SCHOOL FACTORS INFLUENCING THE FREQUENCY OF TEACHING OF PHYSICAL EDUCATION IN LOWER PRIMARY CLASSES IN LAIKIPIA COUNTY, KENYA

BY

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DECLARATION

I declare that this project is my original work and has not been presented for a degree in any other university or any other institution of higher learning for consideration. This research project has been complemented by referenced sources duly acknowledged. Where text, data, graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited in accordance with anti-plagiarism regulations.

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DEDICATION

This research is dedicated to the Almighty God for giving me the ability to complete this work and my family for standing by me throughout the entire project.

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ABBREVIATIONS AND ACRONYMS

HIV/AIDS	**:**	Human Imunodefiency Virus/ Acquired Immunodefiency Syndrome
K.I. E	**:**	Kenya Institute of Education
K.I.C.D	**:**	Kenya Institute of Curriculum Development
MDGs	**:**	Millennium Development Goals
NACOSTI	**:**	National Council for Science and Technology
NAPHER	**:**	Nigerian Association of Physical Health Education and Recreation
NASPE	**:**	National Association for Sports and Education
P. E	**:**	Physical Education
P.E.S	**:**	Physical Education and Sport
UN	**:**	United Nations

ABSTRACT

Physical education is concerned with the teaching of skills, acquisition of knowledge and development of attitudes through movement. The main purpose and objectives of this study was to find out school characteristics influencing the frequency of teaching of physical education in lower primary classes based on the variables: frequency of teaching of physical education in early childhood education, type of school (public or private) and its influence to frequency of PE lesson in early childhood education, influence of availability of physical facilities on frequency of teaching PE, teachers' and head teachers' attitude, gender and qualifications on the frequency of teaching of physical education in lower primary school classes in Laikipia East Sub County. The study was guided by Bronfenbrenner's Ecological Systems Theory which considers the influences on a child's development within the context of the complex system of relationships that form his or her environment. Using the descriptive survey design, the study specifically targeted 62 primary schools. A sample of 19 (30%) were head teachers and 57 (30%) out of 213 lower primary school teachers were selected for study. To obtain the required data, the study used questionnaires for headmasters and teachers and observation. Piloting was done in 4 four primary schools and items in the study instruments validated for their relevance against the set objectives while the test-retest method was used to ensure consistency of the instruments. Both quantitative and qualitative analysis techniques were done for this study because both approaches complement each other. Descriptive research method was used for qualitative data, where common themes were obtained in data collected and clustered in a patterned order so as to identify variables that depict general concepts and differences. On the other hand, the quantitative data was analyzed with the aid of SPSS, a statistical tool for data analysis. The study was informed that high frequency of teaching physical education to early grade learners has immense benefits. However, the study established that physical education is not implemented as per the policy guidelines of the Ministry of Education due to lack of adequate physical education facilities and resources in primary schools.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter gives details on the background to the study, statement of the problem, purpose and objectives of the study, research questions and significance of the study. In addition, the theoretical, conceptual frameworks, assumptions, limitation and definition of significant terms are also presented.

1.1 Background to the Study

Education is a process through which an individual gains experiences, new findings, and value accumulated over the years in his/her struggle for continued existence and development through generations Cronk (2004), says that education and physical education are passing through a period of change and transformation from traditional roles to modern and purposive role in accordance with the increased productive of today's world through competition and production. Physical education (PE) is a systematic instruction in sport, exercise and hygiene given as part of a school program. According to the primary school syllabus by Kenya Institute of Curriculum Development (KICD, 2003) physical education is concerned with the teaching of skills, acquisition of knowledge and development of attitudes through movement.

In November 2003, the United Nations (UN) General Assembly declared the year 2005 as the International Year of Sports and Physical Education (Hardman, 2008; United Nations Resolution 58/5, 2004). The aim was to encourage governments, sporting

organizations and sports personalities to assist in realizing the Millennium Development Goals (MDGs). The MDGs are eight international development goals that all UN member states agreed in the year 2000 to achieve by the year 2015 and they are as follows: eradication of poverty and hunger, achieving universal primary education, promoting gender equality, reducing child mortality, improving maternal health, combating HIV/AIDs, malaria and other diseases, ensuring environmental sustainability and developing a global partnership for development (United Nations, 2010). According to NASPE, (2011) there is a nationally representative data with which to determine the relationship between the actual level of physical activity in which students are engaged and the curriculum models adopted by the schools.

Bailey, (2006) says that Physical Education and Sport (PES) linked with active participation have numerous advantages to learners. According to Allender, Cowburn, & Foster (2006) physical Education helps children to develop self-respect, helps in integrating social, cognitive and physical growth, positively improves self-esteem, and enhances social, affective and cognitive development. Regular physical activity reduces the risk of developing type 2 diabetes and metabolic syndrome-a condition in which one has some combination of too much fat around the waist, high blood pressure, cholesterol, or high blood sugar.

In the Caribbean, physical education is very important, Slater (2013) emphasized that physical activity is significant to children's cognitive development and academic success. In mental development, PE provides mastery of new learning skills since it involves play.

Committee for Health and Social Development meeting in Guyana in (2011) came up with benefits of PE to children which include a display of positive attitudes towards an active lifestyle, exhibition of better health habits even into adulthood, development of personal physical fitness and exhibition of more positive attributes about school and learning, less aggressive behavior among many more benefits. According to Bailey (2006), school is the social institution for the growth of physical skills and the provision of physical activity in children and young people. Teachers should understand that regular physical activity is associated with the enrichment of reduced risk of a variety of diseases. Bailey (2006) therefore suggests a correlation in physical inactivity to health related problems like diabetes and blood pressure not only on adults but in children as well.

Tara,Yen,, Sarah and Mark (2014) established that physical activity was significantly and positively related to both Mathematics and reading achievement in both boys and girls. In their study, Sattelmair and Ratey (2009) opined that there is growing evidence that strenuous physical activity is not only healthy for students but also improves their academic performance. They argued that schools in the United States need to stop eliminating physical education programs under the current political pressures to emphasize on academic subjects and instead to reform the traditional physical education.

Regionally, the emphasis on the importance of physical education cannot be ignored. In Zimbabwe, for instance, the importance of PE in the school curriculum cannot be over emphasized as it plays an important role in educating students where well designed PE

lesson programs have the potential to influence learners physically, intellectually, emotionally and helping learners to make informed choices later in life Nhamo, (2012). According to him, a healthy physically active student is more likely to be academically motivated, alert and successful. In Ghana, according to Ammah and Kwaw (2005), PE is an integral part of school curriculum with about 70% of Ghanaians acknowledging its immense importance.PE is assessed internally in schools in Ghana, Ammah & Kwaw, (2005). Toriola, Owolabi & Kului, (2010) found out that the presence of facilities and infrastructure plays a fundamental role in influencing the frequency of teaching of physical education in South Africa. (ibid) further revealed that only 0.3% of schools have a swimming pool and 29% have access to a swimming pool.

In Kenya, the importance of PE is recognized by the Ministry of Education and given its rightful status by being taught in teacher training colleges and even in some Kenyan universities. It is allocated time in the syllabus both in the primary and secondary sections. A study by Gitonga, Andanje, Wanderi & Builards (2011) on teacher trainee attitude towards PE, they affirm that in all the over 18 teacher training colleges PE is a mandatory subject which must be taken by all in spite of interest, gender, age or physical environment.

Having acknowledged the importance of PE to the young learners, the question now is, how often in a week should it be given to learners? In the United States, Chomitz, Slining, & McGowan (2009) say that more time in physical education leads to improved grades and standardized test scores. Evenson, Ballard & Lee (2009) found that children

who passed more fitness tests during physical education performed better on achievement tests in Math and English than did students who had poorer fitness test results. Carlson, Fulton and Lee (2008) have shown that more time in PE does not adversely affect academic performance rather improves on it. According to Jenkinson and Benson (2010), schools can provide many opportunities for young people to engage in vigorous physical activity and are thus better placed amongst societal institutions to motivate them to live active lifestyles. Physical education should therefore be taught frequently in schools as it has the potential to improve learners' lives through sporting experiences, developing their skills and identifying students with possible hidden talents or those in need of further support.

Bevans, Fitzpatrick, Sanchez, Riley & Forrest (2010) indicated that students who attended schools with a high student-to-physical educator ratio had more PE time and engaged in higher levels of physical activity during school time. Konstantin (2014) found out that the frequency of physical education classes' declines from primary to secondary schools in countries.

Kathleen, David, Mike & Rachel (2009) argued that in the social domain, there was sufficient evidence to support claims of positive benefits of frequent activity for young people. There is, however, some persuasive evidence to suggest that physical activity can improve children's concentration and arousal, which might indirectly benefit academic performance. Hardman (2008) established that PE had insufficient curriculum time allocation, perceived inferior subject status, insufficient competent qualified and/or

inadequately trained teachers (particularly in primary schools), inadequate provision of facilities and equipment and teaching materials frequently associated with under-funding, large class sizes and in some countries, inadequate provision or awareness of pathway links to wider community programmes and facilities outside of schools. Marshall & Hardman (2000) argue that PE is allocated very few hours and that most teachers and a few learners look down on the status of PE as compared to other examinable subjects.

In South Africa, Hendricks (2004) established that though physical education is an important component in the school curriculum, it continues to be marginalized in the South African primary schools. Carlson et al (2008) further support the need for more time in physical activity. In their study, they confirmed that time spent on physical education (minutes per week) was collected and from classroom teachers and academic achievement was scored on an item response theory scale. In their findings, a significant benefit for academic achievement in Mathematics and reading was observed for girls who enrolled higher in amounts of PE time (70-300) minutes per week. The study hence concluded that higher amounts of physical education may be associated with a higher academic benefit.

