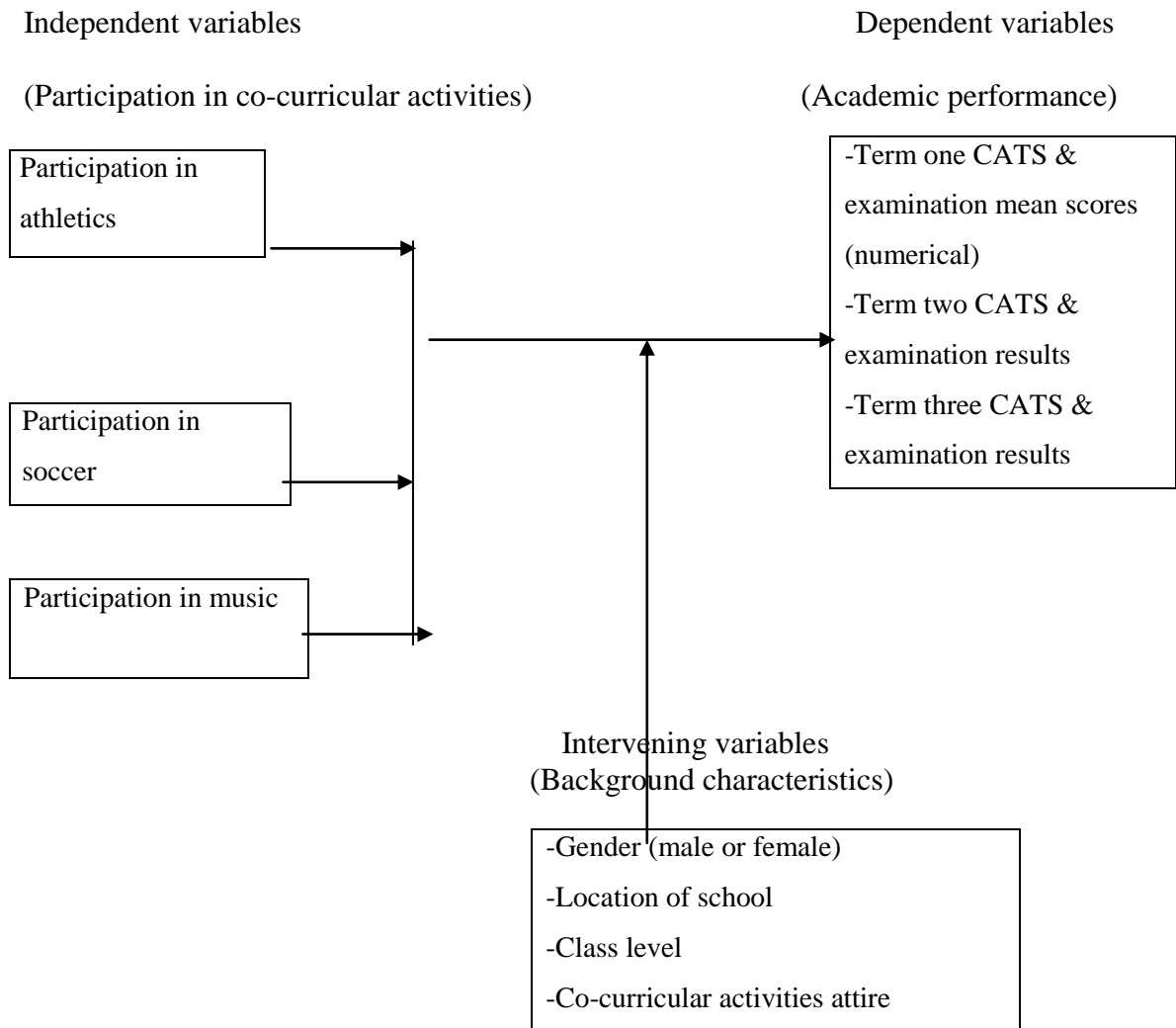


Figure1. Conceptual framework

In figure1, the conceptual framework depicts co-curricular activities as hypothesized to influence academic performance. Co-curricular activities were measured in terms of soccer, music and athletics that students may participate in, and academic performance can be defined as excellent, very good, good and poor. The study considered extraneous variables which will be held constant in the study to control them which are background characteristics as gender and location of schools which is hypothesized to affect co-curricular participation.

1.8 Significant of the Study

This study provides some information regarding the issue of co-curricular activities and whether they benefits or hinder the academic performance of students who participate. Also, research concerning the influence of co-curricular activities on academic performance should be compared to the perception of co-curricular activities outside school. This research will be useful in county in various offices like that of quality Assurance Officer (QASO), curriculum developers, and policy developers, school principals, and patrons of co-curricular activities, learners, teachers and parents.

1.9 Justification for the Study

The present study has the potential to help learners, teachers, parents, stakeholders, county government and national government to identify the influences of co-curricular participation on academic performance so as to improve on those areas with negative influences to be of good use to the consumer. In addition, a policy document will be developed to help co-curricular activities be integrated in the school syllabus.

1.10 Assumption of the Study

In this study, the following assumptions were made: a) all secondary students in Kenya are allowed to participate in at least one co-curricular activity in school without being coerced according to the Ministry of Education advice on co-curricular activities in schools, b) all learners have equal chance of participating in any co-curricular activity in the school, c) all the respondents will be willing and co-operative to provide reliable information. Questions pertaining on the result obtained from the study were deemed to be of good use to the principals of schools to identify factors

affecting students' performance and the result of the research carried out will be used by management in its planning purposes.

1.11 Operational Definition of Terms

In the study the key terms used are defined as follows:-

Co-curricular activities: co-curricular activities in the present study were operationalized as soccer, music, and athletics

Influence: the present study operationalized influence to mean the power co-curricular activities have on student's ability to elicit change in their academics.

Correlates: correlates were viewed as the interrelationships between the individual co-curricular activities and learner performance.

Academic Performance: The operational meaning for academic performance in the present study was scores students' achieved in CATs and end of term examinations for term one, term two and term three.

Learners: refers to Students who constitute the class, the person on whose behalf educational performance exist and operate

Participation: in the present study, participation was used to address students' involvement in co-curricular activities either in the school or outside school.

Public schools: schools that are found and run by the Government

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter report's findings of the general review of literature related to learner participation in co-curricular activities and academic performance, findings of literature on empirical studies showing effects of participation in co-curricular activities on academic performance. The review of literature focused on the following sections: the concept of co-curricular activities, definition and purpose of co-curricular activities, different types of co-curricular activities, importance of participation in co-curricular activities and co-curricular activities in Kenyan public secondary schools and distinction from extra-curricular activities.

The purpose of this review of literature is to explore past research conducted on co-curricular activities on effects of involvement in co-curricular activities on educational achievements of secondary schools, significance of learners' participation in co-curricular activities, evaluation of effectiveness of policy in developing talent among the youth in secondary schools, co-curricular activities and academic performance, social influence of co-curricular activities and academic performance, the relationship between athletics and academic performance, the relationship between participation in music and academic performance, and the relationship between soccer and education.

2.2.1 The Concept of Co-curricular Activities

Children's engagement in co-curricular activities competition is known to contribute to the developmental outcomes for health lifestyle, where children learn about

physical, social and cognitive skills (Choi, 2014). Engagement in physical activity is also recognized to contribute a range of positive outcomes, specifically physical and mental health, social wellbeing, cognitive and academic performance (Bailey *et al.*, 2013).

For young people to achieve such outcomes it is recognized that physical education in schools is an ideal vehicle to promote co-curricular activities due to its availability to all young people. Whilst teachers also have the opportunity to integrate this into the overall education process (Telford *et al.*, 2012). The associations found for participation in competitive sport and physical activity often yield multiple benefits. Bailey *et al.*, (2013) recognizes that such benefits are not autonomous, independent or disconnect, but instead reinforces each other.

Despite these recognized benefits, it remains a concern that within the schools the increased pressure to improve academic scores often lead to additional instructional time for subjects at the cost of time for being physically fit (Singh *et al.*, 2012). In agreement, Trudeau and Shepard (2008) stated that if we want to improve the academic achievement, physical fitness and health of our young people, we should not be limiting the time allocated to co-curricular activities.

According to Poh-Sun Seow and Gary (2014), co-curricular refers to activities, and learning experiences that complement, in some way, what students are learning in school, that is, experiences that are connected to or mirror the academic curriculum. Co-curricular activities are defined by their separation from academic courses. For example, they are ungraded do not allow students to earn academic credit, they may

take place outside of school or after regular schools hours, and they may be operated by outside organization. Co-curricular activities facilitate in the development of various domains such as intellectual development, emotional development, social development, moral development, and aesthetic development. Creativity, enthusiasm, and energetic, positive thinking are some of facets' of personality development and the outcomes of co-curricular activities.

2.2.2 Co-curricular Activities: Meaning, Definition, Examples, Importance, Benefits

Co-curricular activities definitions by leading education thinkers and others are: "Activities sponsored or organized by a school or college which are not part of the academic curriculum but are acknowledged to be an essential part of the life of an educational institution. Co-curricular activities include sports, school bands, student newspaper and others. They may also be classified as extracurricular, that is, activities carried on outside the regular course of study; activities outside the usual duties of a job, as extra class activities" (Bartkus, B.Nemelka, M. Nemalka, M & Gardner, 2012). "Co-curricular activities were mainly organized after school hours and so were the extracurricular but they are not an integral part of the activities of the school as its curricular work".

"Co-curricular activities may be defined as the activities undertaken to strengthen the classroom learning as well as other activities both inside and outside the classroom to develop the personality of the child" (Poh-Sun Seow & Gary, 2014). "Various social and other types of activities like literacy, drama, social service which attracted the attention of the child of the child were considered as extracurricular activities.

Extracurricular have been renamed by educationist as co-curricular which implies that all these activities are a part of school curriculum”(Mittal, as cited in Pakhwara, 2017).

Co-curricular activities (CCAs) earlier known as Extra-curricular activities (ECA) are the components of non-academic curriculum that helps to develop various facets of personality development of the learner. For all-round development of the learner, there is need of emotional, physical, spiritual and moral development that is complemented by Co-curricular Activities. Hence, co-curricular activities are defined as the activities that enable to supplement and complement the curricular or main syllabi activities. These are the important part of education institutions to develop the learners' personality as well as to strength the classroom learning. These activities are organized after school hours, so known as extra-curricular activities. Co-curricular activities have wide horizon to cater to the cultural, social, aesthetic development of the learner (Mittal, as cited in Pakhwara, 2017).

Examples and types of co-curricular activities are as follows: sports, music activities, debate, model, art, music drama, debate and discussion, declamation contest, story writing composition, essay writing competition, art craft, recitation competition, wall magazine decoration, writes ups for school magazine, folk dance, flower show, school decoration, sculpture making, fancy dress competition, preparation of chart and models, album making, photography, clay modeling, toy making, soap making, basket making, organization exhibitions, and celebration of festivals (Mittal, as cited in Pakhwara, 2017).

2.2.3 Role, Importance and Benefits of Co-curricular Activities in Student's life

Co-curricular activities are the true and practical experiences received by learners. The theoretical knowledge gets strengthened when a relevant co-curricular activity is organized related to the content being taught in the classroom. Intellectual aspects of personality are solely accomplished by classroom, while aesthetic development, character building, spiritual growth, physical growth, moral values, creativity, are supported by co-curricular activities. It helps to develop co-ordination, adjustment, speech fluency, extempore expressions, among learners at the school (Makarova & Reva, 2017).

Co-curricular has several importance and benefits to the learner: co-curricular activities stimulate playing, acting singing, recitation, and narrating in students; activities like participation in game debates, music, drama, help in achieving overall functioning of education; co-curricular activities enables the students to express themselves freely through debates; games and sports helps the learner to be fit and energetic; to the learners themselves it helps to develop the spirit of healthy competition; these activities guide students how to organize and present an activity, how to develop skills, how to co-operate and co-ordinate in different situations all these help in leadership qualities; co-curricular activities provides the avenues of socialization, self-identification and self-assessment when the learner come in contact with organizers, fellow participants, teachers people outside the school during cultural activity; it makes learners perfect in decision making; it develops a sense of belongingness; co-curricular activities provide motivation for learning, and develop the values like physical, psychological, ethical, academic, civic, social, aesthetic, cultural, recreation and disciplinary values (Burns, Jasinsinki, Dunn & Fletcher 2013).

2.2.4 Different Types of Co-curricular Activities

Co-curricular activities have been classified into two categories, that is, indoor and outdoor activities. Indoor co-curricular activities are as follows: dramatics; music and dance; drawing and painting; decoration; weaving; clay modeling; first aid; tailoring; rangoli; book binding; card board work; leather work; organizing school panchayat; student self government and art and craft, while outdoor co-curricular activities are as follows: mass parade; mass drill; yoga; athletics; bicycling; gardening; cricket; football; basketball; volleyball; kabadi; kho kho; hand ball; trips to place of geographical, historical, economic or cultural interest; mass prayer; morning assembly; excursions; social service in neighbourhood and valley survey (Singh & Mishra, 2014).

2.2.5 Co-curricular versus Extra-curricular Activities

Generally, co-curricular activities are the extension of the formal learning experiences in a course or academic programme, while extra-curricular activities may be offered or co-ordinated by school, but may not be explicitly connected to academic learning (Borg, as cited in Kelepolo, 2011). This distinction is extremely fuzzy in practice, however, and the terms are often used interchangeably. Athletics, for example, are typically considered to be extracurricular activities, while a science fair would be more likely to be considered a co-curricular activity, given the students are learning science, participation may be required by the school, students may be graded on their entries or a science teacher may coordinate the fair. still, in some schools certain athletics activities might be considered co-curricular while in other schools a science fair may be labeled extracurricular, this is the reason extracurricular has been named co-curricular activities (Beal, 2010).

2.2.6 Purpose of Co-curricular Activities

Debate surrounding co-curricular activities place in school should begin with their purpose. Everything done in public schools requires justification for why we do it. Different viewpoints related to the purpose of co-curricular activities, from proponents and critics, have shared in previous literature.