In Kenya, the frequency with which PE is taught faces a myriad of challenges chief of which is failure of policy implementation, Van Deventer,(2005) Although Krotee and Wamukoya (1986) laud the 8-4-4 curriculum for recognizing PE's importance in the child's psychomotor domain, it has remained a marginalized and non-examinable in primary schools to date. It is not either reinforced by the Ministry of Education Wanyama

and Quay (2014) other academic subjects are seen as key to a bright future while PE is viewed as a non-productive educational activity, a view that is regrettably shared by a cross-section of teachers.

The type of school is a determining factor regarding the frequency of teaching PE to grade 1, 11 and 111 learners. In the United States, Curtner-Smith found out that types of school have an influence on the teaching of physical education as the PE curricula are determined at the local level. It is therefore taught in many different forms and structures. Jenkinson and Benson (2010) argue that types of school, public or private. play an important role in influencing the teaching of PE in that in private schools in Nigeria, there could be an over emphasis on over drilling children in class work as compared to their public counterparts. They further argue that private schools are in business and can easily substitute PE lessons for teaching of more academic and examinable subjects in order to attain attractive results in national exams to remain in business.PE teachers therefore may have to continually provide a justification for the existence of their subject and to plead for actual control of the time they are allocated (DiFiore,2010) In many public schools on the other hand, PE class is a time to take a break from serious class work.

In Kenya, both categories of schools exist and in both teachers compete to get high mean scores in both internal and national exams. In such events PE lessons might be skipped to create time for revision and drilling for exams. Physical activities are yet another factor that that can determine the frequency of teaching PE to early grade learners.

According to Maicibi (2003) physical facilities are important in enhancing the frequency of teaching of PE. He asserts that when the right quantity and quality of human and physical resources are brought together, they can manipulate other resources towards realizing institutional goals and objectives. Educational outcomes in schools are closely linked to utilization and adequacy of teaching and learning resources in different ways; poor utilization or underutilization, may negatively affect the frequency of teaching PE. Provision of play facilities is important in enhancing the frequency of teaching of PE. However, the number of children in a class can affect use of physical facilities availed for children's use. Physical education involves a lot of movement that needs the teacher to be alert always to ensure the students are safe and also concentrate on instruction on how to use available facilities during the lesson.

In Kenya, PE resources and facilities in schools are a great challenge. This is because their availability depends on the social economic status of the school. Better financially endowed institutions will have a variety of superior facilities, yet we all know that in order to improve academic performance and education in general good learning materials and resources in all schools are very crucial. Almond (1997) emphasized the significance of having suitable human and material resources to sustain educational efforts.

Kirui and Too (2012) in their study suggest that there ought to be a commitment to work dynamically so that the position of PE, inside and outside educational system is both acknowledged and developed through measures to improve the curriculum, sport amenities and equipment, the position of PE and the initial in-service training of teachers.

In various studies, teachers and head teachers have been cited as being barriers to the teaching of PE through their negative attitudes towards the subject. Drewe (2001) say that teachers lack confidence and interest in handling PE activities. They further say that teachers do not plan for PE lessons having had personal negative knowledge in PE and lacking in training, understanding and prerequisites to teach PE. Xiang & Hebert 1995 suggest that beliefs about PE developed prior to teaching, have relatively little impact on trainee teachers. Curtner-Smith, (2011) found that teacher training does not tend to challenge teacher trainees' values and beliefs about PE but rather modify their values and beliefs Solmon and Ashy, (2005).

It is unfortunate that despite the fact that teachers and head teachers have undergone full training on the teaching of P.E, they continue to be prejudiced against the subject Marshall & Hardman (2000)in their study argue that teachers and other stakeholders continue to ignore PE and accord it a low status. Gathu, Ndung'u and Bomett (2015) in their study on challenges of implementing PE in secondary schools in Githunguri District established that physical education is inadequately staffed, there are no facilities in schools, and the condition of the available facilities is appalling among other challenges. This condition cannot be ruled out in contributing towards the negative attitude among PE teachers and head teachers of primary schools.

Njororai, Gathua & Owiye 2005 suggest that there is need for the government of Kenya to lay more emphasis on the implementation of PE in schools by retraining teachers, having regular in-service and other short term courses, formulating and implementing an

evaluation system, providing a diversified range of facilities and including more sports disciplines for competition at school. This done the level of enthusiasm to teach PE will be boosted and attitudes changed. During the study, efforts were made to find out whether teachers appreciated the importance of PE, how frequently PE is availed to early grade learners, whether type of school influences the frequency of teaching PE to children, if availability or non-availability affected the frequency of PE lessons and if teachers 'and head teachers' attitudes, qualifications and gender had any impact on the frequency of teaching PE to early grade learners. It is based on the above background that this study sought to bridge the above gap by establishing the school factors that influence the frequency of teaching of PE in early childhood classrooms/early grade in Laikipia East Sub-County, Kenya

1.2 Statement of the Problem

PE is confirmed to have immense benefits to children's holistic growth and development. Various studies have shown that it has however continued to be a marginalized subject in schools worldwide. In many schools in Kenya, PE class time has been found to be used as a time to take a break from serious class work. Other academic subjects are seen as key to a bright future while PE is regarded as a non-productive educational activity. Previous studies appeared to have focused on the influence of school characteristics on the teaching of physical education but have not focussed on factors influencing the frequency of teaching PE at early childhood level presumably due to the fact that early childhood learners cannot argue out their need for PE despite its acclaimed

benefits. There was therefore need to conduct a study at the early childhood level of learning to close this gap.

1.3 Purpose of the Study

The purpose of this study was to find out school characteristics such as category of school, availability and influence of physical facilities on teaching of PE, care givers' attitude, gender and qualification on the frequency of teaching of physical education in lower primary classes in Laikipia East Sub-County, Kenya

1.4 Specific Objectives

The objectives of study were to:

i) Find out the extent to which teachers understand the importance of PE to children

ii) Establish the frequency with which early childhood learners in primary schools are engaged in PE lessons per week.

iii) Find out how type of school influences the frequency of teaching of physical education in early childhood classrooms.

iv) Establish influence of availability of physical facilities on the frequency of teaching of physical education in early childhood classrooms.

v) Find out the extent to which ECE care givers attitude, gender and qualification influences the frequency of teaching of physical education in early childhood classrooms.

1.5 Research Questions

The study was based on the following research questions

i) What is the teachers' understanding of the importance of PE to children?

ii) How frequently are children engaged in PE in a week in early childhood classrooms within primary schools?

iii) How does the type of school have any influence on the frequency of teaching of PE in early childhood classrooms?

iv) What is the influence of the availability of physical facilities on the frequency of teaching of PE in early childhood classrooms?

v) What is the influence of teachers' and head teachers' qualifications, gender and attitude on the frequency of teaching of PE in early childhood classrooms?

1.6 Significance of the Study

The study may come up with appropriate strategies that could be adopted by teachers in education sector in promoting the teaching of physical education to lower primary school pupils. The study could also equip teachers with knowledge of the benefits of PE to early childhood learners.

The findings of the study are expected to contribute to the advancement of knowledge about physical education and facilities required for physical education curriculum development in Kenya. It would also seek to find solutions to the poor attitudes towards physical education by instructors through organization of PE workshops, refresher course and sensitization programs by education stakeholders. The study may be of immediate

benefits to quality assurance and standards stakeholders in the formulation of future physical education policy implementation programs.

It is envisaged that the insights provided by the study will assist in generating recommendations to the Ministry of Education authorities on how to provide the necessary support services to lower primary school teachers in teaching physical education. The study will also inform stakeholders such as school administrators and other education officers about the importance of physical education curriculum in lower primary schools. The study is expected to contribute to knowledge on school characteristics influencing the frequency of teaching of physical education in the Kenyan lower primary schools.

1.7 Limitations and Delimitation of the Study

1.7.1 Limitations

According to Best (2012), limitations are conditions beyond the control of the researcher that may place restrictions on the conclusions of the study and their application to other situations. The study area had poor infrastructure and poor means of transport due rugged terrain which made the movement and the logistics of carrying out the research a problem hence cost implication. This was solved by using motorcycles to access areas that cannot be reached using motor vehicle transport.

The descriptive research design was employed during the study. The main weakness of descriptive design was confidentiality. Teachers identified this during the filling of

questionnaires. The participants left gaps to questions they thought to be personal particularly the question on the number of times children are engaged in PE lessons per week. This was counteracted by reassurance by the researcher that the questionnaire was not vindictive.

1.7.2 Delimitations

The study was carried out in lower primary schools in Laikipia East Sub County. It only targeted lower primary school teachers and the head teachers. It was not applied to other sub counties and to upper primary teachers.

1.8 Assumptions of the Study

In this study the following assumptions were made:

- Teachers understand the importance of PE.
- There is distribution of PE lessons for early childhood learners in lower primary classes every week.
- There are factors that influence the frequency of teaching of PE in lower primary classes.

1.9 Theoretical and Conceptual Framework

Theoretical frameworks are structures that are derived from existing theorization of key aspect of this study. They also provide the foundation within which this study is framed. On the other hand, the conceptual framework is the researcher's position on the problem

of this study which provides the graphic presentation of various variables interactions and direction of the outcomes from the interactions.

1.9.1 Theoretical Framework

Bronfenbrenner's (2005) Ecological Systems Theory considers the influences on a child's development within the context of the complex system of relationships that form his or her environment. The bio-ecological model is both bi-directional and the interactions between the four systems, *micro*-, *meso*-, *exo*-, and *macro*-level systems are synergistic in nature. The complexity of the interactions between the systems is daunting but encourages social scientists, and psychologists to better utilize factors that impact on children's health and wellbeing.

The theory suggests that a child's development is a product of a variety of critical dimensions including context and the individual's personal attributes. Drawing upon the pioneering work of social psychologist Kurt Lewin, Bronfenbrenner's theory emphasizes the "joint function" that personal attribute and environmental characteristics have in influencing an individual's development. In brief, Bronfenbrenner's theory defines the construct of *development* and the multi-system layers of the environment that influence child development. Furthermore, he describes the nature of the processes within the environment that influence development. By so doing, Bronfenbrenner's bio-ecological theory goes beyond providing a framework for identifying and conceptualizing the multi-system factors that influence development. It considers an individual's topology-his or her setting and the way in which individual and external forces interplay to influence

development. It, most importantly, attempts to underscore processes and the dynamics of these processes that might influence development.

In the context of this study, physical activity behavior and the factors influencing it are very complex. Bronfenbrenner's (2005) Ecological Systems Theory Models are used to provide a framework to understand the numerous factors and behaviors that enable or act as barriers to physical activity participation of lower primary school pupils. Ecological theory helps primary school teachers to identify opportunities to promote participation in physical activity by recognizing the multiple factors that influence an individual's behavior. Bronfenbrenner's work demonstrates the influences on behavior as a series of layers, where each layer had a resulting impact on the next level. The implementation of Physical Education programmes in schools may be further determined by internal factors such as the status of the subject, the syllabuses, structure of the programme, qualifications of teachers, quality and instructional skills of teachers, PE, facilities, equipment, budgeting provisions as well as the extra-mural or co-curricular sports traditions. In addition, the joint educational actions of the teachers, learners and managers in relation to Physical Education determine its teaching in the schools. Hence, a critical analysis of internal variables such as category of school, teachers' and head teachers' attitude, gender and qualifications of teachers, facilities and equipment that may influence the frequency of teaching of Physical Education in lower primary schools.

1.10 Conceptual Framework

The relationship between the independent and dependent variable are illustrated in this section.

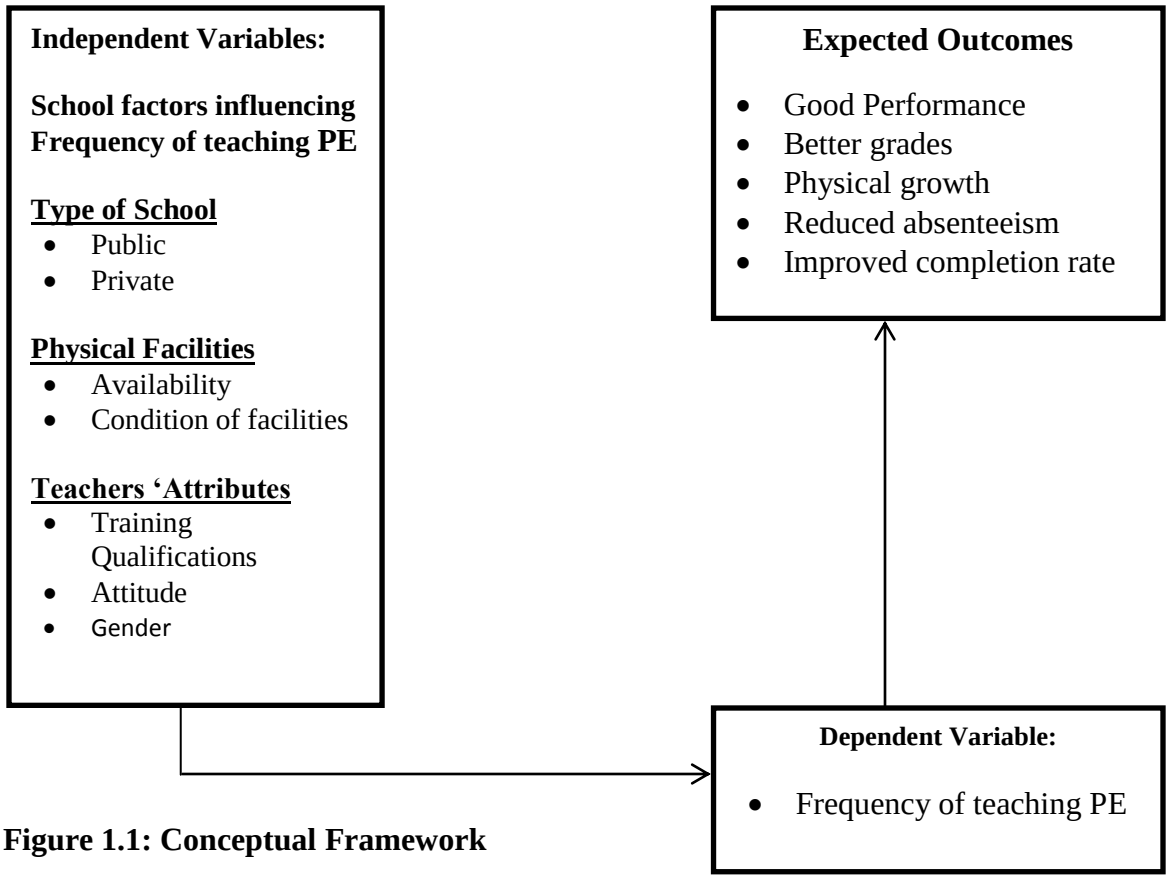

Figure 1.1: Conceptual Framework

As conceptualized in this study, the independent variables (school factors) which include; the category of school, the availability or unavailability and conditions of physical facilities may influence the frequency of teaching of physical education in lower primary classes. In addition, attributes of teachers, their attitudes, training qualifications and gender may affect the frequency of teaching PE. If the above factors which are the (independent variables) are not taken care of then they will eventually influence the frequency of teaching PE which eventually denies children the benefits derived from PE as shown in Figure 1.1.

1.11 Operational Definition of Terms

Caregivers: Teachers and head teachers under whom the nurturance of children in early childhood was entrusted.

Class Attendance: Children being regularly present in early childhood classrooms.

Early childhood classrooms : Lower primary classrooms or level from grade 1- grade 3.

Early childhood learners: Children in lower primary classrooms or grade 1-grade 3.

Early Grade learners: Children in the first three years of formal education in the primary school.

Frequency: Number of times teachers engage learners in PE lessons.

Large permanent fixed play equipment: Play facilities in early childhood classrooms, erected in the play field and not ordinarily portable.

Learning Needs: Essentials required by early childhood learners such as school fees, school uniforms and writing materials.

Learning: Acquisition of knowledge or skills through study, experience or being taught.

Physical education (PE): Instructions in physical exercise and games for early childhood classrooms.

PE facilities: Physical resources such as fields, small movable play materials and large permanently fixed play equipment in early childhood classrooms.

School Administration: Individuals in a school such as head teachers and managers, who control, organize and direct both human and material resources in early childhood classrooms/ institutions.

School Based Characteristics: Issues within the school that influence the frequency of teaching of PE.

Small movable play materials: Play items such as balls, bean bags, skipping ropes, tyres, hoops, rackets among others.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter focuses on review of literature related to importance of physical education to early childhood education. It also focuses on the frequency of teaching physical education in early childhood education. More so, it addresses the category of school and the availability of physical facilities and their influence on the frequency of teaching physical education to lower primary children. Finally, it addresses the caregivers' attitude, gender and qualifications and how they influence the frequency of teaching physical education to early grade learners.

2.1 Importance of PE to Children

Globally, schools can provide many opportunities for young people to engage in vigorous physical activity and are thus better placed amongst societal institutions to motivate them to live active lifestyles Jenkinson & Benson, (2010). PE has several benefits to the growth and development of children and especially in their early development years. In a study in the United States, Chomitz, Slining, and McGowan, (2009) analyzed national data collected from nearly 12,000 adolescents to examine the relationship between physical activity and academic performance. Adolescents who reported either participating in school-based physical activities, such as PE and team sports, or playing sports with their parents were 20 percent more likely than their sedentary peers to earn an "A" in math or English. Hence the study concluded that in some cases, more time in physical education leads to improved grades and standardized test scores. A cross-

sectional study by Evenson, Ballard & Lee, (2009) data from 1,800 Massachusetts middle-school students found that children who passed more fitness tests during physical education performed better on achievement tests in math and English than did students who had poorer fitness test results.

However, some promising research, such as that conducted by Morgan, Beighle and Pangrazi (2007) demonstrated that students are more physically active on days when they participate in physical education classes. NASPE (2012) says quality physical education contributes to a child's daily accumulation of physical activity and is of particular importance for children who are overweight or who lack access to these opportunities in the home environment. Evidence supporting the association between frequent physical activity and enhanced academic performance is strengthened by findings that link higher levels of physical fitness with improved academic performance among children and teens.

In the United States, Tara et al (2014) carried an investigation to determine the independent contributions of physical activity to academic achievement in children. Prior academic achievement and socio-economic status were also examined. Elementary school participants were selected from the Early Childhood Longitudinal Study-Kindergarten database. The study was based on the structural equation models which were constructed for both mathematics and reading achievements. In their findings, it was established that physical activity was significantly and positively related to both mathematics and reading achievement in boys and girls.

Sattelmair and Ratey (2009) in their study on physically active play and cognition at the University of Illinois established that there is growing evidence that physical activity is not only healthy for students but also improves their academic performance. Based on such research, they argue that schools in the United States need to stop eliminating physical education programs under the current political pressures to emphasize academics and instead to reform and reform traditional physical education to more structured physical education lessons. Therefore, modern physical education should move away from its competitive sports approach to one that employs a wide range of play involving strenuous physical activity for every student.