Kleese (as cited in Acquah & Anti, 2014), looked specifically at the purpose of co-curricular activities. One viewpoint Kleese conveyed was that student activities offer young people a place to try out their academic skills in an eclectic community-like environment. He also felt co-curricular activities were meant to challenge students to actively learn and solve problems that involve the real possibility of success or failure. This possibility of success or failure is free from the pressure of grades associated with classroom experiences. Kleese further stated co-curricular activities that represent a rich array of opportunities and experiences may be one of the reasons many students stay in school, and or find personal meaning for the time in their lives. Students must feel a purpose for attending school. Whether the purpose is truly academic or is co-curricular related.

Other authors shared a similar viewpoint. Eric Freitag (as cited in Mwaura, Mbugua & Kagema, 2017) applied the concept of attachment theory to support co-curricular activities in schools. He claimed students who participate in school-related activities have an enhanced attachment to and investment of in their schools. Charla Lewis (as cited in Mwaura, Mbugua & Kagema, 2017) indicated that participation in co-curricular activities is a useful and acutely appropriate vehicle for children to gain valuable academic and social experiences, as well as related strategies for overall

healthy psycho-social development. Although co-curricular activities are meant to support the academic purpose of schools, these same activities provide positive reinforcement for social and emotional aspects of schooling.

Critics of co-curricular activities claim schools need to focus their time and energy on academics. They believe co-curricular pursuits merely as a distraction to the academic role of schooling. This is commonly referred to as “zero-sum”, theory proposed by Coleman in 1960. The theory states there is only a finite amount of time for schools and students so academics and co-curricular are in competition with each other for students’ time. In the current society, there is more competition for students’ time than ever before. Application of zero-sum theory would indicate many students do not have the time necessary to complete academic work due to their demands. In schools today, there is a fine line between their academic and social mission. Kilrea (as cited in Hoffman et al., 2017) suggests that co-curricular activities strive to support both aspects.

2.2.7 Co-curricular Activities in Kenyan Public Secondary Schools

Although the Central and County Government of Kenya allocates money to co-curricular activities not much is seen to be going on in terms of student’s participation in co-curricular activities (Ministry of Education 2012). Most schools concentrate on academic work examined after four years in secondary school thus effectively locking out co-curricular activities –central component of the curriculum offered in our secondary schools. Each child has the capacity to succeed in schools and life although many, especially those from poor and monitory families, are exposed to risk by school practices that are based on a system of education that tend to glorify those who excel

academically while condemning students who fail in examinations thus relegating them to lower quality futures. This is unfair particularly given some of the so called “failures” are actually good in one form of co-curricular activity or the other, given opportunity.

While our education system in Kenya recognizes the central role of co-curricular activities in curriculum as attested by the 2003 co-curricular policy (Ogochi, 2011), it is not known how effective those activities are in influencing academic performance among students in Kapenguria Division of West Pokot County. Thus, research was carried out to investigate the influence of learners’ participation in co-curricular activities on academic performance in public secondary schools in Kapenguria division of West Pokot County. The researcher found out those co-curricular activities have positive effect on academic performance. The students take part in quite a number of other activities outside academic angle in Kenyan public secondary schools. Within the school there are clubs, movements, societies, and schemes. The students also take part in sporting activities and in Kenya music festivals.

There are numerous clubs in Kenyan schools which have improved over time having started with just a few. They are now fully in place and are well organized. The clubs include: Red Cross club, Aviation club, Junior Achievers club, law club, Aquaculture club, Straight Talk club, Wildlife club, Music, Computer, Mathematics, Home science, Young farmers association. The Red Cross club deals with the first-aiding, health, hygiene, nutrition, physical neatness and voluntary. The club is guided by seven principles; humility, independence, neutrality, impartiality, voluntarily, spirit, universality, and unity. Journalism club seeks to explore the potential students’ posses

in journalisms as a field. Its main vision is to attain the level of publishing a magazine and producing the finest journalist for our country. Law club aims at exercising and finding ways in which justice can be realized in our country. It also discusses and find solutions to problems in schools. Music club aims at exploring all talents and learn to accept the beauty of all forms of music in the country (Ogochi, 2011).

For the case of straight talk club, here matters affecting the society are handled by creating awareness on drug abuse, HIV/AIDS, marriage life, relationships; it also takes part in games and environment cleaning. Wildlife club take part in activities such as; visiting the game parks, tree planting, and going for nature walks. Home science club deals on every aspect of life such as: cookery, beadwork, sewing, and marking detergents, etiquette, good manners and good grooming. Debating club aims at improving students' public skill, acquiring different views from teenagers on the solutions to emerging issues such as FGM in the marginalized areas. Drama club is a group of dramatic students, it comprises of exceptional actors, actresses, script writers, producers and directors in the making. The scouts' movement is a unit that strives to improve the value one's emotional, intellectual, spiritual, and physical being. The ranger guides movement provides students with an opportunity to portray their talents share their experiences and learn more skills from each other. There are societies in Kenyan schools but major ones are the Adventist youth service, the Christian union, the young catholic society and the Muslim society (Kilrea, as cited in Hoffman et al., 2017).

Schemes are as follows; the Red Cross scheme and the presidents' award scheme. The Red Cross scheme main aim is to offer first aid to casualties in the school and also

teach about health, while the presidential' award scheme the members have to do voluntary services and display their skills as well as being physically fit to qualify to for expeditions which are fun and quit adventurous. Participants undergo three courses; the bronze, silver and gold standard. This is a disciplinary scheme where students acquire skills and in interact with many young people throughout the country.

2.3. The Concept of Academic Performance

Academic performance according to Mason (2017) is frequently defined in terms of performance in examinations. Academic achievement refer to what the student have learned or what skills the student has learned and usually measured through assessments like standardized tests, performance assessments portfolio assessment (Santrock, 2006).

Academic performance, which is measured by the examination results, is one of the major goals of a school. Hoyle (as cited in Ghanney & Aniagyei, 2014) argued that schools are established with the aim of imparting knowledge and skills to those who go through them and behind all this is the idea of enhancing good academic performance. Despite the attention paid to abroad definition of outcomes, however, academic performance remains central. Academic instruction is arguably the primary business of education, and it was poor performance that sprawled the recent era of reform after the publication of *A Nation at Risk* two decades ago (Ben-Ayed, Lahmar, & Kammoun, 2016).

Academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college and university. Schools mostly define cognitive goals that either apply across multiple subject areas, for example, critical thinking or include the acquisition of knowledge and understanding in a specific intellectual domain, for instance, numeracy, literacy, science, history. Therefore, academic achievement should be considered multifaceted construct that comprises different domains of learning (Marsh, & Shavelson, 2010).

Because of the field of academic achievement is very wide-ranging and covers a broad variety of educational outcomes, the definition of academic achievement depends on the indicators used to measure it. Among the many criteria that indicate academic achievement, there are very general indicators such as procedural and declarative knowledge acquired in an educational system, more curricular-based criteria such as grades or performance on an educational achievement test, and cumulative indicators of academic achievement such as educational degrees and certificates. All criteria have in common that they represent intellectual endeavors and thus, more or less, mirror the intellectual capacity of a person. In developed societies, academic achievements play an important role in every person's life. Nelson and Gordon-Larsen, (2006), Academic achievement as measured by the GPA (grade point average) or by standardized assessments designed for selection purpose such as the SAT (Scholastic Assessment Test) determines whether a student will have an opportunity to continue his or her education , for example to attend a university. Therefore, academic achievements defines whether one can take part in higher

education, based on the educational degrees one attains, influences one's vocational career after education.

Besides the relevance for an individual, academic achievement is of utmost importance for the wealth of a nation and its prosperity. The strong association between a society's level of academic achievement and positive socioeconomic development is one reason for conducting international studies on academic achievement, such as PISA (Program for International Student Assessment), administered by the OECD (Organization for Economic Co-operation and Development). The results of these studies provide information about different indicators of a nation's achievement; such information is used to analyze the strengths and weakness of a nation's educational system and to guide educational policy decisions. When people hear the term academic performance they often think of a person's GPA. However, several factors indicate a student's academic success. While some may not graduate top of their class, they may hold leadership positions in several student groups score high on standardized tests such as the SAT (Telford *et al.*, 2012).

2.3.1 Factors Affecting Academic Performance of Students

A number of studies have been carried out to identify and analyze the numerous factors that affect academic performance in various centres of learning. Their findings identify students' effort, previous schooling (Mushtaq2012), parents' education, family income (Raychaudhuri, Debnath, Sen & Majumder, 2010), self motivation, age of student, learning preferences (Aripin, Hahmood, Rohaizad, Yeop, & Anuar, 2008), class attendance and entry qualifications (Roberts, K. L., & Sampson, (2011), as

factors that have significant effect on students' academic performance in various settings.

A good match between students' learning preferences and instructor's teaching style has been demonstrated to have positive effect on student's performance (Harb & El-Sharawi, 2006). According to Wan shaaidi, wan raihan. (2012), learning preference refers to a person's natural, habitual and preferred way of assimilating new information. This implies that individual differ in regard to what mode of instruction or study is most effective for them. Scholars, who promote the learning preferences approach to learning agree that effective instruction can only be under if learner's learning preferences are diagnosed and instruction is, tailored accordingly (Pashler, McDaniel, Rohrer, & Bjork, 2008). Felder (as cited in Bahar, 2009) established that alignment between students' learning preferences and an instructor's teaching style leads to better recall and understanding.

Neil Flemming (2001-2011) described four major learning preferences as follows:

Visual learners: students who prefer information to be presented on the board, flip charts, walls, graphics, pictures, colours. Probably creative and may use different colours and diagrams in their notebooks.

Aural (or oral)/ auditory learners: Prefer to sit back and listen. Do not make a lot of notes. May find it useful to record lectures for later playbacks and reference.

Read/write learners: prefer to read the information for themselves and take a lot of notes. These learners benefit from the given access to additional relevant information through handout and guided readings.

Kinesthetic (or tactile) learners: these learners cannot sit still for long and like to fiddle with things. Prefer to be actively involved in their learning and thus would benefit from active learning strategies in class.

Romer, (as cited in Guleker & Keci, 2014)) is one of the first few authors to explore the relationship between student attendance and examination performance. the major reason given by students for non-attendance include assessment pressure, poor delivery of lectures, timing of lectures, and work commitments (Newman-Ford, Lliy & Thomas, 2009). Research on this subject seems to provide a consensus that students who miss classes perform poorly compared to those who attend classes (Arulampalam, Naylor & Smith, 2008; Thatcher et al., 2009). Based on these findings a number of stakeholders have called for mandatory class attendance

Another factor that affects academic performance is entry qualifications and prerequisites. For number of institutions, students' admission is based on a number of different qualifications to the extent that students receiving instruction in the same course differ widely in terms of their prior knowledge. Learning is a cumulative process, thus a student recruited with higher entry requirements will be well prepared for the course material compared to a student admitted based on the bare minimum qualifications.

The influence of age and gender on academic performance, research has shown that men perform better than women in certain settings while women outperform men in other settings (Gibb, Fergusson, & Horwood, 2008). Mature students are thought to lack basic skills required for effective study or to be impaired by age-related

intellectual deficits. Mature students tend to be admitted into their programs with distinctly lower educational attainment than the young students (Newman-Ford, Llyod & Thomas, 2009). However, when compared to the younger students, the academic performance of mature students is as good, if not better (Gibb, Fergusson, & Horwood, 2008).

2.3.2 Performance determinants in Kenyan schools

Kenyan schools are organization with defined rules and procedures that determine the degree of activities and behavior of each learner (Mbithi, as cited in Yara & Wanjohi, 2011)) schools are in the sense factories in which raw children are shaped and finished to meet the various demands of life. The system of education in Kenya is highly selective even in primary level. Advancement is solely based on students' performance in examinations. Examinations are used above all to identify and define those adjudged suitable to proceed to the next stage of education.

Success in educational institution is measured by the performance of students in external examinations. Examinations are used to among others to measure the level of candidates' achievement and clarify the candidates' level of education, training and employment. They also provide the basis for evaluating the curriculum both at local and national level. Examinations can when properly, improve the quality teaching and learning and because of this reason when Kenya Certificate of Secondary Education (KCSE) results are released the feedback is sent to schools through a report indicating not only how students have performed but also what teachers and students should do to improve on future examinations (Mbithi, as cited in Yara & Wanjohi, 2011).

2.4 Review of Related Literature

2.4.1 Over-Involvement in Co-curricular and Academic Achievements

The purpose of this research was to examine effects of over-scheduled involvement in co-curricular activities on the educational attainment of students at secondary school level in Kohat division carried out by Suleiman (2014). The study was experimental in nature and therefore, pre-test-post-test equivalent Groups design was used. The students of experimental group were involved in co-curricular for 40 minutes in school and 2 hours after school time. The students of the control group were involved for 40 minutes in school only. Data was collected through pre-test and post-test technique. Data was analyzed using the statistical tools, that is, mean, standard deviation, and test. When the research was carried out its findings indicated that there were significant negative effects of over-scheduled involvement in co-curricular activities on the educational attainment of students at secondary school level.

In the research there was no element of influence of learners participation in co-curricular activities on academic performance but it dealt on over-scheduled involvement in co-curricular activities therefore, a research need to be carried out in Kapenguria Division of West Pokot County to investigate influence of participation in co-curricular activities on academic performance.

2.4.2 Learners' Participation in Co-curricular Activities in South Africa

A research carried out by Kariyana, Maphosa and Mapuranga in Walter Sisulu University (2013) which sought to establish learners' views on the significance of their participation in school co-curricular. A quantitative-cum-qualitative descriptive

survey design was used. Data were solicited from learners in both private and public schools in one educational district in South Africa.

A convenient sample of 200 learners participated in the study. A semi-structured questionnaire was used to collect both quantitative and qualitative data. Quantitative data were analyzed with the help of the SPSS statistical software package version 21 and presented through a blend of both descriptive and inferential statistics. Qualitative data were analyzed using content analysis method and presented through verbatim quotation of respondents. The study found that learners were agreeable on importance of participating in co-curricular activities and that skill and values taught in co-curricular were important for academic success. The study concludes that co-curricular activities were viewed as important components of the curriculum.

In the research conducted, learners were agreeable on importance of co-curricular activities but it did not indicate how each co-curricular activities undertaken influence academic performance at their schools. This research considered only the views of learners' on the significance of their participation in school co-curricular activities. Hence, this is the reason a research was carried out in Kapenguria Division of West Pokot County to investigate influence of learners' participation in school co-curricular activities on academic performance.