Kathleen et al (2009) critically examined the theoretical and empirical bases of claims made for the educational benefits of Physical Education and School Sport (PESS). A historical overview of the development of PESS points to the origins of claims made in four broad domains: physical, social, affective and cognitive. Analysis of the evidence suggests that PESS has the potential to make contributions to young people's development in each of these domains. There is suggestive evidence of a distinctive role for PESS in the acquisition and development of children's movement skills and physical competence. The study argued that these are necessary, if not deterministic conditions of engagement in lifelong physical activity.

In the United Kingdom, Hardman (2008) carried a survey which was to assess the worldwide situation of school PE as well as developments since the Physical Education World Summit held in November 1999 in Berlin. A pluralistic approach was adopted

which facilitated data collection on national level policies and practice-related issues in school PE, the PE curriculum, resources (human and material), the PE environment (school subject and PE teacher status; and pathway links to PE activity in and out-of-school settings) and 'Best Practice' exemplars. The data generated provided an indication of patterns and trends in school PE in countries and regions across the world. The survey established that there was insufficient curriculum time allocation for PE activities, PE is given inferior subject status, has inadequately trained teachers (particularly in primary schools), and has inadequate provision of facilities, equipment and materials. It was further established that PE suffered frequent under-funding, large class sizes and inadequate awareness of pathway links to wider community programmes and facilities outside schools. Levels of obesity amongst children of school age were noted to be alarmingly rising.

Regionally, Ammah and Kwaw (2005) in Ghana shows that PE is an integral part of the school curriculum with most teachers acknowledging its importance. Unfortunately, not much academic importance is attached to it. School heads are very prejudiced against the subject and most PE lessons are instead used for other activities. However, professional PE teachers endeavor to build the image of PE through campaigns via mass media. The perception of administrators towards physical education is essential to physical education teachers and for the success of physical education programs in schools.

In his study on the role of physical education in South African primary schools, Hendricks (2004) established that though physical education is important in school

curriculum, it remains marginalized in the primary school education sector. Through this marginalization, Physical Education has been reduced from having full subject status, to being only one of the components of the primary school learning areas, namely, life orientation. Consequently, Physical Education finds itself in a situation in which it is generally being taught by a class teacher and no longer by a specialist Physical Education teacher. Possible reasons for this marginalization were expressed, however, the argument that Physical Education is an imperative in the holistic development of the child, was also espoused. The study critically examined the route that South African primary school education was taking and focused on the issues of holistic education and development, Outcomes-based Education and Life Orientation.

In Kenya, Njororai et al (2005) in their study of physical education and sport in primary schools in central Kenya aimed at establishing the actual practice in schools and the possible suggestions that could enhance its effectiveness, a total of 118 teachers, with a background in PE responded to a brief questionnaire. The questionnaire sought information pertaining to their demographic details, interest in sports, emphasis on the subject, sports disciplines offered, and coaching competence, time-tabling of PE, level of emphasis, subject supervision and recommendations. Among other findings, it was apparent that ministry inspectors rarely supervise the teaching of PE that, students are enthusiastic about sport, and that competent coaches are lacking in some disciplines despite the importance of physical education. There is therefore need for the government to lay more emphasis on the implementation of PE by having teachers of PE in schools re-trained, formulating and implementing an evaluation system, providing PE facilities,

and to include more sports disciplines in school. From the above studies, it is observed that, there were significant and positive benefits of PE to children.

2.2 Frequency of Teaching PE

Bevans et al (2010) conducted an empirical evaluation of specific human, curricular, and material resources that maximize student opportunities for physical activity during physical education (PE) class time in the United States of America. The findings of the study indicated that students who attended schools with a low student-to-physical educator ratio had more PE time and engaged in higher levels of physical activity during school time.

Konstantin (2014) carried a comparative study on the frequency of physical education curriculum of primary and lower secondary school pupils in Sweden and South Africa. The aim of the study was to describe the frequency of physical education curriculum taught in class as perceived by pupils in Sweden and South Africa in terms of physical, social and personal development as well as health promotion. 2495 Swedish and 3748 South African pupils completed the questionnaire. According to the results, the frequency of physical development classes declines from primary to lower secondary schools in both countries, while health promotion classes in South African schools showed good standards.

According to Hardman & Marshall (2000), European regions vary in time allocation for primary schools and secondary schools. Central and Latin America schools also vary in

time allocation in both primary and secondary schools. Physical education curriculum allocation has increased in the period between 2000-2005. According to Curry (2012), the study shows that compared with classroom teachers, physical education tutors teach longer and top quality classes in which learners use extra time being physically energetic. In another research article by Curry (2012), primary teachers frequently skip the compulsory P.E. hours from their week because of emotional pressure by the scope of the curriculum. Katherine (2011) noted that learners who are present at schools with a sufficient number of tutors who completely provide PE coaching (specialist teachers) receive more PE knowledge and skills per week.

In a UNESCO (2014) world-wide survey of school physical education to inform the development of benchmark Indicators on Quality Physical Education (QPE) in schools and Quality Physical Education Teacher Education/Training (QPETE/T) in provider institutions as well as principles of a Physical Education Basic Needs Model the Project was in line with a CIGEPS' mandate to ameliorate physical education policy and delivery around the world. The issue of time, frequency and allocation is generally complicated and is exacerbated by non-implementation of prescribed or mandated time allocations.

In African countries, the presence of facilities and infrastructure plays a fundamental role in influencing the frequency of teaching of physical education. A survey carried out by Toriola et al (2010) showed that schools which were well endowed in physical facilities attended PE more frequently than their counterparts without adequate PE facilities.

Calson et al (2008) examined the association between time spent in physical education and academic achievement in a longitudinal study of students in kindergarten through fifth grade. The study used data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998 to 1999, which employed a multistage probability design to select a nationally representative sample of students in kindergarten Time spent in physical education (minutes per week) was collected from classroom teachers, and academic achievement (mathematics and reading) was scored on an item response theory scale. It was concluded that the higher the amounts of physical education time, the higher the academic and other benefits. In an international survey, which did not cover Kenya but did investigate other African nations, Hardman (2008) discovered that the status of PE was low and the subject was in grave danger of being sidelined. The problems ranged from reduced curriculum time and a lack of adequately prepared teachers, to the poor state of facilities and a negative perception from teachers, students and parents. Although many school principals and teachers appear to understand the importance of PE, they are also aware of the immense pressure for students to perform well in high stakes examinations DiFiore, (2010). This would seem to suggest that making PE a core and examinable academic subject in schools would solve his problem

In Kenya, Wanyama and Quay (2014) carried a qualitative study to compare the experiences of Kenyan and Victorian secondary school Physical Education teachers with the aim of discovering what they can learn from each other. Through in-depth interviews with four experienced PE teachers; two each from Kenya and Victoria, and using phenomenological research methods, the study established that there is a lot that PE

teachers can learn from each other in matters concerning curriculum time allocation, class sizes, teachers' professional affiliation, examination and assessment, school sport, and use of technology, among others. In the new curriculum which is being rolled out in Kenya in the year 2018, PE has been allocated appropriate time especially in the lower primary now known as early grade. Being referred to as psychomotor and creative activity it has been allocated 5 lessons in a week or 1 lesson of 30 minutes per day. The study therefore sought.

2.3 Type of School

In the United States curricula Curtner-Smith (2011) found out those types of schools have an influence on the teaching of physical education as the curricula is determined at the local level. Various curriculum models are used in instruction, including movement education, sport education, and fitness education (Lonsdale et al., 2013). In private schools, other curriculum models of teaching physical educationist considered a basis for students' learning skill or knowledge is planned for students. According to NASPE, (2011), A paucity of nationally representative data is available with which to demonstrate the relationship between the actual level of physical activity in which students are engaged and the curriculum models adopted by their schools. While private school teachers are not required to hold license, all public school teachers must be licensed for P.E. by the state in which they are employed. These expanded waiver and substitution policies increase the possibility that students will opt out of physical education for non-medical reasons.

Type of school may influence the frequency of teaching physical education in that private boarding schools, according to Jenkinson & Benson (2010) can provide many opportunities for young people to engage in vigorous physical activity and are thus better placed amongst societal institutions to motivate young people to live active lifestyles due to facilities in the schools set up. This is not to downplay the contribution of clubs but it is in schools where children are introduced to PE and sport in a formal setting and with a curriculum to guide such exposure.

In Nigeria, types of schools (private or public), play an important role in influencing the teaching of P.E in that in private schools, there is emphasis of over drilling children in class work as compared to their public school counterparts (Jenkinson & Benson, 2010). The private school are in business and can easily substitute PE lessons for the teaching of examinable subjects in order to attain a high mean score in national examinations. DiFiore (2010) says that PE teachers as left begging for their PE time and trying to give justification for its existence.

In Kenya, all public schools and colleges in Kenya teach PE programs that are centrally developed by the KIE. The programs are generally practical, as they focus on the teaching of skills of various outdoor sports and games. However, there are two other categories of privately owned schools that provide the education of the upper class: the international schools that have their own unique PE programs that are modeled on the British and American systems and local private schools that follow the KIE PE curriculum. The private schools are generally adequately empowered to teach PE due to

the provision of modern sports facilities and equipment (Rintaugu, Mwisukha & Munayi, 2011).

The schools also recruit adequate professional teachers and coaches for their PE programs. Although the objectives of teaching PE in private schools slightly vary from one school to the other, the most common objectives include promoting physical, mental, and social well-being of children; developing their life skills; and instilling virtues of self-confidence, cooperation, and work ethic that they need to succeed in various facets of life. The PE curriculum activities for private schools mainly include swimming, basketball, tennis, rugby, track and field, soccer, field hockey, cricket, rounder, and outdoor excursions. Notably, private schools regularly engage their children in outdoor adventure activities such as mountain and rock climbing, canoeing, and boating. This contrasts the practice in public schools where it is assumed that children interact with the natural environment on a regular basis (Rintaugu, Mwisukha & Munayi, 2011).