2.4.3 Effectiveness of Co-curricular Policy in Development Talent

This is a research carried out by Ogongo and Thinguri, school of education Maasai Mara University (2013). The purpose of the study was to investigate on how to expose teachers to structural training in order to empower them with necessary skills and techniques to develop talent among the youth under their watch.

The researchers indicated that many school-going children are placed at risk by school practices that are based on a system of education which tend to glorify those who excel academically while condemning students who fail in examinations and therefore regarding them to be of lower quality. The study sought to evaluate the effectiveness of co-curricular policy in developing talent among the youth in secondary schools in Transmara West Sub-county, Kenya. The objectives of the study included to assess the training needs of head teachers, games teachers, club patrons and coaches in areas of skills shortage identified. The study adopted a mixed methodology with naturalistic and participant-oriented research design. From a population of 4202, the researchers used the stratified sampling technique to sample 9 head teachers, 90 teachers and 270 students from the 9 schools sampled with each providing 30 students for the study thus making a sample of 369 respondents. Data was analyzed using Microsoft excel and SPSS programme. Descriptive and inferential statistics were used. The findings revealed that there was inadequate time allocated for co-curricular activities and that most schools did not take co-curricular activities seriously. Most respondents were not aware about the co-curricular order to empower them with the necessary skills and techniques needed to develop talent among the youth under their watch.

In the research above it investigated on talent among the youths, but, there was no indication of how co-curricular activities participation influence academic performance of learners, therefore, this is the reason why a research was carried out in Kapenguria Division of West Pokot County to investigate the influence of learners' participation in school co-curricular activities on academic performance.

2.4.5 Co-curricular Activities and Academic Performance

Studies have been conducted concerning the relationship between co-curricular activities and academic performance. When looking at the variety of out-school options students may choose, it is important to consider how connecting with an activity might benefit them. It has been suggested by Eccles (as cited in Akos, 2006), that participation in voluntary, co-curricular activities increase school participation and achievement. This happens because it facilitates: a) the acquisition of interpersonal skills and positive social norms, b) membership in pro-social peer groups, and c) stronger emotional and social connections to one's school. Co-curricular activities may contribute to an increase of wellness in mental health, improved student engagement in school and achievement. Strengthen their long-term educational outcomes and find that participation may decrease problem behaviors.

It is important to understand that participation in co-curricular physical activities may influence the mental well-being of young people by reducing stress, keeping fit and feeling overall better about their appearance (Biddle, & Asare, 2011). Those who were involved in these activities reported significantly higher self-perceptions compared to those who did not participate. It might also be suggested that participation can give adolescents confidence about their physical and perhaps social selves.

Participation in structured co-curricular activities promotes not only academic achievement but also personal and social development. According to Morinaj et al. (2017), participation in school's music program lessened students' feelings of alienation, promoted individual growth and provided a common bond between home

and school. It can provide adolescent with a social network and support system that is associated with their schools (Aritzeta *et al.*, 2016).

Rees & Sabia (2010) Suggested that participation in athletics is related to the following positive academic outcomes including higher grade point average, fewer disciplinary referrals, lower absentee rates, decrease in dropout rates, stronger commitment to the school, liking schools better, being in the academic tract coursework, taking more demanding coursework, more likely to attend college full time and graduate holding higher aspiration for attending college. These positive effects are not just from participating in athletics but also from joining other activities as well.

Reeves (2008) determined that parents and teachers might fear students may lose their focus on academics when they become too busy with out-of-school activities. When students get overscheduled, they might be spreading themselves too thin, which may lead to spending less time studying and preparing for class. Some athletes may have life-long injuries that occur when they are participating in sports. This is another potential negative effect of participation in co-curricular activities.

2.4.6 Social Influence of Co-curricular Activities and Academic Performance

Studies conducted indicate that co-curricular activities do, in fact promote academic performance in students. However, are the co-curricular activities themselves, regardless of outside or social influences, responsible for this impact on academic performance? Guest and Schneider (as cited in Acquah & Anti Partey, 2014) conducted research on what influence various social factors had on the relationship

between co-curricular activities and academic performance. They found that most of studies previously conducted on the relationship between two factors had not taken into account the meaning that participation in co-curricular activities (held) for individual participation within distinct social contents. They believed that every school and community assigned certain values to various activities, putting more importance on some over others. According to Guest and Schneird, the value that is placed on each activity affects the relationship between that specific activity and academic performance.

Guest and Schneider (as cited in Acquah & Anti Partey, 2014) conclude that there are three factors which influence this relationship. They posit that these factors are the “what”, the “where” and the “when”. The “what” suggests that “the type of participation or activity undertaken influences developmental outcomes”. The “where” suggest “that the school and community context in which co-curricular activity takes place matters”. Finally, the “when” suggests “that the developmental and historical context in which co-curricular participation takes place influences both how it is valued and its effects on subsequent. All the three factors work together to influence the relationship between participation in co-curricular activities and academic performance, because each one places a different value both on activities and academics.

2.4.7 Formal Versus Informal Co-curricular Activities

Some researchers have divided co-curricular activities into informal and formal activities. The formal activities include activities which are relatively structured, such as participating in athletics or learning to play a musical instrument. Informal activities, on the other hand, also known as leisure activities, include less structured

activities, such as watching television. Guest and Schneider (as cited in Acquah & Anti Partey, 2014) suggest that formal and informal activity setting have different influences on motivation and feelings of competence, two factors which influence academic performance. More time in leisure activities is related to poorer academic grades, poorer work habits, and poorer emotional adjustment, while more time in structured groups and less time watching TV were associated with higher test scores and school grades (Marsh & Kleiman, as cited in Sharif, Wills & Sargent, 2010).

Besides, Guest & Schneider in their study, found that, the type of participation or activity undertaken influences development outcomes. This involves the “what” factor and this is the concern of this research thesis.

2.4.8 The Relationship between Athletics and Academic Performance

The impact that athletics has on academic performance has been debated over years—some say the impacts is positive, while others say it is negative. Early analysis of the effect of participation in sports on academic achievement produced inconsistent evidence (Singh, 2017) even today, there is inconsistency evidence, but most research tend to lean toward the idea that participation in athletics does not, in fact, improve academic performance. The result of one particular study indicated that, with the exception of a few subgroups and outcomes, participation in sports is generally unrelated to educational achievement. Broh (as cited in Singh, 2017) further argues that playing sports in high school has no significant effects on grades or standardized test scores in the general student population Although this particular study produced a negative relationship between sports and academic performance, many demonstrate a positive relationship. Broh believes that Participating in interscholastic sports

promotes students' development and social ties among students, parents, schools, and these benefits explain the positive effects of participation on achievement.

Compared to other co-curricular activities, however, athletics does not appear to produce a strong positive correlation. Kariyana, Maphosa, and Mapuranga (2012) found out that students who did not participate in any co-curricular activities showed the poorest adjustment as far as grades, attitude toward school, academic aspirations, while non-sport co-curricular activities showed the most positive adjustment, with sports related co-curricular in the middle. Guest and Schneider (as cited in Acquah & Anti Partey, 2014) reported similar results, saying, in all schools, participating in non-sports co-curricular activities has a stronger association with being seen as good student than does participation in sports.

Studies has shown that participation has a positive impact on learning and development although some students still stumble academically, parents still continue see athletics as a positive involvement for their children (Bonfiglio, 2011). Athletics involvement promotes more efficient use of time and higher motivation to excel at different school endeavours (Tublitz, 2007). Five top factors as to why parents chose to enroll their children in sports are: enhancing school identity, attracting community support, decreasing racial prejudice, promoting physical fitness and wholesome participation, and increase revenue. Through sports involvement these athletes get to meet new people from different backgrounds, become involved with their community, and create a sense of pride for their school, and lead physically acceptable lifestyles (Tublitz, 2007).

2.4.9 The Relationship between Participation in Music and Academic Performance

Studies reflect a strong positive relationship between participating in music and academic performance. Cabanac *et al.* (2013) suggested that music should be considered as fundamental to the curriculum as mathematics and reading. Intolubbechmil (2015). holds a similar view, believing that, Music can influence learning in core subjects as well as contribute to the attainment of core goals in learning. This gives the impression that music plays an important role in academic performance. Evaluation on the effects that music performance has on children's academic performance and thinking abilities, showed that, instrumental music training uniquely enhances the higher brain functions required for mathematics, science, and engineering (Cabanac *et al.*, 2013).

Confirming the belief that the relationship between music and academic performance is positive, researchers have found that instruction actually enhances student achievement in areas outside music (Elpus, 2013). It is believed that music develops critical thinking skills and improves skills in reading, writing and mathematics. Music develops and improves spatial intelligence, which transfers to high-level mathematics and science. It develops perceptual skills necessary in many academic areas (Elpus, 2013). According to this study, music has a strong influence, because it produces and develops skills needed for many academic processes.

According to Annete, (2006) music affects the rate of language learning amongst students. Background music has little effect on the amount of words learnt after a week. Music did not have any negative effects on language learning it has a positive

effect. Music and musical instruments can be used for therapeutic purposes rather than aesthetic ones. It is believed that music training is a very potential instrument since it finds its way into the inward places of the soul (Bancroft, as cited in Mashayekh, & Hashemi, (2011).

Music lessons enhance the links between the brain neurons and thus build new spatial reasoning says psychologists Francis Rauscher at the University of California – Irvine. Music study facilitates higher brain functions required for reading, mathematics, chess, science and engineering. Music helps to enhance the creative skills of an individual (Adalarasu *et al*, 2011). The research proved that music affects the body and the mind. It positively influences the hormones and enhances concentration, enabling the brain to store more amount of information in very short span of time, thus helping to boost the cognitive skills. Studies show that silence between the two music notes triggers the brain cells and also the neurons that are responsible for the development of sharper brains.

According to Gur (2009), children taking music lessons showed improvement on the general memory skills such as literacy, verbal memory, visual spatial processing, mathematics and intelligent quotient (IQ) as compared to those children who did not take music lessons. According to Watter *et al.*, (2009) music training improves school performance. He found that students who study music have overall higher grades in every aspect except for sports. It was also found that students who did not study music received comparatively lower grades. Since studying music involves a lot of repetition and memorization, this activity in the brain may be transferred to the ability to memorize the information in school and thus receive higher grades.

2.4.10 Relationship between Soccer and Academic Performance

Soccer (aka football) is more than just a fun, popular, international sport. Soccer plays a role in international development by funding global education, effecting positive social change and renewable energy (Serrano *et al.*, 2017). According to Serrano and colleagues, soccer is unique in that it crosses all geographical, ethnic and religious boundaries. While everyone on this planet knows of, plays or has watched others play football, aside from goals scored and long standing team rivalries, rarely do we hear about the more important value and ability for this and other sports to effect social change.

Soccer engage people, foster teamwork, release endorphins and teach young people important life lessons about hard work, dedication and relying on others. Soccer helps to keep kids off the street and away from drugs and violence. With traditional forms of foreign assistance falling short, education and the answer seems to be soccer. The United Nations had recently asked FIFA to institute a 0.4 percent educational tax on broadcasting and sponsorship revenues from the 2010 world Cup as well as the five European leagues until 2015. The tax would generate an estimated \$48 million per year until the World Cup of 2014 and could help give 2 million children access to basic education. The impact this kind of funding had was crucial, especially in a time when traditional sources of funding were stagnating and even declining (2007) according to studies by the organization for economic operation and Development (OECD).

This related literature did not show the relationship between participation in soccer and academic performance but it only concentrated on the importance of participating

in soccer and the general education this is why it was important to undertake research in Kapenguria Division of West Pokot on soccer and its influence on academic performance

2.5 Summary of Literature Review and Knowledge Gap

The review of literature clearly indicates that studies are attempted on benefits of ECA, types of ECA, definition of academic performance, importance of co-curricular activities students' involvement in co-curricular activities, co-curricular activities and academic performance, significance of learners' participation in co-curricular activities, social influence of co-curricular activities. A close look at literature reviewed show that good numbers of studies are found on benefits of co-curricular activities and the influence of co-curricular activities improves academic achievement leaving out the concept of influence of learners' participation in co-curricular activities on academic performance in public secondary schools in Kapenguria Division of West Pokot County.

Studies were conducted on attitude of children towards co-curricular activities differs according to age group, gender, family socio economic background (Manzoor, 2017). Participation in co-curricular activities provide an opportunity to make a positive, voluntary connection to school, and this may lead to acquire new skills, strengths or develop particular attitudes (Walter, Calpan & Elvin, 2006). These studies focused that the students involved in co-curricular were likely to develop self confidence, social competence, leadership, student co-operation and involvement in co-curricular activities, the knowledge gap here is that it has not investigated the influence of

learners' participation in co-curricular activities on academic performance in public secondary schools in Kapenguria Division of West Pokot County.

According to the literature review, attempt is needed to make co-curricular activities an integral part of our students' holistic education. This study examined the extent to which participating in co-curricular activities influence academic performance in schools in Kapenguria Division of West Pokot County. Influence of learners' participation in co-curricular activities on academic performance is the focus of research and less attention has been paid to how well co-curricular activities influence academic performance in school life and how this affect their outlook on schooling and the future. Researchers like Alva Soumya (2008) and Susan (2010) found the issues of students' participation with school co-curricular but on the academic performance

Schools in Kapenguria Division of West Pokot County participate in; music, soccer and athletics have not been researched very well to find out its influence on academic performance, because we find out that those schools performing very well in those co-curricular activities are very few and still perform equally well on academics like those other schools that do not participate on co-curricular activities. We also have those schools that perform poor in academics and co-curricular activities. My research will focus on investigating that disparity in co-curricular activities participation and academic performance in schools of West Pokot County.

On the study on an evaluation of the effectiveness of co-curricular policy in development talent among the youth in secondary schools in Transmara West Sub

county, Kenya, the study included to assess the training needs of head teachers, games teachers and coaches in areas of skills but did not take into consideration the influence of learners' participation in co-curriculum activities on academic performance in secondary schools which the searcher intend to investigate in West Pokot County. Furthermore, the research carried out in Walter Sisulu University (2013) by Kariyana, Maphosa and Mapuranga was on learners' views on the significance of their participation in school co-curricular. This was only about the views and perception of the learners leaving out the aspect of influence of learners' participation in co-curriculum on academic performance which the researcher intends to investigate in West Pokot County.