Physical education is a unique subject and so its teaching at lower primary level is a necessity to develop the individual physically, intellectually and morally. Taking into consideration the numerous physical, mental, social, moral, emotional and economic benefits an individual, community and the nation at large can derive from physical education it is important to advocate for the teaching of physical education in our public and private schools and especially to early grade learners. During the study, efforts were made to find out whether type of school influences the opportunity for lower primary children to engage in PE.

2.4 Physical Facilities

Physical facilities are important in enhancing the frequency of teaching of PE. This study therefore endeavours to find out how they contribute to the teaching of PE in lower primary classes. Availability of teaching and learning resources (TLR) enhances the effectiveness of schools as these are basic things that can bring about many benefits to learners. Maicibi (2003) opined that all institutions or organization are made up of human beings (workers) and other non-human resources. He further asserts that when the right quantity and quality of human resources is brought together, it can manipulate other resources towards realizing institutional goals and objectives. Dinan-Thompson (2009) states that educational outcomes in schools are closely linked to utilization and adequacy of teaching and learning resources in different ways; poor utilization or underutilization, may negatively affect the frequency of teaching PE.

Milder (2006) suggests that adequate equipment and appropriate facilities are provided to implement the curriculum as adequate budget for physical education is provided on a yearly basis. Apart from the athletic program, adequate numbers of indoor and outdoor teaching stations are available for the number of students, classroom space is available for school physical education programs, equipment and facilities are clean, safe and are inspected on a regular basis. Providing facilities that are clean, safe, and adequate for the number of students needs in physical education may differ; the following are recommendations appropriate to the grade level of the student. Upper elementary school students need more space than lower elementary school students because of their body size and the nature of the program. The outside facility should include both a hard surface

as well as a grass field. The grass field area should be large enough for students to run safely in group activities (100 yards x 100 yards) or (91.4 m x 91.4m). (Mary Thissen-Milder, 2006).

2.4.1 Availability of Physical Facilities

The availability of physical facilities on the frequency of teaching of physical education in lower primary school classes is one of the issues that require much consideration. Provision of play facilities is important for the teaching of PE, however, class size or the number of children can affect use of physical facilities availed for their use. In Australia for instance, Myton (2003) recommended that class sizes in Australian schools be reduced to 20 students. A small number of children makes it easier for the teacher to be able to manage them and utilize effectively the facilities availed.

UNESCO (2014) during its world-wide survey of school physical education to inform the development of benchmark Indicators on Quality Physical Education (QPE) in schools and Quality Physical Education Teacher Education/Training (QPETE/T) in provider institutions as well as principles of a Physical Education Basic Needs Model found out that there is general global and regional concerns about physical education facilities (indoors and outdoors) as well as associated amenities (such as changing rooms and showers), equipment provision and inadequacies in facility maintenance. Whilst there is a greater propensity of inadequate physical resource provision in low income countries and regions, the divide between these and some schools in middle and high income regions and countries is not always clear-cut. The level of such provision together with

challenges presented by inadequate maintenance can detrimentally impact on the nature, scope and quality of physical education programs in both primary and secondary schools.

Physical education involves a lot of movement that needs the teacher to be alert always to ensure the students are safe and also concentrate on instruction on how to use available facilities during the lesson. This was also supported by Hickey (2003) who cites various research and policy initiatives showing overwhelming evidence that small classes benefited students more. She recommended that sustained efforts must be made to ensure Australian children benefited from small class experiences because small classes were superior in terms of students' reactions, teacher morale and the quality of the teaching environment. For instance, swimming classes should be small due to safety issues and also because a limited number of students ensure that the instructors can assist all learners in an un-crowded situation. Provision of physical facilities in a PE lesson is also important as Karp, Hui, & Perlman (2008) point out. Schools are expected to keep up with advances in technology, thereby preparing students with skills needed to use technology effectively. These researchers found that the physical education teachers perceived themselves as competent or more proficient in using timing devices, aerobic exercise equipment, and activity monitors, such as pedometers.

In African countries, the presence of PE facilities and infrastructure plays a fundamental role in in influencing the frequency of teaching PE An empirical survey carried out by Toriola et al (2010) in South Africa established that 23% of schools had no facilities, 51% had a multipurpose hall and 25% of schools had a sports field though only 10% of

these were in use and 30%did not have suitable outdoor hard surfaces for outdoor games and activities. It was further established that only 0.3% of schools had a swimming pools and only 29% have access to swimming pools. The study however did not capture the number of times children are engaged in PE per week in lower primary classes. In Botswana, Shehu (2009) says that inadequate funding and deficiency of essential resources coupled with the perception of PE as a non-intellectual subject have seriously devalued its status. Additionally, school cultures have isolated PE teachers and deprived them of meaningful badly needed support systems necessary for professional learning.

Woods, Karp, Hui, & Perlman (2008) recommend availing heart rate equipment for monitoring or assessing pupil's heart rate and effort during physical activity. The hand-held PCs and available software give physical education teachers the opportunity to record assessments of student performance in both behavior and sport skill development. Regarding the heart rate monitors, they are an accurate tool that provides students individual feedback for appropriate intensity levels of physical activity as well as a visual aid for learning. Furthermore, heart rate monitors are a valid means for assessing a student's effort during physical activity.

In Kenya, the most common activities and games in schools are soccer, volleyball, athletics, handball and net ball. Children both in lower and upper classes will be seen playing in school fields unsupervised using torn balls or homemade balls. PE involves a myriad of activities which according to KIE (2003) include body movement and exercises for body agility, running races for strengthening the heart and singing games/

dances for enjoyment. Since physical activities are important for children's holistic growth and development, Mugo (2005) who in her research explored conditions in the play environment that could cause accidents to young children, emphasizes that they should be given an opportunity to engage in safe play.

2.4.2 Condition of Physical Facilities

Although availability of PE facilities is important, deficiency of essential resources has seriously devalued its status in Botswana (Shehu, 2009). Further, poor maintenance of large permanently fixed equipment like slides, swings, climbing frames as well as small movable apparatus such as toy cars, tyres, balls, beanbags, hoops, relay batons, bats and rackets could cause accidents. Broken play equipment, loose bolts in swings, metal climbers and slides can easily cause falls (Stoppard, 2001) and could lead to children fracture their delicate bones. Torn bean-bags on the other hand could spill and injure children's eyes while playgrounds with open holes/pits or surfaces which are not leveled, presence of sharp objects like stones, thorns, sticks, broken bottles or nails in the playground and broken metallic play facilities can cause pricks or cuts. Dry sand used for play in the playground may also cause eye injuries if it is not made wet before use because it can fly into children's eyes.

Due to financial constraints, many Kenyan schools have large classes because demand for education is higher than the ability of schools to provide the necessary facilities. Primary schools in Kenya contain students ranging from over 40-50 per class (MOEST, 2001; Saitoti, 2004). In this situation it is also difficult for teachers to know their students

and to appropriately understand their backgrounds and experiences, yet "effective PE teachers are better able to gain their students' cooperation and respect when they get to know them as individuals" (Fisette, 2010, p.43). PE teachers face the challenge of teaching these large classes with minimal facilities and equipment. A class of 40-50 students would need a considerable investment in balls and other facilities to ensure that PE is taught adequately. However this depends on the financial resources at the disposal of the respective schools and the willingness of the head teacher to spend money on purchasing and maintaining such equipment

Mugo (2005) further reports that falls due to various causes such as poor maintenance of play facilities in the play environment account for 70% of accidents sustained. Children's play facilities must thus be properly maintained under all costs and availed in adequate numbers for use in terms of quantity. Based on the above literature this study established how the availability of physical facilities influences the frequency of teaching physical education in lower primary classes in Laikipia East Sub County.

2.5 Teachers/Head Teachers' Attributes

Teachers' and head teacher's personal attributes can also influence the frequency of teaching PE as discussed in this section.

2.5.1 Teachers /Head Teachers' Qualifications

Teachers' or head teacher's attributes such as professional training and qualifications and work experience since graduating as trained teachers could influence how frequently or

not, they avail PE to children. Training for instance, helps to mould the attitude of teachers and head teachers towards the importance of PE .In the United States for instance, the government has restated its commitment to physical education by making it mandatory to public schools in early grade though it remains elective in high school levels. PE teachers are trained even at degree level under a 4-year degree program. On completion the teachers are employed as PE teachers / instructors or gym instructors and given a number of schools to instruct specifically on PE only (www.excite.com).

In their study on teachers' attitude towards PE Gitonga et al (2012) established that teachers or those under training have positive attitudes towards PE, with non-significant gender differences. The teacher is often trained to be self-confident, and have an appreciation of the value of health and personal well-being through physical activity. Consequently, teachers are expected to empower the young learner to take responsibility of their own lives. A teacher trainee undergoes a rigorous, intensive training program that enables him/her to develop and implement sports programs both in school and out of school setting (Mwangi, Kamenju and Rintaugu, 2013). Trained teachers have experience and understanding of benefits of physical activities and have pushed children from poor background to situations where they have acquired sports scholarships and this further motivates them to do better academically.

2.5.2 Attitude of Teachers and Head teachers

The attitude of teachers and other stake holders in school in very vital in influencing the frequency of teaching PE. An article by Gourneau (2005) on five attitudes of effective

teachers, states that pre-service teachers are interrogated about their teaching profession, they always respond that they want to make a positive difference in the lives of learners. Further, teachers say that they have a chance to be better teachers than the teachers they personally experienced. However, according to Halas et.al (2005), teachers usually teach the way they were taught. Arabaci (2009) in the article; attitudes towards physical education activities and class inclinations of Turkish school students, note that, many studies have acknowledged family influence and support as an importance factor contributing towards attitude development. Sports participation in pre- adolescent girls and adolescents' attitudes are associated with parents' participation.

In sub Saharan Africa, Shimishi and Ndhlovu (2015) investigated teachers' perceptions towards physical education as an academic subject in Kombaniya primary school, Mansa district in Zambia. The drive for the study emanated from the fact that recognition of practical subjects in the Zambian Primary School Curriculum by the Government had made all primary schools to offer Physical Education (PE) compulsory as a pillar to foster educational, health and personal development of learners. The study was also undertaken to ascertain teachers' perceptions of PE as an academic subject in primary schools, Mansa District, Luapula Province, Zambia. A case study design adopting a qualitative approach was employed and data gathered through focus group discussions (for the learners), semi-structured interviews (for teachers and administrators) and lesson observations. The sample comprised of 49 participants. The study found that despite having PE as a compulsory subject in school, teachers had a negative view about it. The subject was neglected, looked down upon, regarded as time for learners to play and have

fun. Some teachers and administrators saw the subject as play or sport that took time away from academic subjects. Based on the study findings, the study concluded that the perception of teachers towards PE as a subject was negative. Teachers and school administrators saw PE as sports and a subject that took time away from learners' academic subjects. On the basis of the findings, the study recommended that the Ministry in charge of education should monitor and ensure that PE and other practical subjects are taught in Zambia's primary schools.

The attitude of teachers and head teachers in regard to whether or not physical education is availed to children is of importance and has far reaching influence in the teaching of PE in Kenya. Wanyama (2011) revealed that the frequency of cancellation of PE classes is very high in Kenya and is done by academic subject teachers who use allocated PE time to supplement that of examinable subjects. During times of adverse conditions or when extra time is needed for academic or other school activities, PE periods are often the first to be re-allocated. This happens especially during examination periods when lessons are abandoned to provide time for examinations and revision of past examination papers. Regarding timetabling, other subjects are positioned on the timetable with the highest priority, with PE often being placed on the timetable as the last lesson of the day, at a time when both students and teachers are tired.

Attitude towards the teaching of PE is very important aspect towards the frequency of teaching PE. A study carried out by Gitonga et al. (2011) of teacher-trainee attitude towards PE has been noted in Kenyan primary schools. *Ibid* affirms that in all the

teachers colleges, PE is mandatory for every teacher learner and must be taken in spite of interest, gender, age or physical environment. Therefore, students and teachers appear to correlate the subject with little esteem. The negative attitude factors developed by the trainee-teachers are carried to schools they are posted to after training. Sakwa et al. (2003) investigated secondary school learners' attitudes towards participation in physical education programs, and the students' attitudes and their performance. Sakwa et al. (2003) found that students have positive attitudes towards participation in physical education and that their performance is significantly above average. Practices of the precedent are also clear in the methodologies used in the delivery of PE lessons.

From finding indicated above, physical education teachers could be role models, not only as teachers in the gymnasium, but also looking the part of a physically-fit physical educator. Previous studies have shown physical appearance of body fatness to have a negative effect on students' attitudes toward the physical education teacher. The researcher recognizes that to become a teacher requires strong preparation in the subject matter knowledge, the development of pedagogical skills, right dispositions and the acquisition of the ability to make good judgments in practice. This implies that, head teachers from colleges of education should be well equipped with requisite information, to impact the specific knowledge and skills to the pupils. This study thus sought to establish the influence of teachers'/head teachers' attitude on the teaching of P.E in lower primary classes in Laikipia East Sub County.

2.5.3 Teachers' and Head Teachers' Gender

This section will look into teachers' gender and how it affects the frequency of teaching of PE to early childhood. Not much study has been undertaken on this area. However, it is quite clear that the influence of the teacher whether male or female is very important for the participation and eventual benefit of PE by the learners. In England, gender stereotyping and PE exists. Department of Education (1992) showed marked tendencies for male PE teachers perceiving dance a 'female-appropriate' activity and female teachers perceiving out-door activities as male appropriate. Research by Aktop and Karahan (2012) found out that a significant difference existed in teaching styles relating to the gender of the teacher. The study found out that female teachers thought command style was most beneficial with divergent and guided discovery being the least beneficial to students. Male teachers found practical styles to be most beneficial to learners.

In many empirical studies according to 'Sports Education and Society Volume 21 Issue 7' (2016) the trend is that there are the so-called male-oriented activities like games and sports and which are predominant in PE lessons and females-oriented activities like dance, aerobics and health related exercises but which are scarcely ever taught.

In Kenya, PE is taught indiscriminately at the Teacher Training Colleges with both genders partaking of it. Upon posting bias in teaching PE and especially in some specific activities start being manifested with some being seen as masculine and others as feminine. The study hence sought to establish whether the gender of the teacher

influences the frequency of teaching PE in lower primary classes in Laikipia East Sub-County.

2.6 Summary

In Summary the literature covers the extent to which teachers of early grade learners globally, regionally and locally understand and appreciate the importance of PE to their learners. It also covers literature on the frequency with which PE is taught to early grade learners and how the availability of facilities in schools influences the frequency of teaching PE. Teachers' qualifications, work experience, attitudes towards PE and their gender have also been explored in relation to the frequency of teaching PE to early childhood education. There have been scanty studies on frequency of teaching physical education in lower primary classes especially in Laikipia East Sub-County hence the need for this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the methodology that was used in carrying out the study. It covers the research design, study area, target population, sampling procedure and sample size, instruments, validity of the instrument, reliability of the instrument, procedure for data collection, data analysis and ethical issues.

3.1 Research Design

This study adopted descriptive survey design to investigate school characteristics influencing the frequency of teaching of physical education in lower primary classes in Laikipia East Sub-county, Kenya. This design was relevant to this study because it is ideal for gathering information regarding people's feelings and opinions about educational issues (Kombo & Tromp, 2006). This design is also appropriate for this study because the survey method is widely used to obtain data useful in evaluating present practices and providing basis for decisions.

3.1.1 Research Variables

Below are the study variables and the procedure for their measurement given in section:

- **Independent Variables:** Independent variables in this study were factors influencing the teaching of PE to children in early childhood classrooms/Lower primary classrooms. They included: the category of school, physical facilities, teachers 'and head teachers 'attitudes, and gender and education qualifications.

- **Dependent Variable:** The dependent variable was the frequency or number of times PE is availed to children in a week. Availing it 3 times a week will be assigned 4 points, 2 times= 3 points, 1 time = 2 points and 1point for not availing it at all.

3.2 Location of the Study

This study was carried out in Laikipia East Sub County in .Laikipia County which is one of the ASAL regions in Kenya. The location was chosen for the study because very scanty research and information on PE is available in record hence the need to close that gap.

3.3 Target Population

The target population in this study was preschool pupils and teachers in Laikipia East Sub County. It considered only few schools offering Early Childhood education. The target population for this study was 46 public primary schools and 16 private schools in Laikipia East Sub-County. The study specifically targeted 162 teachers of lower primary schools in public schools and 51 in private schools making a total of 213 teachers and 46 headmasters from public schools, 16 head masters from private schools making a total of 62. The total population will be 275 respondents.

3.4 Sampling Techniques and Sample Size

3.4.1 Sampling Techniques

According to Orodho (2009), 10-30% of the total population is adequate for a study in descriptive research. Based on this view, out of the pre-schools in Laikipia East Sub

County, the population was randomly selected for this study. The study purposively sampled the respondent school head teachers and randomly sampled the teachers of lower primary classes in the sampled schools..

3.4.2 Sample Size

The sample size comprised of 19 primary school head teachers and 57 lower primary school teachers 14 public primary schools and 5 private primary school this gave a total of 76.

Table 3.1 Sampling Frame

	Target Population			**Sample Size**			
	Public	Private	**Total**	Public	Private	**Total**	%
Schools	46	16	**62**	14	05	**19**	30.0
Head teachers	46	16	**62**	14	05	**19**	30.0
Teachers	162	51	**213**	42	15	**57**	26.5
Totals				**56**	**20**	**76**	**56.5**

3.5 Research Instruments

To obtain the required data, the study used questionnaires for both teachers and head teachers and observation schedules used by the researcher for more information that the questionnaires may not have captured. Both schedules also gave the researcher a likelihood of achieving the objectives of the study.

3.5.1 Questionnaire

The researcher used both open and closed ended questionnaires to get the required information from teachers. Through questionnaires, there is greater consistency therefore greater compatibility in the responses. Orodho (2009) opines that a questionnaire allows dimension for or beside a particular viewpoint and that questionnaire has the capability to gather a great amount of information in a reasonably short time. The questionnaire was chosen since it is easy to manage and the researcher can concurrently collect information from the respondents therefore saving time (Mugenda & Mugenda, 2004). The questionnaires gave qualitative and quantitative data. The questionnaire consisted of both open-ended and closed-ended questions which were designed specifically for teachers in line with the research objectives. The questionnaire elicited data on the background of schools and teachers' educational level, age, gender and all other aspect of demography. Researcher made actual observation on preschool children behavior.

3.5.2 Observation Check lists

Observations were conducted because little children were not able to fill in the questionnaires or may not give accurate information when interviewed.

3.6 Pilot Study

A pilot study was carried out in 4 four pre-schools in the study locale. These schools were not included in the main study. The purpose of conducting the pilot study was to enable the researcher to determine the extent to which the research instruments were able to provide required information as Mugenda & Mugenda (2003) advice.