Another research that was carried out was in Kohat Division, Pakistan which was on effects of over-scheduled involvement on academic achievements of secondary schools. This research was much on time spent on co-curricular activities without taking into consideration time spent on other subjects that are being taught at secondary schools, therefore, there was a gap of influence of learners' participation in co-curriculum activities on academic performance in public secondary schools in Kapenguria Division of West Pokot County. This is the reason the research was carried out.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter reports on the location where the study was conducted, the study design adopted, the target population and sampling scheme, key instruments used in data collection, validity and reliability of the instruments, data analysis techniques and ethical considerations that were adhered to in conducting the study.

3.2 Study Location

The study was conducted in public secondary schools in Kapenguria division of West Pokot County. Kapenguria division is one of the nine divisions of West Pokot County. It has its headquarters in Kapenguria town. The total population of the division is 125,114, out of which 20698 is urban population (KNBS, 2010).

Kapenguria division was chosen for study because being located in Rift Valley it has and continues to produce athletes like Tegla Loroupe one of the famous Kenyan female athlete and Lonah Chemtai who is Kenya Israel Olympic marathon runner who have become role models to the youth and for that reason it provided an ideal location for investigation.

3.3 Research Design

This study focused not only on analytic participation in co-curricular activities as it affects academic performance but also on a holistic understanding of key roles co-curricular activity teachers play in mentoring students participation in physical activities. For this reason, both quantitative and qualitative data were used. The study

therefore adapted the concurrent mixed methods design that sought to process quantitative and qualitative data separately, but conduct interpretation of their results concurrently. The mixed methods design was preferred since according to Newman and Benz (1998, cited in Creswell, 2006), “the situation today is less quantitative versus qualitative but more of how research practices lie somewhere on a continuum between the two”.

3.4 Target Population

The study targeted all students, co-curricular teachers and Principals in public secondary schools in Kapenguria division of west Pokot County. Records from County Education office reveal that there are a total of 20 public secondary schools in the division, with a student population of 11,300 and a total of 60 co-curricular teachers and 20 Principals (as at March, 2016). Consequently, the study population was made up of 11,300 students, 60 co-curricular teachers, and 20 Principals as summarized in Table 3.1.

Table 3.1: Study Population

Category of respondent	Number in division
Students	11,300
Co-curricular teachers	60
Principals	20

Source: County Education office (Kapenguria division, March, 2016)

3.5 Sampling Scheme

The sampling scheme comprised of two categories. First the sample size was calculated using the Degu and Yigzaw’s sample size formula. Two sampling procedures were then employed to select the study sample/

3.5.1 Sample Size

The sample size for the proposed study was derived using the following formula suggested by Degu and Yigzaw (2006).

$$n = \frac{z^2 p(1-p)}{w^2}$$

Where n= number of respondents to include

p=required proportion

w= margin of error allowable

z=level of confidence

Thus for the proposed study, and assuming a proportion of 0.5 of successes, a margin of error of 5% and a 90% Confidence Interval,

$$n = \frac{1.64^2 \times (0.5)(0.5)}{(0.05)^2}$$

$$= 268.96$$

$$\approx 270$$

A sample of 270 individuals comprising of 250 students, 15 co-curricular teachers, and 5 principals was therefore settled upon.

3.5.2 Sampling Procedure

Two sampling techniques informed the selection of the required sample. First, respondents were stratified proportionately according to whether they were students, co-curricular teachers or principals (Table 3.2).

Table 3.2: Stratification

Category	Number in Population	Sample size
Students	11,300	250
Co-curricular teachers	60	15
Principals	20	5

Simple random sampling technique was then used to select the required 250 students from the 11,300; 15 co-curricular teachers from the 60 co-curricular teachers; and the 5 principals from the 20 Principals. The approach used random number generation.

3.6 Data Collection Instruments

Primary data was the main nature of data used in the current study. Three main tools were used to collect data. These included; questionnaire for students, questionnaire for co-curricular teachers and principal's interview schedule.

3.6.1 Questionnaire for Students

A student's questionnaire was designed to contain six sections. The first section was used to collect information pertaining to the background characteristics of students. This information was deemed necessary so as to help identify some factors that may contribute extraneous effects to the conceptualized influence of participation in co-curricular activities and academic performance. The second section collected information pertaining to various co-curricular activities on offer in public secondary schools in the division. The information was used to give a pointer towards dominant co-curricular activities students participated in.

The third, fourth and fifth sections sought information regarding current status of participation in athletics, soccer and music among public secondary school students in the division. The intention was to determine how active students were in these activities as a precursor to their academic performance. Items were measured on a 5-point likert scale. The sixth section sought information regarding students' academic performance measured using cumulative numeric scores of term one, term two, and term three cat and exam marks (see Appendix B)..

3.6.2 Co-curricular Activity Teachers' Questionnaire

The co-curricular teacher's questionnaire (Appendix D) had two sections. The first section sought background information concerning teacher's qualification, gender, and experience in conducting co-curricular activities. Teachers background characteristics were thought to have some influence on how they conduct co-curricular activities and hence it was necessary to examine their distribution among the teachers in the study sample. The second section comprised of seven closed ended and two open ended items. The items sought teachers' views on organization of co-curricular activities in their respective schools. Use of open ended questions provided respondents with a wide latitude of expressing themselves.

3.6.3 Principals' Interview Schedule

The Principals interview schedule (Appendix C) consisted of ten items seeking incisive opinions from Principals regarding general organization and conducting of co-curricular activities in their respective schools. Choice of Principals as key informants was based on the fact that being school managers; they held the final say in decisions concerning co-curricular activities. Consequently, their in-put was considered vital in investigating the influence of participation in co-curricular activities on academic performance.

3.7 Validity and Reliability

Validity and reliability are reported to be important considerations with regards to the extent to which results from the instrument permit researchers to draw warranted conclusions about the characteristics of the individuals studied (Konradsen, Kirkevold, & Olson, 2013). Consequently, the instruments were checked for both internal and external validity as well as for reliability of the items.

3.7.1 Validity

Three forms of validity were conducted on the instruments of the proposed study. Face validity used to examine the appearance of both the student and co-curricular teacher questionnaire and the Principals' interview schedules. The researcher with assistance of the supervisors ensured that items were legible and systematically arranged. Content validity was necessitated by the desire to establish the extent to which the measures adequately represented all facets of participation in co-curricular activities and academic performance. Expert reviews of instruments using objectives and specifications were sought from supervisors and other sporting experts in order to achieve high levels of content coverage. Key areas requiring grammatical correction among others were pointed out and addressed. Criterion validity was conducted to ascertain the extent to which items suggested under each construct were able to predict perception concurrent or future (predictive). It was revealed that indeed items were suitable for the criterion variable under study (academic performance).

3.7.2 Reliability

The questionnaire incorporated mainly closed ended questions to facilitate proper capturing and analysis of the study variables. The reliability of the questionnaire scales was achieved by computing Cronbach's alpha coefficients on data collected through piloting of the developed questionnaire among 15 students and 6 teachers drawn from public secondary schools in the neighbouring Kongelai division. This division was chosen for piloting owing to the fact that it is from the same county and has public secondary schools whose students also participate in co-curricular activities. Results indicate that all reliability coefficients of the measurement scales were above 0.7, showing that they were reliable (see Table 3.3).

Table 3.3: Reliability Coefficients

Scale	Number of items	Reliability coefficient
Participation in co-curricular activities	15	0.724
Participation in Athletics	10	0.747
Participation in soccer	12	0.785
Participation in music	9	0.805

Source: Survey data (2016)

3.8 Data Analysis

Data were analyzed using descriptive statistics for all continuous and categorical data. Coded data were entered into the statistical package for social science (SPSS) ver 20 which was then used to screen and clean data for missing values and outliers. Inferential statistics and particularly regression analyses were used to ascertain the influence of learners' participation in co-curricular activities on their academic performance.

Thematic analysis was used to explore co-curricular teachers and Principals perceptions regarding existing frameworks for planning and organization of co-curricular activities in public secondary schools in the division as well as in capturing their recommendations on what ought to be. Thematic analysis was preferred due to its ability to allow for an examination of prominent, recurrent themes across and within respondents (Seidman, 2013). Besides, it allowed for processing of data inductively as opposed to deductively. Recurrent themes and sub-themes arising from respondents were presented in form of thematic matrices.

3.9 Ethical Considerations

The study was undertaken in consideration of ethical issues in social science inquiry. The process of collecting, analyzing and interpreting data was done in a way that

respected the rights of participants. Specifically, prior to data collection, an introductory letter was prepared for purposes of seeking informed consent from respondents to take part in the study. Details revealing the purpose of the study and guarantee of anonymity and confidentiality were included in the letter. All research assistants were required to show the letter to potential respondents when soliciting participation in the study.

As was indicated in the introductory letter, the right of anonymity and confidentiality was guaranteed. This included the assurance that the study was only for academic purposes and not for circulation to other parties. Anonymity was assured by concealing respondent's identities and also ensuring that the information collected was not linked to the respondent. Consequently, the respondent's name was not required. Confidentiality was assured by the researcher taking responsibility to protect all data gathered within the scope of the study.

Finally the study ensured that the respondent's right to privacy was guaranteed. This is the freedom of an individual to determine the time, extent and circumstances under which the private information should be shared with or withheld from others. The students, co-curricular teachers and Principals' were interviewed at their own convenient times.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter presents results of data analysis as described hereafter. First, the response rate to questionnaires and interviews was determined. This was then followed with an analysis of respondents' background information. Descriptive statistics (means and standard deviations) were used to analyze the structured sections of students' and co-curricular teachers' questionnaire. Thematic analysis was on the other hand used to analyze the unstructured sections of co-curricular teacher questionnaire and principals responses to the interview schedule. Factor analysis was used to identify factor structure of common co-curricular activities that students in the study area engage in. Multiple regression analysis was used to establish causal relationships between participation in co-curricular activities and academic performance.

4.2 Response Rate

Data for compilation of this study were collected from students, teachers charged with co-curricular responsibilities, and principals drawn from five public secondary schools in Kapenguria division of West Pokot County. Out of an expected sample size of 270 made up of 250 students, 15 co-curricular teachers and 5 principals, 94.4% (237 students, 13 co-curricular teachers and 5 principals) participated. This was an impressive response rate (see table 4.1).

Table 4.1: Participants Response Rate in the Study

Nature of respondent	Expected number	Actual number	Percentage of actual respondents
Students	250	237	94.8%
Co-curricular teachers	15	13	86.7%
Principals	5	5	100%
Total	270	255	94.4%

Source: Survey Data (2016)

The 237 student questionnaires, 13 co-curricular teachers' questionnaires and 5 principals' interview schedules were coded, edited and processed for data analysis.

4.3 Respondents General Information

Respondents general information was first analyzed for student respondents followed with co-curricular teacher respondents.

4.3.1 Students Demographic Information

Analysis of students' demographic information focused on student gender, age bracket, class and participation in co-curricular activities. These were considered fundamental to interpreting and discussing participation in co-curricular activities in public secondary schools. Indeed it can be observed that most public secondary school sporting competitions are pegged on age limits. Besides, students preparing for exams hardly want to engage in co-curricular activities.

Results presented in Table 4.2 reveal that a majority of students (63.3%) were male. This is consistent with the many boy schools found in the county. Age distribution shows that most of the students were aged between 15 years to 17 years (68.8%). This again reflects the average age of secondary school going students. It can be argued that most students attending secondary school in Kapenguria division are boys.

With regards to class distribution, it was revealed that most students were drawn from Form 3 (44.7%) and form 2 (28.7%). Form 4 students represented only 19.8% while form 1 students were a mere 6.8%. These results on class distribution are consistent with the true position on the ground in most public secondary schools. Form 1 students hardly get an opportunity to participate in co-curricular activities while form

4 students usually concern themselves more with preparation for exams. The participation in co-curricular activities revealed that from the study sample, a majority of the students (85.7%) participated in co-curricular activities as opposed to 14.3% who don't. This is a clear manifestation that students in the study area appreciate co-curricular activities integrated within the regular curricular.

Table 4.2: Students' Background Characteristics

Background characteristics	Category	N	%
Gender of respondents	Male	150	63.3
	Female	87	36.7
	Total	237	100.0
Age of respondents	12-14	8	3.4
	15-17	163	68.8
	18-20	66	27.8
	Total	237	100.0
Class of respondents	Form 1	16	6.8
	Form 2	68	28.7
	Form 3	106	44.7
	Form 4	47	19.8
	Total	237	100.0
Participation in co-curricular activities	Yes	203	85.7
	No	34	14.3
	Total	237	100.0

Source: Survey Data (2016)

4.3.2 Co-curricular Teachers Demographic Information

Demographic information for the co-curricular teachers was assessed in terms of academic qualification, teacher gender and experience in co-curricular activities. Indeed teachers' academic background informs on ability to support students' balanced participation in examinable subjects as well as participation in co-curricular activities. Moreover, gender of the teacher is a crucial motivator to both student sexes

to actively participate in these activities. Experience on the other hand informs decisions on when or when not to engage students in co-curricular activities.

Results presented in Table 4.3 reveal that while most of the teachers in the study sample were first degree holders (61.5%), some were diploma certificate holders (23.1%) and masters' degree holders (15.4%). This essentially is encouraging and goes on to prove to students that co-curricular activities are important despite the level of education. Gender distribution reveals that despite male co-curricular teachers being the majority (69.2%), a sizeable proportion of female co-curricular teachers are also on hand (30.8%). This is important since presence of female co-curricular teachers is a motivation for girls to be proactive in participating in co-curricular activities. The average number of years teachers have been in charge of co-curricular activities was found to be close to 7 years, indicating that they have the necessary experience to conduct co-curricular activities.

Table 4.3: Co-curricular Teachers' Background Information

Background Characteristic	Category	N	%
Academic Qualification	Bachelors degree	8	61.5
	Diploma	3	23.1
	Masters	2	15.4
	Total	13	100.0
Gender of Teacher	Female	4	30.8
	Male	9	69.2
Total		13	100.0
Average number of years in co-curricular activities: 6.69 years			

Source: survey data (2016)

4.4 Factor Structure of Co-curricular Activities Available to Students' in Public Secondary Schools in Kapenguria Division

The first research question one sought to establish factor structure of common types of co-curricular activities that students in public secondary schools in Kapenguria division participate in. Responses were elicited on a 5-point scale namely: 1-strongly agree, 2-agree, 3-moderately agree, 4-disagree, 5-strongly disagree. Fifteen items were initially proposed to measure co-curricular activities that students commonly engage in within public secondary schools in the county. Exploratory Factor Analysis with principal components was used to reduce these items as well as to assess the factor structure of the co-curricular activities available.

As shown in Table 4.4, Exploratory Factor Analysis extracted four factors which explained 58.192% of the total variance in co-curricular activities on offer. All factor loadings were above 0.5 and loaded highly on the four factors designated as: Music activities; athletics activities, assorted indoor and outdoor activities; and soccer activities. Besides, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.699 indicating that data were adequate for EFA.

Table 4.4: Unidimensionality of Co-Curricular Activities in Public Secondary Schools in Kapenguria Division

Factors	Loading	Eigen values	Variance explained
Music Activities		3.208	21.384%
My school has ever been asked to entertain the president at the national gala fete	.857		
My school has enough facilities and equipments for music	.578		
My school participates in music festival up to national level	.822		
Athletics Activities		1.907	34.095%
My school has produced renowned athletics.	.696		
Every student is required to take part in cross-country competition held in my school.	.568		
Assorted Indoor and Outdoor Activities		1.444	43.724%
Students are usually asked to bring hockey sticks on reporting to school in form one.	.761		
My school produces the best students in debate in the county	.635		
Hockey is popular in my school	.813		
Some students participate in rugby in the school	.811		
Soccer Activities		1.033	58.192
My school has won several accolades in football competition at zonal level	.725		
My school values participation in football competition in the county	.660		
My school hosts other schools for open competition in football	.636		
Kaiser-Meyer-Olkin MSA	.699		
Bartlett's test of sphericity	.000		

Source: survey data (2016)

These results clearly confirm that despite participation in other indoor and outdoor co-curricular activities, the main activities available in the division are athletics, music and soccer, each with its unique factor structure and highly loading items. Considering that the county is located in a region that produces most athletes in Kenya, it is no surprise to find athletics being regarded as one of the key co-curricular activities. Soccer is an activity that every boy child naturally finds himself participating in and hence the identified interest in the activity within the division.

4.4.1 Students Participation in Athletics Activities

Athletics was identified as one of the key co-curricular activities students in the division engage in. Means and standard deviations were used to explore students' participation in athletics in the county. Responses were elicited on a 5-point scale with discrete measurement values. This scale was however converted to a continuous scale to measure average response scores such that $0.5 < R < 1.5$ was the threshold for strong agreement; $1.5 < R < 2.5$ for agreement; $2.5 < R < 3.5$ for moderate agreement; $3.5 < R < 4.5$ for disagreement, and $4.5 < R < 5.5$ for strong agreement. In this case, 'R' was used to denote response.

Results presented in Table 4.5 show the mean response scores and corresponding standard deviations across key athletics items. The mean response scores tended to indicate appreciation for athletics among the student respondents. In addition, the small values in standard deviations show consistencies in response scores among the students.

Specific results reveal that respondents tended to agree to the following: that they are active members of the school cross-country team ($M=1.81$, $SD=0.501$); that they spent most of their free time practicing running in the field ($M=2.02$, $SD=0.649$); that they create time away from their athletics sessions to complete their home work ($M=2.08$, $SD=0.599$); that they are inspired by previous students of the schools who have made it in athletics ($M=2.12$, $SD=0.595$); that classmates often marvel at their individual skills ($M=2.16$, $SD=0.616$); and that athletics is the order of their daily schedules ($M=2.20$, $SD=0.784$).

They however, tended to moderately agree to the following: that they represent their schools upto county and national levels (M=2.87, SD=0.925), that they keenly participate in field events upto the national level (M=2.90, SD = 0.829); that they compete in track events upto the national level (M=2.94, SD=0.774); and that they are hardly in school due to their athletic participation (M=3.18, SD=0.916).

Table 4.5: Participation in Athletics Activities

Items	M	SD
I am an active member of the school cross-country team	1.81	.501
I spent most of my free time practicing running in the field	2.02	.649
I create time away from my athletics sessions to complete my homework	2.08	.599
The numbers of past students of this school who have made it in athletics inspire me.	2.12	.595
My classmates marvel at my skills.	2.16	.616
Athletics is the order of my day schedules.	2.20	.784
I represent my school up to county and at national level competitions.	2.87	.925
I keenly participate in field events up to national level.	2.90	.829
I compete in track events up to the national.	2.94	.774
I am hardly in school due to my athletics participation.	3.18	.916

Source: survey data (2016)

The implication of these results is that for those students who participate in athletics activities, they are surely not coerced and fully enjoy the activities. This is particularly so since in the Rift Valley where the county is located, athletics is a way of livelihood to most of the families. Renowned athletes who were former students of the schools in the study area provide the impetus that drives students in their athletics pursuit. It is also worth to note that despite their devotion to the athletics activities, these students find time to complete their homework. The bottom line is that even though they participate in athletics, they recognize their cardinal responsibility as students.

4.4.2 Students Participation in Music Activities

Assessment of students' participation in music activities was conducted using twelve items. Respondents were asked to indicate their agreements with the twelve items selected to reflect key activities related to music in public secondary schools. Once again, responses were elicited on a 5-point scale with discrete measurement values. This scale was however converted to a continuous scale to measure average response scores such that $0.5 < R < 1.5$ was the threshold for strong agreement; $1.5 < R < 2.5$ for agreement; $2.5 < R < 3.5$ for moderate agreement; $3.5 < R < 4.5$ for disagreement, and $4.5 < R < 5.5$ for strong agreement. In this case, 'R' was used to denote response.

Results shown in Table 4.6 reveal that the mean response scores in most of the items approximated to 2 indicating that respondents tended to agree to participation in music activities. Specific results show agreement to representing the school in music festival upto national level ($M=1.59$, $SD=0.692$); representing the school at regional competition ($M=1.66$, $SD=0.678$); enjoying participation in singing ($M=1.73$, $SD=0.591$); learning of music instruments ($M=2.03$, $SD=0.73$). Moderate agreements were made on the items reflecting among others; spending most time practicing singing with choir mates ($M=2.69$, $SD=0.887$); taking free time to compose some songs for the school choir ($M=2.85$, $SD=0.722$); traveling out of school due to music commitments ($M=3.33$, $SD=0.918$). Students however appeared to disagree that they were hardly in class due to choir commitments ($M=3.84$, $SD=0.893$).

Table 4.6: Participation in Music Activities

Items	M	SD
I have represented the school in music festival up to national level	1.59	.692
I represent my school at regional music competition.	1.66	.678
I enjoy participating in singing	1.73	.591
I am an active member of the school choir	1.90	.702
Learning of music instruments and singing makes me feel refreshed.	2.03	.731
I spent most of my time practicing singing with my choir mates	2.69	.887
I take my free time composing some songs for my school choir	2.85	.722
I travel a lot out of school due to my music commitments	3.33	.918
I am hardly in class due to choir requirements	3.84	.893

Source: survey data (2016)

The implication of these results is that students who participate in music activities such as music festivals do so voluntarily and in no way do they find it inhibiting to the class attendance. Most of the items reflect the urge to excel in their participation in music by learning how to use music instruments and deriving pleasure and enjoyment from participation in singing.

4.4.3 Students' Participation in Soccer Activities

Student participation in soccer activities was measured using nine questionnaire items. Respondents were asked to indicate their levels of agreement with the items forming the factor structure of soccer activities. Responses were elicited on a 5-point scale with discrete measurement values. This scale was however converted to a continuous scale to measure average response scores such that $0.5 < R < 1.5$ was the threshold for strong agreement; $1.5 < R < 2.5$ for agreement; $2.5 < R < 3.5$ for moderate agreement; $3.5 < R < 4.5$ for disagreement, and $4.5 < R < 5.5$ for strong agreement. In this case, 'R' was used to denote response.

Results shown in Table 4.7 indicate active participation in soccer among students. In particular, respondents tended to strongly agree that they participate in several

football tournaments ($M=1.17$, $SD=0.290$); that they are active participants in football ($M=1.25$, $SD=0.563$); and that they are well known for their football skills ($M=1.46$, $SD=0.621$). They however, tended to agree that they represent the school at various levels and that the main inspiration for their soccer participation are former students of the school that have excelled in the countries football clubs ($M=2.21$, $SD=0.828$).

Table 4.7: Participation in Soccer Activities

	M	SD
I participate in several football tournaments	1.17	.290
I am an active participant in football	1.25	.424
My school football team ranks very highly in football competition	1.45	.563
I am well known for my football skills.	1.46	.621
I represent my school up to the county level in football competition.	1.56	.647
I represent my school up to the regional level competition in football.	1.90	.724
I am inspired with the many national footballers my school has produced	2.21	.828
I represent my school up to the national level in football competition	2.57	.864
I represent my school up to the international level in football competition.	3.18	1.074

Source: Survey data (2016)

These results are indicative of the fact that soccer activities are largely participated in within the county. The finding relating to students being inspired by past students excelling in local football leagues bring into mind a school like Chewoyet which is famed for grooming a number of football stars who have gone on to darn national colours such as Patrick Shim.

4.5 Teachers and Principals Views on Participation in Co-Curricular Activities.

Learner participation in co-curricular activities in public secondary schools in West Pokot County was also explored using teacher questionnaire and principals interviews.

4.5.1 Co-curricular Teachers Perceptions of Participation in Co-curricular Activities

Two frames of reference were used to explore co-curricular teachers' views on the organization and student participation in co-curricular activities in public secondary schools in the county. First, teachers were asked to indicate their agreement with seven structured items reflecting on organization, support and participation in co-curricular activities. Responses were elicited on a 5-point discrete scale ranging from 1- strongly agree to 5- strongly disagree. Considering that mean response scores were the focus for each item, this discrete scale was converted to a continuous scale with the following threshold. $0.5 < R < 1.5$ - Strongly agree; $1.5 < R < 2.5$ - agree; $2.5 < R < 3.5$ - moderately agree; $3.5 < R < 4.5$ - disagree; and $4.5 < R < 5.5$ - strongly disagree.

Results presented in Table 4.8 show that whereas co-curricular activity teachers appeared to agree with some items, they also tended to disagree with others. Teachers strongly agreed that the school requires students to participate in at least one co-curricular activity ($M=1.23$, $SD=0.439$); They also agreed that functional playing fields were adequate for co-curricular activities ($M=2.31$, $SD=0.855$); that students voluntarily participates in co-curricular activities ($M=2.46$, $SD=1.330$); and that the administration supports students in selection of co-curricular activities ($M=2.46$, $SD=1.330$). They moderately agreed that co-curricular teachers were instrumental in students choice of co-curricular activities ($M=2.92$, $SD=1.754$). They however, disagreed that co-curricular teachers were enough for the school requirements ($M=3.69$, $SD=1.251$); and that certain core subjects are paired to co-curricular activities ($M=3.85$, $SD=1.345$).

Table 4.8: Teacher Perceptions of Organization and Participation in Co-curricular Activities

	M	SD
The school requires a student to participate in at least one co-curricular activities	1.23	.439
The functional playing fields are adequate for co-curricular activities	2.31	.855
Students voluntarily participate in co-curricular activities	2.46	1.330
The administration supports students in selection of co-curricular activities	2.46	1.330
Co-curricular teachers are instrumental in students choice of co-curricular activities to participate	2.92	1.754
Co-curricular teachers are enough for the school requirements	3.69	1.251
Certain core subjects are paired to co-curricular activities in school.	3.85	1.345

Source: survey data (2016)

Implications drawn from these results include the fact that public secondary schools in West Pokot County consider participation in co-curricular activities of utmost importance and have therefore made participation in co-curricular activities mandatory with every student required to choose at least one activity. This task is made even easier by the voluntary participation of students in most co-curricular activities. Despite the administration's willingness to support students' selection of activities to participate in, co-curricular teachers required to nurture these activities are not enough. Clearly, integration of core subjects with co-curricular activities has not been done in the study area.

Second, co-curricular teachers were further probed on their roles as co-curricular teachers and their recommendations with regards to the current mode of organization of co-curricular activities in the schools. This being open ended items of a qualitative nature, thematic analysis were used to extract key themes emerging from the responses made. Results of this analysis are presented in Table 4.9.

Table 4.9: Co-Curricular Teachers Perception of their Roles

Question	Themes	Sub-themes
What are your roles as the co-curricular activities teacher?	Coordination	i) Co-ordinate co-curricular activities at the school level ii) Ensure students participate in co-curricular activities at school iii) Take students to compete in co-curricular activities with other schools
	Coaching	i) Coach students in co-curricular activities ii) Work hand in hand with other teachers in preparing students in various co-curricular activities iii) Enable students to identify their talents iv) Guide the learner's on what to participate in basing on their abilities.
	Liaison	i) Advice the principal on the recommended items for games ii) Procure required items for co-curricular activities iii) Facilitate access to co-curricular requirements
	Moral responsibility	i) advice against irresponsible behavior ii) Promote good morals iii) Control peer pressure iv) Promote teamwork

On the question of the roles of the co-curricular teacher, four key roles emerged from thematic analysis. These were identified as coordination, coaching, Liaison, and moral responsibility. Under coordination, it was revealed that the co-curricular teacher coordinates activities at the school level, ensuring that students' actively participate in the activities, and also organizes to take students for competitions with other schools. Under coaching role, it was revealed that the co-curricular activities teacher is expected to coach students in the activities; work hand in hand with other teachers in preparing students in various activities; enable students to identify their talents; and guide them on what activity to participate in given their abilities.

The third role was Liaison under which the teacher is expected to liaise with the principal in procuring required materials and facilities, and also to advice the principal on recommended materials. Besides these roles, it was also revealed that the co-

curricular activities teacher is supposed to nurture moral responsibility among students. In this role, the teacher is supposed to advice against irresponsible behaviour, promote good morals, control peer pressure, and to promote team work.

4.5.2 Participation in Co-curricular Activities: Principal's Perspectives

Assessment of Principal's views on participation and organization of co-curricular activities in West Pokot County were conducted using four questions on the Principal's interview schedule. Results of the typology of responses made by principals towards the specific questions are presented in Table 4.10 and are consistent with co-curricular teachers' perceptions.