3.6.1 Validity

The validity test was done through a number of ways as Orodho (2009) explains. First the researcher went through the instruments and compared them with the set objectives to ensure that they contained all the aspects that provide answers to the set questions and thus fulfil the set objectives. Secondly, expert input from the supervisors in the area of study was sought to scrutinize the relevance of the items on the instruments against the set objectives. The instruments were content validated by the supervisors at Kenyatta University to determine whether the instruments will adequately reflect the concerns of the study.

3.6.2 Reliability

The Test-retest method was used to test the reliability of the instruments. In this, the same test was given to the same people after a period of time. The reliability of the test (instrument) was estimated by examining the consistency of the responses between the two tests within one week. The research instruments were administered twice within a one-week interval between the first and second tests. Spearman rank order correlations was employed to calculate the correlation coefficient in rank to establish the extent to which the contents of the questionnaires are reliable in eliciting the same responses, each time the instruments were administered. A correlation coefficient of 0.72 was obtained. Therefore, the research tools were considered reliable.

3.7 Data Collection Techniques

The researcher ensured that all the interview guides, questionnaires and the observation checklists were ready, legible and sufficient for the respondents. A work plan was also prepared, giving a period for accomplishing various phases of the research study. The researcher visited the sampled primary schools and administered the questionnaires to the headteachers and the selected physical education teachers in lower primary classes in both public and private primary schools for the purpose of collecting data. The researcher carried out observations as well. The researcher agreed with respondents on the date of collecting the duly filled questionnaires.

3.8 Data Analysis

The researcher used both quantitative and qualitative analysis techniques for this study because both approaches complement each other. Questionnaires from respondents were checked for completeness. All the 76 questionnaires were duly filled and were included in the analysis. First, data collected using the questionnaires was coded, assigned labels manually according to variable categories and keyed into the computer and processed using the statistical package for social science (SPSS). The use of SPSS yielded descriptive statistics. Frequency tables, percentage, and pie charts were used to present the data. For qualitative data, common themes were obtained in data collected and clustered in a patterned order so as to identify variables that depicted general concepts and differences.

3.9 Logistical and Ethical Considerations

3.9.1 Logistical Consideration

The researcher obtained authority to carry out research from the National Council for Science and Technology (NACOSTI) through a clearance letter from Kenyatta University Graduate School. A copy of the research permit was also given to the sub county director of education before visiting the schools. The head teachers of the sampled schools were also given a copy each. The researcher then agreed with the head teachers on appropriate days and date to collect the data.

3.9.2 Ethical Consideration

Research calls for a commitment to honesty and respect for the dignity and privacy of the people who are subjects of research. The researcher first established a rapport with the head teachers who later introduced her to the teachers of early grade learners in their respective schools. The participants were then informed of the nature of the study and allowed to choose whether to participate or not. To ensure anonymity, they were not required to fill their names on research instruments .Children were not directly involved in the questionnaires.

CHAPTER FOUR

PRESENTATION OF DATA ANALYSIS, RESULTS AND DISCUSSION

4.0 Introduction

This chapter focuses on the analysis of data collected, interpretation and discussions based on the study objectives. The study was based on the following objectives:

i) To find out the extent to which teachers understand the importance of PE to children.

ii) To establish the frequency with which children in early childhood classrooms within primary schools are engaged in PE lessons per week.

iii) The influence of type of school on the frequency of teaching of physical education in early childhood classrooms was also an important aspect of the study

iv) To establish influence of availability and adequacy of physical facilities on the frequency of teaching of physical education in early childhood classrooms.

v) To find out the influence of the ECE care givers' attitudes on the frequency of teaching of PE in early childhood education in Laikipia East Sub-County.

4.1 Demographic Information

4.1.1 Response Rate and Background Information

Section 4.2 presents the response rate and background information of study participants.In a bid to obtain the background information of the respondents, the researcher carried an analysis of their ages, gender, professional qualification and teaching experience.

4.1.2 Response Rate

A total of 57 teachers of ECE classes and 19 head teachers of the sampled schools participated in the study, thus their response rate was 100%. This was made possible as the researcher made prior arrangements with the schools' administration, visited each of the sampled schools, distributed the questionnaires to teachers and head teachers personally and collected the completed questionnaires at an agreed date.

4.1.3 Background Information

This section presents the teachers and head teachers bio data.

i. Gender of Participating Teachers

This searcher found it important to find out the gender of the respondents as an aspect for getting to know the kind of subjects who participated in providing the needed information and as a prerequisite for studying factors influencing the frequency of teaching of physical education. The teachers were therefore asked to state their gender which was measured by generating the frequencies against each variable and Figure 4.1 and 4.2 present the responses of teachers and those of head teachers respectively.

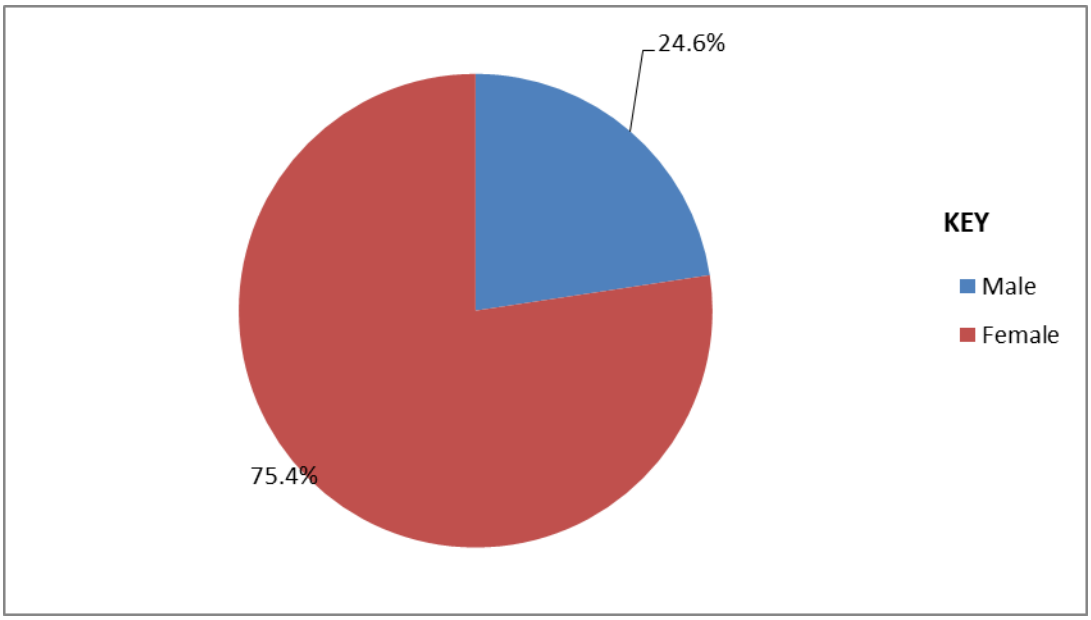

Figure 4.1: Teachers' Gender

As shown in Figure 4.1, 14 (24.6%) of the teachers were male while 43 (75.4%) were female. Generally there were more female teachers in lower primary schools in Laikipia County as compared to their male counterparts. The presence of more female teachers confirms the stereotypes that most female teachers teach in lower primary classes and that they hate some form of rigorous physical activities.

ii. **Gender of Participating Head teachers**

The following task is that of establishing the gender of participating head teachers and figure 4.2 presents the findings.

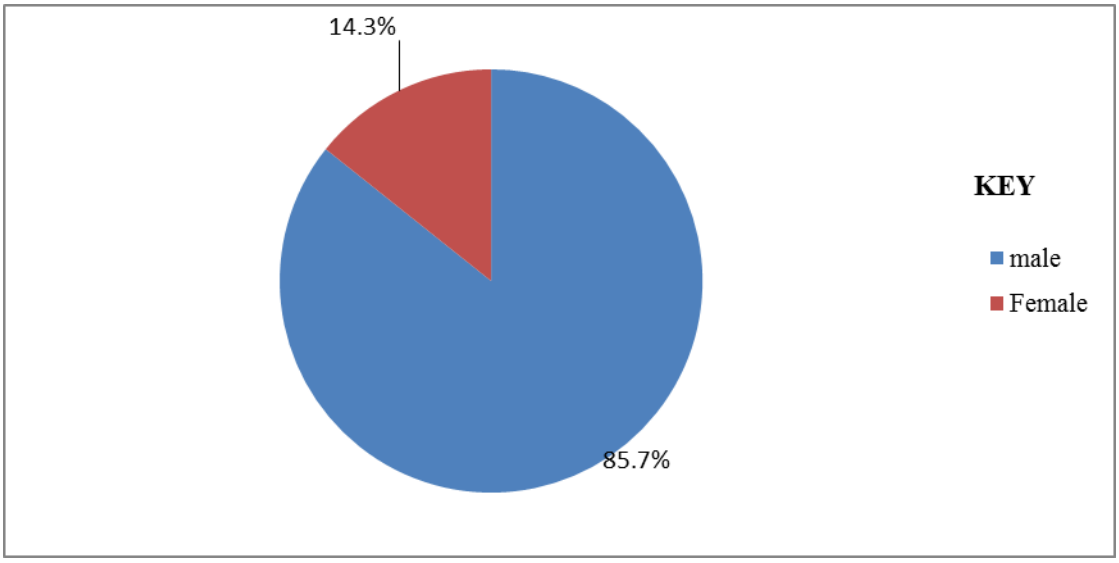

Figure 4.2: Head teachers' Gender

As presented in Figure 4.2, the head teachers in the primary schools were dominated by males 17 (89.5%) as compared to 2 (10.5%) who were female. Despite the disparity, the findings show that both genders were represented in the study.

iii. Professional Qualifications of Participating Teachers

The researcher found it important to establish the level of professional qualification of participating teachers and head teachers and Figure 4.3 presents the findings.