Table 4.10: Principals' Perceptions on Organization and Participation in Co-Curricular Activities

Question	Typology of responses
In your view, what role does the co-curricular activities teacher play in the enrolment of students to participate in co-curricular activities?	<ul style="list-style-type: none"> i. Encourages students to participate in co-curricular activities ii. Groups them according to their field of specialization where they can excel iii. Orientates learners to the various co-curricular activities available iv. Recruits students to various activities
What are the school selection criteria for students to participate in co-curricular activities?	<ul style="list-style-type: none"> i. Ability of students ii. Data captured during admission to the school iii. Selection is according to the learner interest and teachers identification iv. Students capabilities based on their various talents
Are the fields available up to standard?	<ul style="list-style-type: none"> i. A field for each activity has been created though in a makeshift way ii. Some fields like for handball are being finalized iii. Fields available are scarce and definitely not to standard
In your view, how adequate are the field facilities in the school for full participation in co-curricular activities?	<ul style="list-style-type: none"> i. not adequate ii. not yet adequate compared to the student population

The first question sought to establish principals' views on the role of co-curricular activities teachers in enrolment of students to co-curricular activities. According to the principals, co-curricular activities teachers are expected to (i) encourage students to participate in co-curricular activities (ii) group students according to their activities of participation (iii) orientate learners to various co-curricular activities (iv) recruit students to various activities. These views obtained from principals are consistent with teachers' views indicating that the role of the co-curricular activities teachers is clearly spelt out and is directed towards tapping and nurturing students potential in co-curricular activities.

On the question of the schools criteria for selection of students to participate in co-curricular activities, three key criteria were identified and include (i) ability of students (ii) data captured during admission to the school (iii) learner interest and capability based on talent.

This clearly shows that schools in West Pokot County have a framework for participation in co-curricular activities that take cognizance of the individual learners' interests, abilities and talents. This in essence is aimed at building from the known to the unknown which is a key approach in educational development.

Asked whether fields were up to standard, typology of responses given by principals imply inadequacy in playing fields thus lending support to teachers views on this matter, principals indicated that although schools try to provide a field for each activity, this is mainly in a make shift way, where the larger soccer field is used for multi-tasking by segmenting it appropriately. Moreover, responses indicated that some fields were still under construction but majorly, they were inadequate.

The fourth question sought to explore the principals' view on adequacy of facilities necessary for full participation in co-curricular activities. It clearly emerged that student population remains a key challenge to co-curricular facilities which have been over stretched to the limit and remain inadequate for engaging learners fully. This possibly explains the 14.3% of students who indicated non participation in co-curricular activities in the current study.

Further, Principals were asked to indicate whether the schools policy on co-curricular activities grants enough time for students to exercise their talents, and how participation in co-curricular activities impacts on learner academic performance.

Results of thematic analysis are presented in Table 4.11

Table 4.11: Principals' Perceptions on Availability of time for Co-curricular Activities

Question	Typology of responses
Does your school policy on co-curricular activities grant enough time for students to exercise their talents?	<ul style="list-style-type: none"> i. The school provides enough time for students to participate in co-curricular activities ii. Co-curricular activities are encouraged and time created by the school for participation iii. Co-curricular activities are carried out after normal classes
If the school schedules time for students to participate in co-curricular activities, at what time of the day?	<ul style="list-style-type: none"> i. 4.00pm - 5.30pm Monday to Friday ii. During games time and weekends from 1.00pm - 2.00pm iii. Lunch, break and weekends only iv. P.E in the timetable is compulsory for all students from 4.00pm - 5.40pm on weekdays
How has the performance in previous K.C.S.E exams for students who participate in co-curricular exams been?	<ul style="list-style-type: none"> i. Good (60%) ii. Above average (20%) iii. Average (20%)
In your view, has participation in co-curricular activities impacted on previous performance?	<ul style="list-style-type: none"> i. Students participating in co-curricular activities have tended to post improved results ii. It has had no effect iii. Yes, others take co-curricular as their future source of bread iv. Yes, students realize that co-curricular activities go hand in hand with academics v. Yes, there is positive results for students participating in co-curricular activities

Source: survey data (2016)

On the question of whether the school policy on co-curricular activities grants enough time for students to exercise their talents, respondents affirmed that the importance attached to co-curricular activities is such that most schools have set aside specific time periods in which to conduct the activities. Co-curricular activities in most schools are held after normal classes as from 4pm to 5.30pm daily from Monday to Friday. Some schools also provide time over the weekend for co-curricula's.

Asked to rate previous performance in KCSE exams, 60% of the respondents rated it good; 20% rated it above average and 20% rated it average. Diverse responses were made regarding Principals' views on whether participation in co-curricular activities has impacted on previous performances. By and large, there was a general consensus that seemed to attribute participation in co-curricular activities with good performance. Despite this however, it was observed that a few students take co-curricular activities so seriously that they get dissuaded from concentrating on their studies.

4.5.3 Co-Curricular Teachers and Principals' Recommendations on Organization and Student Participation in Co-curricular Activities

Respondents were asked to give recommendations with regards to prevailing organization and student participation in co-curricular activities. When asked their recommendations with regards to current organization of co-curricular activities in schools, three major recommendations emerged from co-curricular teachers (Table 4.12).

Table 4.12: Teachers Recommendation on Organization of Co-curricular Activities

Question	Recommendation	Commentary
What are your recommendations with regards to the current organization of co-curricular activities in your school?	Inclusivity	i) All teachers should be involved in co-curricular activities ii) Co-curricular is part of the system and all teachers should encourage students to identify their talents iii) Take students to compete in co-curricular activities with other schools
	Integration	i) Co-curricular should be integrated with other subjects in the school curricular to make learning holistic ii) Co-curricular activities should be organized in a way that learner's participate in most of the activities without clashing
	Facilities	i) The school should create more fields to accommodate the many learners ii) Provision of more appropriate gear and equipment iii) introduce more variety of games to involve as many students as possible

Recommendation One: Inclusivity

The first recommendation made by the teachers is inclusivity. It was of the view among co-curricular activities teachers that all teachers be involved in co-curricular activities in order to maximize on learner gains. Noting that co-curricular is an integral part of holistic development, it was recommended that all teachers should encourage students to identify their latent talents. Moreover, to forestall student indiscipline while outside for competitions, many teachers should be available to take students to compete in co-curricular activities with other schools.

Recommendation two: Integration

The second recommendation emerging from thematic analysis was integration. Co-curricular activities teachers were of the view that co-curricular activities should be integrated with other subjects in the school curricular in order to derive the holistic

nature of student development. Moreover, it was recommended that co-curricular activities should be programmed in a way that would see most students participating in a variety of activities without them clashing on time.

Recommendation three: Facilities

Facilities emerged as the third key recommendation by co-curricular activities teachers. It was recommended that schools should create more fields to accommodate the large number of students. In addition, there is need to provide more appropriate gear and equipment for these activities. Noting that the co-curricular activities on offer were in away inhibiting to some students it was recommended that a variety of activities should be introduced so as to bring as many students on board.

Principals' recommendations displayed in Table 4.13 were consistent with the teachers recommendations. According to the Principals, co-curricular activities should be factored in the evaluation process in order to produce a complete individual. Moreover, Principals were of the view that co-curricular activities should be embraced if talents among learners are to be optimally exploited. A major concern resonating among respondents was lack of adequate time for co-curricular activities. It was therefore recommended that syllabus content be scaled down to create more time for co-curricular activities.

Table 4.13 Principals Recommendations on Organization and Participation in Co-Curricular Activities

Question	Recommendations
What do you recommend that should be done to the current organization of co-curricular activities at all levels if all students have to benefit?	<ul style="list-style-type: none"> <li data-bbox="836 383 1404 456">i. Co-curricular activities should be inclusive of the whole curricular <li data-bbox="836 456 1404 530">ii. Embrace co-curricular activities to tap the talents that learner's possess <li data-bbox="836 530 1404 640">iii. It should be factored in the evaluation process so as to get a whole complete learner <li data-bbox="836 640 1404 714">iv. make co-curricular to be part of the school syllabus <li data-bbox="836 714 1404 822">v. Syllabus content should be scaled down to create adequate time for co-curricular activities

4.6 Summary Results of types and framework for co-curricular Activities that students in Public Secondary Schools in West Pokot County engage in.

A comprehensive analysis of results focusing on answering research question one of the study engaged students, co-curricular activities teachers and principals with a view of triangulating information sources. Results established cut across the three categories of respondents. The study reveals that there is a variety of co-curricular activities available to public secondary school students in the county but athletics, music and soccer are the main activities in the schools.

A large proportion (85.7%) of the students participates in co-curricular activities mainly out of their own interest. There is a constraint in facilities and equipment for co-curricular activities among schools in the county. This coupled with the fact that not all teachers are involved in supervising these activities could be responsible for the small proportion of students who opt not to participate in the activities.

A key result is the realization among co-curricular teachers and school administrators of the potential co-curricular activities has on holistic development of individuals. This has seen many public secondary schools in the county make it mandatory for participation in the activities. More importantly, previous students of these schools have continued to excel in different sporting activities in the country which inspires the current crop of students in their participation in these activities.

The gains made in providing this enabling framework for student participation in co-curricular activities in the county can however be improved even more if all teachers embrace the utility of co-curricular activities in other curricular subjects and support by actively being involved in organization and conducting of the activities in support of the regular co-curricular teachers..

4.7 Performance of Students Participating in Co-curricular activities

Cross tabulation were used to examine performance of students who participate in examinations. This was necessary so as to provide evidence of the influence of participation in co-curricular activities on learner performance. Average scores of students' performance over three terms were obtained and categorized into pass (above 40%) or fail (below 40%).

The results of the cross tabulations presented in table 4.14 seem to suggest that participation in co-curricular activities may not affect learners' performance. The pass rate for students who participated in athletics was 64.3% compared to 35.7% failures. Similarly, 81.8% of students who participated in music, 73.9% passed while only 26.1% failed. On this evidence, a significant proportion of students who participated

in co-curricular activities passed implying that participation in co-curricular activities did not interfere with their academics.

Table 4.14: Participation in Co-curricular Activities and Learner Performance

		co-curricular activity				
		athletics	soccer	music	Total	
Performance	Fail	Count	30	12	11	53
		% within co-curricular activity	35.7%	18.2%	20.8%	26.1%
	pass	Count	54	54	42	150
		% within co-curricular activity	64.3%	81.8%	79.2%	73.9%

4.8 Learners participation in Co-curricular Activities and its Influence on Academic performance

The purpose of this study was to establish the influence of participation in co-curricular activities on learners' academic performance. Consequently, the cumulative influence of co-curricular activities on academic performance was explored from individual influences of athletics, music and soccer on learner academic performance.

4.8.1 The influence of Students' participation in Athletics on Academic performance

The second research question of the present study sought to determine how students' participation in athletics influences their academic performance in public secondary schools in West Pokot County. Research shows that influence relationships are best analyzed using regression analysis (Blaikie, 2010). Consequently, regression analysis was used to establish the influence of participation in athletics on academic performance. Regression analysis is however an analysis that brings out causality. This then requires that there is linearity among the variables involved. Correlations

were therefore used to first establish whether there existed linear relationships between participation in co-curricular activities and academic performance.

Results presented in Table 4.15 shows that there was a positive and significant correlation between participation in athletics and academic performance ($r=0.632$, $p<0.01$).

Table 4.15: Correlation Coefficients

		1	2	3	4
1. Participation in athletics	Pearson Correlation	1			
	Sig. (2-tailed)				
2. Participation in singing	Pearson Correlation	.711**	1		
	Sig. (2-tailed)	.000			
3. Participation in soccer	Pearson Correlation	.343**	.192**	1	
	Sig. (2-tailed)	.000	.006		
4. Academic performance	Pearson Correlation	.632**	.519**	.508**	1
	Sig. (2-tailed)	.000	.000	.000	

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

The implication is that participation in athletics has potential to influence academic performance in a non-causal way. This therefore paved way for regression analysis to examine the influence of athletics on academic performance. Results of the regression coefficients presented in Table 4.16 reveals that participation in athletics is a significant predictor of academic performance ($B=7.663$, $p<0.01$).

Consequently, a one percent improvement in participation in athletics has potential to increase academic performance by 7.663 percentage points.

Table 4.16: Regression Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	17.566	2.834		6.199	.000		
Participation in athletics	7.663	1.448	.390	5.291	.000	.450	2.223
Participation in music	3.546	1.425	.176	2.488	.014	.491	2.037
Participation in soccer	7.381	1.143	.341	6.455	.000	.877	1.140

a. Dependent Variable: Academic performance

The implication of these findings is that athletics is seen to influence academics in a positive way and contributes to learner academic performance. These findings add to the inconclusive results that exist in literature regarding the influence of athletics on learner performance. Indeed several conflicting results have been reported with some showing direct effects of participation in athletics and academic performance and others showing indirect relationships. The current study results therefore add to this discourse by showing direct and significant effects.

The findings showing a positive influence of participation in athletics on academic performance are consistent with Bonfiglio (2011) who contributes to discourse on athletics and learner development by noting that official school statements have often posited a profound influence of athletics on the youth, school and communities. This conjecture further supports findings by NHSAW (as cited in Kelepolo, 2011) which relates academic performance as well as attachment to school and social development among high school students to participation in co-curricular activities. Indeed the

findings by NHSAW (as cited in Kelepolo, 2011) continue to postulate that participation in sports and related physical education activities provide opportunities for students to learn values of teamwork and the opportunity to apply academic skills in other arenas.

The finding in this study that athletics predicts academic performance among public secondary students in the county implies that some element of concentration is derived from participation in athletics. Consequently, most of the youth somehow participate in athletics while undertaking their studies. Some of the students do achieve high grades despite their participation in athletics. While it may be coincidental that students have participated in athletics and have gone on to excel academically in the county, it is good to appreciate and recognize contributions made by athletics activities towards their physical and mental concentration.

The utility of athletics to academic performance has previously been explored from direct and indirect perspectives (Bonfiglio, 2011; Burns, Jasinski, Dunn, & Fletcher, 2013; Coleman 2006; Gritmit, 2014). Indirectly, it has been posited that participation in athletics has potential to improve a variety of non-cognitive aspects relating to an athlete's personality, self esteem and motivation. Clearly then, when these aspects are improved they lead to a better academic achievement. Directly, participation in athletic is viewed to impact on students similar competitive events such as academic tests and courses (Gritmit, 2014).

Despite the reported positive impact of athletics on academic performance, results remain inconclusive. Evidence exists of studies showing prejudice against athletes. Simons, Bosworth, Fujita, and Jensen, (2007) contend that prejudice against student–

athletes and stereotypes result in perceived incompatibility between participation in athletics and academic excellence in education. Indeed, this scenario greatly reflects the stereotypes and prejudice our society has for athletes who mainly come from the Kalenjin speaking communities. This is further exasperated by responses some athletes give during interviews with journalists after races some of which are barely incorrigible. There is need to note that such interview sessions ought not to be yardsticks to gauge academic ability among these athletes. Besides, this crop of athletes represents a very small portion of athletes. Suffice to say that some athletes have given very eloquent interviews that are a marvel to listen to.

Findings against athletics with regards to performance may just but be imaginary and more of stereotypic. Sitkowski (2008), in conducting a study on the effects of participation in athletics on academic performance among high school sophomores and juniors notes that it could be possible that the notion that participation in athletes affects academic performance is a negative reputation developed by the society. The author observes that the effect of participation in athletics, with respect to its direct effect on participants themselves has not been investigated in literature. The findings of this study are therefore crucial since they show results which reflect direct effects of participation in athletics on participant themselves.

4.8.2 The Influence of Students' Participation in Soccer Activities on Academic Performance

The third research question of this study sought to determine how students' participation in soccer influences their academic performance. Results of correlation analysis between participation in soccer and academic performance are presented in Table 4.14.

These results show that participation in soccer has a positive and significant correlation with academic performance ($r=0.508$, $p<0.01$). This then paves way for regression analysis to establish the causal relationship between participation in soccer and academic performance. Results of the regression analysis displayed in Table 4.15 show that participation in soccer is a positive and significant predictor of academic performance ($B=7.381$, $p<0.01$). This implies that for a unit percentage increase in participation in soccer, an increase of 7.381 percentage points may be realized in academic performance.

The study therefore finds that participation in soccer has direct influences on academic performance among students in West Pokot County. While literature is sparse on the direct influence of participation in soccer on academic performance, Kenya has produced a good number of soccer stars who have also excelled in academics. As noted by Eshitemi (2014) (www.sde.co.ke/the_nairobi/article/2000145331/meet-kenya-most-educated-footballers, retrieved on 4/07/16), juggling football and academics is a tricky affair. The author however observes that a few players have excelled both in soccer and the world of academia thereby dispelling the notion that participation in soccer would erode academic gains.

Indeed Eshitemi (2014) identifies a host of players currently plying their trade in the Kenyan premier league and who have excelled in academics. Bernard Mangoli currently plays soccer for AFC Leopards and holds a Bachelor of Environmental Studies in Community Developmental from Kenyatta University; Michael Olunga who plays in the Vietnamese league is pursuing his Bachelor of Engineering degree in Geospatial Engineering in Technical University of Kenya; Brian Osumba holds a Bachelor of Economics from Nairobi University and has pursued CPA up to level 4.

These are just but a few of Kenyan soccer stars that have also made it academically. Indeed these players add to a host of popular past players like Dr. JJ Masiga, Dr. William Obwaka and Dr. Dan Shikanda who excelled during their foot balling days and are today respected medics.

The bottom line of these findings therefore is that the physical exercise put towards preparation for soccer activities have potential to arouse mental stimulation and concentration which indirectly impact on academic performance. Current trends are that even when one is participating in soccer, education remains a fall back plan to their football career.

4.8.3 The Influence of Students' Participation in Musicg on Academic Performance

The fourth research question of the present study focused on establishing the influence of students' participation in singing on their academic performance. Results of correlation analysis presented in Table 4.14 revealed that there is a significant positive correlation between participation in singing and students' academic performance ($r=0.711$, $p<0.01$). This implies that there exists a direct relationship between participation in singing and academic performance.

The regression analysis results confirmed that there is a causal relationship between participation in singing and students academic performance. Consequently, participation in singing is a positive predictor of academic performance ($B=3.546$, $p<0.05$). This implies that an improvement of one percentage point on participation in music potentially raises academic performance by 3.546 percentage points.

The findings showing that participation in singing significantly influences academic performance supports a plethora of existing studies on music participation and various aspects of academic performance. Indeed, Norton, Winner, Crowin, Lee, and Schlng (2005) showed that there were correlations between music perceptual skills and both non-verbal reasoning and phonemic awareness. Besides, the findings are consistent with findings by Moreno, Marques, Santos, Santos, Castro and Besson (2009) that even a little bit of musical training can enhance reading skills as well as pitch discrimination abilities in speech.

The finding that participation in singing is a significant predictor of academic performance implies that singing and music as a whole has potential to stimulate learners' mental structures thereby leading to high levels of concentration in academic disciplines. This mirrors findings by Hyde, Lerch, Norton, Forgeard, Winner, Evans and Schlang (2009) which seemed to suggest that children who participate in music using a musical instruments show numerous benefits in terms of improved motor-finger dexterity and in auditory melodic and rhythmic discrimination skills. Moreover, findings have alluded to participation in music as the cause of differential development in certain regions of the brain.

It is therefore important to remark that the positive effects of participation in music as a co-curricular activity on academic performance realized in this study adds to existing literature on benefits of music albeit from a different dimension. While most studies have looked at the role of music from a phonetic development dimension, the current study looks at music from a co-curricular dimension.

4.8.4 Contribution of Participation in Co-curricular Activities on Students' Academic Performance

The multiple regression model summaries presented in Table 4.17 show that the R-square value was 0.511 with a Durbin Watson statistic of 1.686. The R-square value implies that participating in co-curricular activities particularly drawing upon the three main activities explored in this study accounts for 51.1% of the variance in students' academic performance. This means that although participation in co-curricular activities is not the only causation to improved academic performance, it has potential to raise overall performance among students. The Durbin–Watson statistic reveals that regression errors were uncorrelated in this case.

Table 4.17: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.715 ^a	.511	.504	7.256	1.686

a. Predictors: (Constant), Participation in soccer, Participation in music , Participation in athletics

b. Dependent Variable: Academic performance

These findings showing that participation in co-curricular activities especially those vigorous ones improves academic performance are reminiscent of studies focusing on importance of sports and physical activities on academic performance. Several studies point to positive impacts of participation in sports on academic performance. Trudeau and Shephard (2008) suggest that learning efficiency increases with sports involvement.

Recognition of participation in co-curricular activities as key to academic achievement is further espoused by a range of studies that point to positive association

between physical fitness and academic achievement (Castelli, Hillman, Buck and Erwin, 2007; Chomitz *et al*, 2009). Through these studies, it has been posited that students who are more physically fit are more likely to score higher grades. According to Coe *et al.*, (2006), vigorous physical activity most effectively supports higher grades. The essence then is that time allocated for PE and a co-curricular activity is important if students have to be vigorously involved.

Physical activities such as the co-curricular activities under study have in an array of studies been found not only to impact on motor skills among students but also on their cognitive skills. Bailey (2006) observes that self esteem, social development, cognitive development and academic achievement are some of the key benefits that may accrue out of participation in physical activity and cognitive measures such as perceptual skills, verbal and math tests, IQ, and academic readiness. Vail (2006), argues that exercise gained from physical activities help students to concentrate better in class and this in turn tends to contribute towards improved grades.

Arguments such as posited by Vail go on to confirm that participation in co-curricular activities should in no way be seen negatively since physical activity as a whole can lead to numerous gains that extend to academics. The findings in this study showing a contribution of close to 51% made by participation in athletics, singing, and soccer on students' academic performance adds to the plethora of existing studies bringing in a contextual change from previous studies that have mainly focused on athletics and music as individual entities. Moreover, past studies have concentrated on developed countries (Castelli, Hillman, Buck and Erwin, 2007; Chomitz *et al*, 2009). This study replicates previous findings but from an undeveloped country perspective.

The relevance of co-curricular activities has also been associated to neurological benefits. Noting that physical activities increase blood flow to the brain, the author's argue that this tends to increase students' alertness and attention span, enhance self-esteem and reduce chances of boredom (Coe *et al.*, 2006; Keeley & Fox, 2009). Benefits that lead to increased alertness and self-esteem are potentially good for improved academic performance. Mental alertness and self-esteem have been shown to have a positive effect on academic achievement (Bailey, 2006; Mahar, *et al*, 2006).

4.8.5 Academic Performance: A comparison of Co-curricular Activity Participation and Non Participation

Research question five sought to establish if there were mean differences in academic performance between students' who participate in co-curricular activities with those who do not. Since there was only one grouping variable namely participation in co-curricular activities, with only two levels, participation or non participation, the t-test for independent groups was used to compare academic performance for participants and non participants.

Results presented in Table 4.18 show that the t-test statistics when equal variances were assumed and not assumed were not significant at the 0.05 level ($t=1.675$, $p>0.05$; $t=1.465$, $p>0.05$). This implies that a claim that there is no significant difference in mean academic performance between students' who participate in co-curricular activities and those who do not can be upheld.

Table 4.18: Independent Samples Test

		t-test for Equality of Means				
		T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Academic performance	Equal variances assumed	1.675	235	.095	3.298	1.969
	Equal variances not assumed	1.465	40.923	.151	3.298	2.252

The implication of these results is that though participation in co-curricular activities is seen to have a positive impact on academic performance, this does not in any way mean that those who participate are better academically than those who do not. The average performance in an individual is a combination of several other factors and cannot be seen to only be pegged on participation in co-curricular activities.

These results are consistent with findings which show that academic performance among students is a function of several factors. According to Bedard and Kuhn (2008), class size is a significant factor in student academic performance. Smaller class sizes enable ease of access to resources and consequently may lead to enhanced academic achievement. SAVASCI and TOMUL (2013) identify availability of teaching and learning resources as central to academic achievement. Leadership style is also identified in existing literature as having potential to impact on learner achievement (Crum & Sherman, 2008). According to UNESCO (2014), teachers contribute to learner achievement in the sense that they are the most important human resource and backbone of any educational system.

The finding that there is no significant difference in academic performance between students who participate in co-curricular activities and those who do not, as seen in

the current study could be attributed to other factors. Class size has remained a challenge in public schools in Kenya as a result of the introduction of free primary education and the associated transition rates (Tooley, Dixon, & Stanfield, 2008). This has occasioned a long standing tussle between teacher unions and the Teachers Service Commission over the recruitment of more teachers to overcome the shortfalls. Moreover, teaching and learning resources in most public schools are overstrained, which could lead to findings such as lack of significant differences between the two sets of students (Anyiendah, 2017).

The finding showing lack of significant differences in academic performance between co-curricular participants and non participants however contradict several other findings. Jonker *et al.*, (2010) found that elite Dutch football players aged 12-16 self-reported higher levels of effort; willingness to achieve a task goal, in school than the control group who did not participate in sport. Mahar (2011) reported increased and improved on-task behaviour amongst American elementary school students following short bouts of physical activity in a classroom setting. Similarly, Stead and Neville (2010) noted that as little as 10 minutes of additional organized physical activity in or outside the classroom implemented into the school day improves classroom behaviour, and consequently may enhance academic performance.

The contradictory findings could possibly be a result of a combination of other factors as mentioned elsewhere in this report. It is also worth noting that instability occasioned by cattle rustling and subsequent tensions often experienced in the County accounts for absenteeism which could lead to observed results.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study findings reported in line with the study objectives. It also captures the researcher's conclusions, recommendations and suggestions for further study.

5.2 Summary of the Findings

The overall finding of the current study is that participation in co-curricular activities has potential to influence students' academic performance in a positive way, although other factors also play important roles. The influence of co-curricular activities on academic performance could be attributed to its ability to stimulate physical and mental health, social wellbeing, and cognitive growth. The following summary of findings focuses on the sub-headings that formed the study objectives.

5.2.1 Types and Framework for Co-curricular Activities Available for Students in Public Secondary Schools in West Pokot County

Research objective one sought to identify types and framework for co-curricular activities available to students in West Pokot County. Using exploratory factor analysis, results revealed that despite participation in other indoor and outdoor co-curricular activities, the main activities available in the county are athletics, music and soccer, each with its unique factor structure and highly loading items. Participation in athletics is characterized by mandatory cross-country activities and desire to be part of renowned athletes from the region. Participation in singing is basically motivated by music festivals organized up to national levels and the desire to appear at the Gala.

The framework for participation in soccer pursues the desire to succeed in soccer competitions from zonal to national levels.

5.2.2 Influence of Participation in Athletics on Students' Academic

Performance

The second objective of the current study focused on establishing the influence of participation in athletics on students' academic performance. Descriptive analysis of responses on participation in athletics established that most students participate in athletics on their own willingness and are not coerced to do so. Most of them are inspired by former students who have gone on to excel nationally and internationally. Moreover, the County is located in a region where athletics is a way of livelihood to most of the families. The study also established that participation in athletics does not in any way affect their studies.

Results of the correlation analysis revealed that there is a significant positive correlation between participation in athletics and students academic performance. This implies that the more students participate in athletics, the more the potential of posting good grades. Regression analysis results confirmed that participation in athletics is a significant predictor of academic performance.

Results of thematic analysis of teacher responses revealed that the co-curricular teachers play a crucial role in: coordinating athletics and other co-curricular activities at all levels of participation; coaching students in athletics skills and other co-curricular skills; liaising with the school administration to provide necessary infrastructure; and overseeing moral responsibility among students. Furthermore,

results from school Principals indicated fields and other crucial facilities were inadequate thus barring many students from participating.

5.2.3 Influence of Participation in Soccer on Students' Academic Performance

The third objective of the study sought to establish the influence of participation in soccer on students' academic performance. Descriptive analysis of students' responses revealed that soccer activities form a major component of co-curricular activities in the County. It was noted that soccer is a sport that provides income to most youthful people and this acts as an inspiration for students.

The correlation analysis established that there is a significant positive correlation between participation in soccer and students academic performance. This was further confirmed by the regression analysis results which indicated that participation in soccer is a significant predictor of academic performance.

5.2.4 Influence of Participation in Music on Students' Academic Performance.

The fourth objective of the current study sought to find out the influence of participation in singing on students academic performance in public secondary schools in west Pokot County. Using both descriptive statistics, the study found out that students who participate in music activities such as music festivals do so voluntarily and in no way do they find it inhibiting to their class attendance. Besides, the study revealed the urge among students to excel in their participation in music by learning how to use music instruments and deriving pleasure and enjoyment from participation in singing.

Correlation analysis confirmed existence of linear relationship between participation in music and academic performance. The implication is that participation in music has potential to influence academic performance in a non-causal way. Results of the regression coefficients revealed that participation in singing was a significant predictor of academic performance

Thematic analyses of co-curricular teacher and Principals responses revealed that despite the enthusiasm among students to participate in singing and co-curricular activities as a whole, there were challenges in procuring appropriate facilities such as fields and musical instruments. They consequently recommended for inclusivity of all teachers in organization of co-curricular activities. Besides, they noted the need to improve on existing sporting infrastructure.

5.2.5 Comparison of Academic Performance of Students who Participate in Co-curricular Activities with those who do not

The fifth objective of this study focused on comparing academic performance of students who participate in co-curricular activities with those who do not. Using the t-test for independent groups, the study revealed that there were no significant differences in mean scores for students participating in co-curricular activities with those who do not. This implies that though participation in co-curricular activities does have a positive impact on academic performance, this does not in any way mean that those who participate are better academically than those who do not

5.3 Conclusions

In view of the findings summarized above, several conclusions were made regarding learner participation in co-curricular activities and their academic performance in public secondary schools in Kapenguria division of West Pokot County.

1. Public secondary schools in Kapenguria division take co-curricular activities seriously knowing their utility in learners' holistic development. Most of them have in place policy guidelines that make participation in at least one of the activities mandatory. Main co-curricular activities undertaken are athletics, music and soccer. However, other sporting activities such as rugby and hockey are available albeit to a small scale. Besides indoor activities such as drama and debate are also on offer.
2. Participation in athletics is learner driven with most of them hoping to emulate former students in public secondary schools in the County and who have gone on to excel nationally and internationally. Participation in athletics does not in any way interfere with academic performance of students involved and has potential to lead to improved academic performance by stimulating fine and gross motor growth, learner concentration, and cognitive development among others.
3. Students proactively participate in soccer activities hoping to emulate former students from public secondary schools who have excelled in the national soccer team. Besides, soccer provides a livelihood for most of the youth and can be very lucrative. Participation in soccer has a positive influence on academic performance and has potential to stimulate learner concentration in academic disciplines.

4. Participation in music is a popular co-curricular activity in public schools in the division. Schools compete in music festivals right from zonal to national level. Participation in music is voluntary and students engaging in this activity show enthusiasm to excel in several domains of the activity. Once again, participation in music influences academic performance in a positive way and has potential to improve learners' communication skills.
5. Whereas participation in co-curricular activities influences academic performance in a positive way, it is not the precursor to academic performance. There is no significant difference in mean scores obtained by students who participate in co-curricular activities and those who do not. Consequently, one should not be compelled to participate in co-curricular activities with the imagination of improving performance but rather gain enough physical fitness to stimulate mental growth.

5.4 Recommendations

In view of the conclusion made above, the following recommendations are made:-

5.4.1 Recommendations for theory and practice.

1. Schools should create more fields to allow various co-curricular activities take place concurrently according to learners' preference on co-curricular activities available at school.
2. Teachers should encourage learners to choose at least one co-curricular activity at school.
3. Co-curricular activities should be embraced if talents are to be fully exploited in learners.

5.4.2 Recommendations for Further Studies.

The researcher recognizes that while the findings show direct effects of participation in co-curricular activities on academic performance, it is worth to note that Kapenguria division is a fraction of the larger west Pokot County. The study therefore recommends that similar studies should be replicated in public secondary schools in other divisions in the County so as to improve on generalizability of the findings.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

RESEARCH LETTER OF INTRODUCTION TO RESPONDENTS

Rionosia Philemon Kapelinyang

University of Eldoret

P.O. Box 1125

Eldoret, Kenya

Dear participants,

I am, master of Education student at University Of Eldoret, and I am carrying out a study to find out the Influence of Learners' Participation in Co-Curricular Activities on Academic Performance in Secondary Schools in West Pokot County. This study provides some information regarding the issue of co-curricular activities and whether they benefit or hinder the academic performance of students who participate.

Your co-operation and assistance in completing the attached questionnaire will be appreciated. All the information obtained from your responses will be used only for this study and will be kept confidential.

May I take this opportunity to thank you in advance for your co-operation and participation in this study.

Yours faithfully

Rionosia Philemon Kapelinyang

APPENDIX II: QUESTIONNAIRE FOR STUDENTS**Section A: Demographic information**

1. Indicate your gender

Male

Female

2. Indicate age bracket

12 years -14years

15 years-17 years

18 years-20 years

3. Indicate class

Form 1

Form 2

Form 3

Form 4

Section B: Participation in Co-Curricular Activities

The following are some statements related to a variety of co-curricular activities found in Secondary schools in West Pokot County. Please indicate whether you strongly agree (SA), agree (AG), moderately agree (MDA), disagree (DIS), or strongly disagree (SD)

Questions	SA	AG	MDA	DIS	SD
4: My school values participation in football competition in the county.					
5: My school organizes music competition with the neighbouring schools.					
6: My school has won several accolades in football competitions at zonal level.					
7: Athletics is highly regarded in my school.					
8: Every student is required to take part in cross-country competition held in my school.					
9: My school has produced reknowned athletics.					
10: My school participates in music festival up to National level.					
11: My school has ever been asked to entertain the president National gala fete.					
12: My school hosts other schools for open competition in football.					
13: Students are usually asked to bring hockey sticks on reporting to school in Form one.					
14: Hockey is popular in my school.					
15: Some students participate in rugby in the school.					
16: My school produces the best students in debate in the					

county.					
17: My school has produced best musicians nationally.					
18: My school has enough facilities and equipments for music.					

Section C: Participation in Athletics

The following are some statements related to athletics found in Secondary schools in West Pokot County, please indicate whether you strongly agree (SA), agree (AG), moderately agree (MDA), disagree (DIS), or strongly disagree (SD)

Athletics statements	SA	AG	MDA	DIS	SD
I am an active member of the school cross-country team.					
I compete in track events up to the National level.					
I keenly participate in field events up to National level.					
The numbers of past students of this school who have made it in athletics inspire me.					
I spent most of my free time practicing running in the field.					
My classmates marvel at my skills.					
I create time away from my athletics sessions to complete my homework.					
Athletics is the order of my day schedules.					
I am hardly in school due to my athletics participation.					
I represent my school, county and country at International level competitions.					

Section D: Participation in Music

The following are some statements related to music found in Secondary schools in West Pokot County, please indicate whether you strongly agree (SA), agree (AG), moderately agree (MDA), disagree (DIS), or strongly disagree (SD)

Music statements	SA	AG	MDA	DIS	SD
I have represented the school in music festival up to National level.					
I am an active member of the school choir.					
I represent my school at Regional music competition.					
I represent my school in music competition at National level.					
I represent my school at International level competition in music festival.					
I spent most of my time practicing singing with my choir mates.					
I take my free time composing some songs for my school choir.					
Learning of music instruments and singing makes me feel refreshed.					
I enjoy participating in singing.					
I am an integral member of the school choir.					
I am hardly in class due to choir requirements.					
I travel a lot out of school due to my music commitments.					

Section E: Participation in Soccer

The following are some of the statements related to soccer found in Secondary schools in West Pokot County, please indicate whether you strongly agree (SA), agree (AG), moderately agree (MDA), disagree (DIS), or strongly disagree (SD)

Soccer statements	SA	AG	MDA	DIS	SD
I am an active participant in football.					
My school participates in football tournaments.					
My school ranks very highly in football competition.					
My school is well known for its foot baling abilities.					
My school has produced many national footballers.					
I represent my school up to the County level in football competition.					
I represent my school up to the Regional level competition in football.					
I represent my school up to the National level in football competition.					
I represent my school up to the International level in football competition.					

Section F: Academic Performance

Indicate your average score in the resent examinations as follows

TERM	CAT%	EXAM %	TOTAL %
First term 2015			
Second term 2015			
Third term 2015			

APPENDIX III: PRINCIPALS' INTERVIEW SCHEDULES

Hallo Sir/Madam! I am Rionosia Philemon Kapelinyang a Master of Education student from University of Eldoret. I am carrying out a research on Influence of Learners' Participation in Co-curriculum Activities on Academic Performance in Secondary Schools in West Pokot County, Kenya. You are being requested to take part in this research study. Your participation is voluntary which means you can choose whether or not to participate. If you decide to participate you are welcome to this interview session. I am going to ask you some questions about learners' participation in co-curriculum activities in your school. Please feel free and respond appropriately. To begin with:

The following questions will guide us in this interview

1. How long have you served as the Principal of this school?
2. How has the previous performance of students who participate in co-curricular activities in K.C.S.E been generally?
3. In your view, does the previous performance in KCSE have any effect on students enrolling to participate in co-curricular activities? (Probe). If so, how?
4. In your view, what role does the teacher of physical education play in the enrolment of students to participate in co-curricular activities?
5. What are the school selection criteria for students to participate in co-curricular activities?
6. How many fields do you have in the school? (Probe). If so, are they to the designated standard? (Probe). If to the standard specify each
7. In your view, how adequate are the field facilities in the school for full participations practice?

8. What is the school policy on co-curricular activities, that is, does the school provide students with enough time to exercise their talents or the students create their own time to take part in co-curricular activities?

9. If the school schedules time for students to participate in co-curricular activities, at what time of the day?

10. What do you recommend that should be done to the current organization of co-curricular

Activities at any level, for instance KNEC, syllabus etc so that co-curricular activities can attract more students?

APPENDIX IV: QUESTIONNAIRE FOR PHYSICAL EDUCATION

TEACHERS

AND H.O.D CO-CURRICULAR ACTIVITIES

Hallo Sir/Madam! I am Rionosia Philemon Kapelinyang a Master of Education student from University of Eldoret. I am carrying out a research on Influence of Learners' Participation in Co-curriculum on Academic Performance in Secondary Schools in West Pokot County, Kenya. You are being requested to take part in this research study. Your participation is voluntary, which means you can choose whether or not to participate. If you decide to participate you are welcome to this interview session. I am going to ask you some questions about learners' participation in co-curricular activities in your school. Please feel free and respond appropriately. To begin with:

The following questions will guide us in this interview

Section A: Background information

1. What is your academic qualification? _____
2. What are your teaching subjects? _____
3. How long have you taught in the current station? _____
4. How long have you held this position (HoDs only) _____

Section B: Questionnaire for Teacher(s)/HOD Co-curricular Activities

The following are some of the statements related to co-curricular and your school please indicate whether you strongly agree (SA), agree (AG), moderately agree (MDA), disagree (DIS), or strongly disagree (SD)

Statements	SA	AG	MDA	DIS	SD
The PE teachers are enough for the school requirements for					

the co-curricular activities.					
The functional playing fields are adequate for co-curricular activities.					
Students voluntarily participate in co-curricular activities.					
The administration supports students in selection of co-curricular activities.					
The school requires a student to participate in any co-curricular activities.					
Certain core subjects are paired to co-curricular activities in school.					
PE teachers are instrumental in students selection of co-curricular activities to participate.					

What are your roles as the physical education teacher /HOD co-curricular activities?

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What are your recommendations with regards to the current organization of co-curricular activities in your school?

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APPENDIX V: LETTER OF INTRODUCTION

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

Telegrams: "DISTRICTER"
 West Pokot
 Telephone
 Email: westpokotland@rocketmail.com

Office of the County Commissioner,
 West Pokot County,
 P.O BOX 1,
KAPENGURIA.

REF: OOP.CC.ADM.15/14 VOL.I/34

29TH APRIL, 2016**TO WHOM IT MAY CONCERN**

**RE: RESEARCH AUTHORIZATION
PHILEMON KAPELINYANG RIONOSIA**

The above mentioned student from Moi University has been duly authorized to conduct research in this County.

He is doing a research on "*Influence of learners' participation in co-curricular activities on academic performances in secondary schools in West Pokot County*"

Kindly accord him the necessary assistance, guidance and support he may require.



**(WILSON O. WANYANGA, MBS)
 COUNTY COMMISSIONER
WEST POKOT COUNTY**

APPENDIX VI: RESEARCH AUTHORIZATION



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

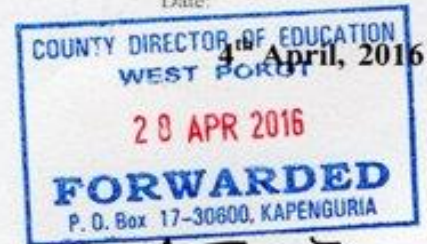
Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

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

Ref. No. **NACOSTI/P/16/64593/9619**

Date:

Philemon Kapelinyang Rionosia
University of Eldoret
P.O. Box 1125-30100
ELDORET.



RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Influence of learners’ participation in co-curricular activities on academic performance in secondary schools in West Pokot County,”* I am pleased to inform you that you have been authorized to undertake research in West Pokot County for a period ending 1st April, 2017.

You are advised to report to the **County Commissioner and the County Director of Education, West Pokot 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.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
West Pokot County.

The County Director of Education
West Pokot County.




APPENDIX VII: RESEARCH PERMIT

Permit No : NACOSTI/P/16/64593/9619
 Date Of Issue : 4th April, 2016
 Fee Received : ksh 1000

THIS IS TO CERTIFY THAT:
MR. PHILEMON KAPELINYANG RIONOSIA
of UNIVERSITY of ELDORET, 0-30600
Kapenguria, has been permitted to
conduct research in Westpokot County
on the topic: INFLUENCE OF LEARNERS'
PARTICIPATION IN CO-CURRICULAR
ACTIVITIES ON ACADEMIC
PERFORMANCE IN SECONDARY
SCHOOLS IN WEST POKOT COUNTY
for the period ending:
1st April, 2017

[Signature]
 Applicant's Signature

COUNTY DIRECTOR OF EDUCATION
WEST POKOT
2-8 APR 2016
FORWARDED
D. BOX 17 SODUK KAPENYURIA
[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 Officers 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.**

RESEARCH CLEARANCE PERMIT

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

REPUBLIC OF KENYA

Serial No: A 8400

CONDITIONS: see back page