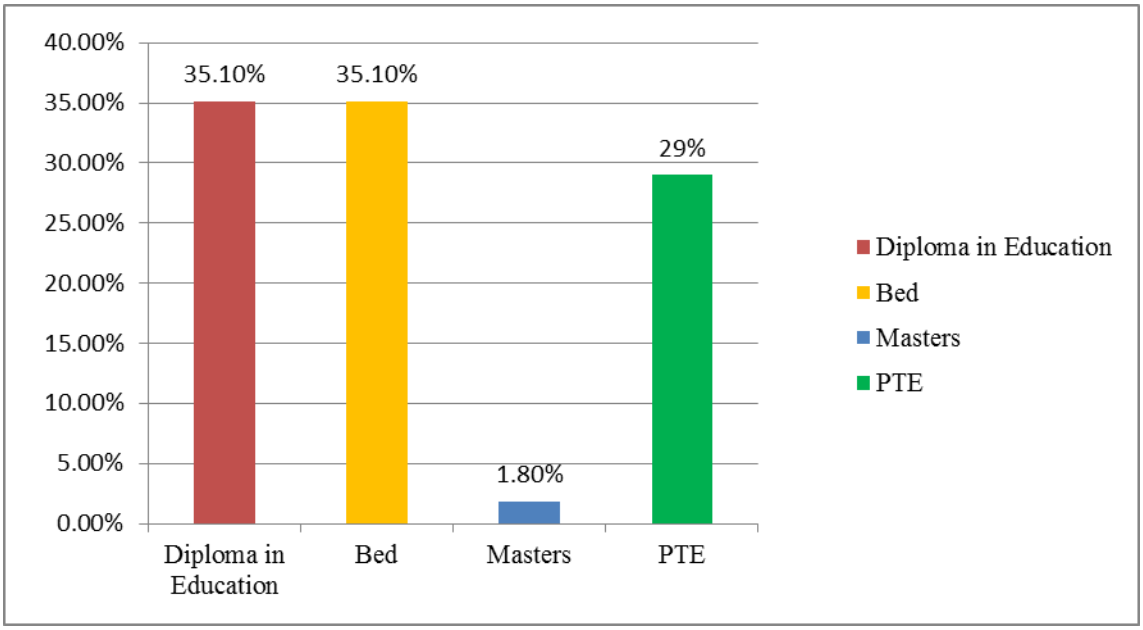

Figure 4.3: Teachers' Professional Qualification

As shown in Figure 4.3, the findings show that 20 (35.1%) of the teachers had Diploma level of education, 16 (28.1%) had bachelor of education degree and 1 (1.8%) with masters level of education and 20(35.1%) had a certificate in Primary Teacher Education (PTE). This implies that all the teachers were qualified to handle the questions related to school factors that were associated with influencing the frequency of teaching of physical education. Trained teachers have experience and understanding of benefits of physical activities and have pushed children from poor background to situations where they have acquired sports scholarships and this further motivates them to do better academically. It was important to establish the teachers' qualification because according to Lynch (2007), implementation of the PE curriculum is dependent on a range of factors including the teachers' qualifications, experience in the learning area including knowledge of the syllabus documents, as well as the teachers' ability to share with colleagues. Understandably, experienced teachers who had been in-serviced in teaching PE syllabus

are more confident and have a better understanding of the PE syllabus than less experienced teachers.

iv. Professional Qualifications of Head Teachers.

Participating head teachers were also asked to state to state their level of professional qualification and Figure 4.4 presents the findings

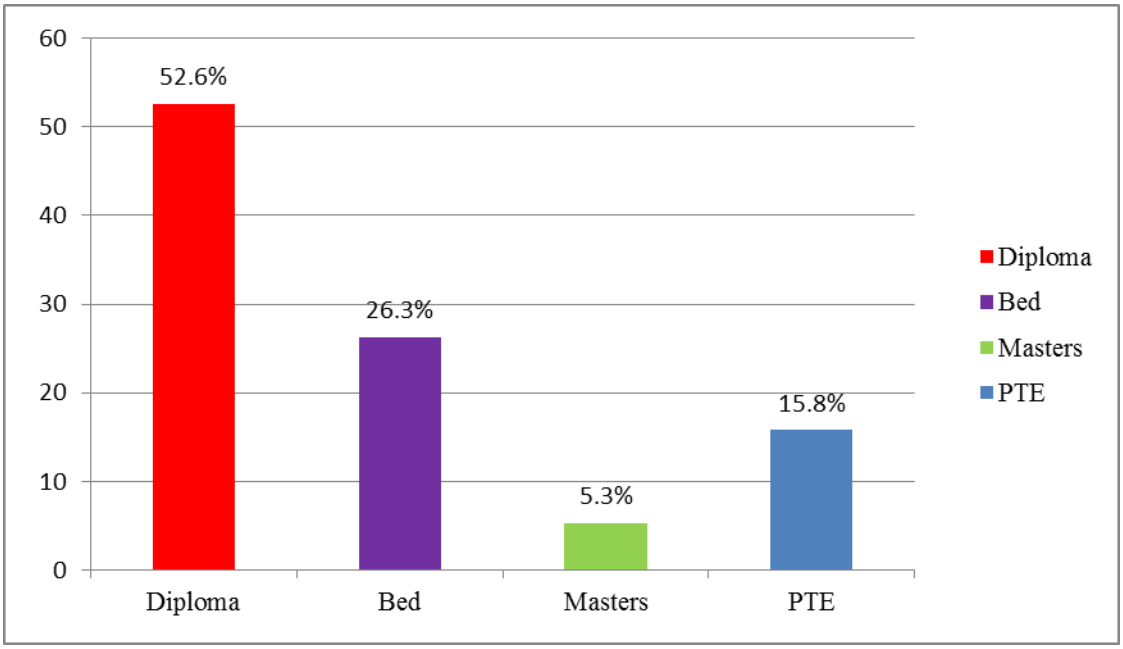

Figure 4.4: Head Teachers' Professional Qualification

Figure 4.4 shows that 1 (5.3%) of the head teachers had Master's degree level of education, 3 (15.8%) had a certificate in Primary Teacher Education (P1) 5(26.3%) had bachelor of education degree and 10 (52.6%) had a diploma in early child hood education This shows that many primary school head teachers have gone back to school for further studies to attain higher education. Head teacher's attributes such as professional training or qualifications and work experience since graduating as trained teachers could

influence how frequently or not they ensured that PE was availed to children. Training for instance, helps to mould their attitude towards the importance of PE.

v. Work Experience of Participating Teachers

The teacher respondents were asked to state their years of experience as teachers in lower primary classes and Figure 4.5 presents the findings.

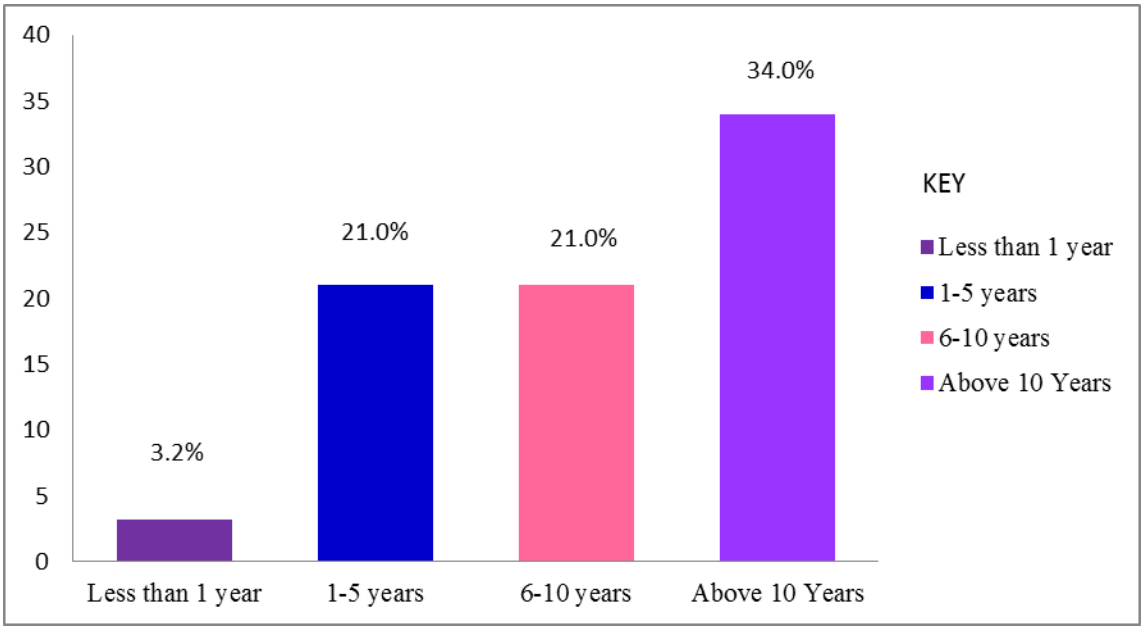

Figure 4.5: Teachers' Years of Teaching Experience

The Figure 4.5 shows that 34.0% of the teachers had over 10 years of experience in teaching, 21.0% had 1-5 years and 6-10 years of experience respectively and 3.2% with less than one year. The reason for training teachers is to make them competent and self-confident. It also instills in them an appreciation of the value of health and personal wellbeing through physical activity. Consequently teachers are expected to empower the young learner under their care to take responsibility of their own lives. The next section presents findings on teachers understanding of importance of PE to children.

4.2 Teacher Responses on Importance of PE to Children.

This section presents findings on extent to which teachers understood the importance of PE to young children as per objective one and Figure 4.6 presents the findings.

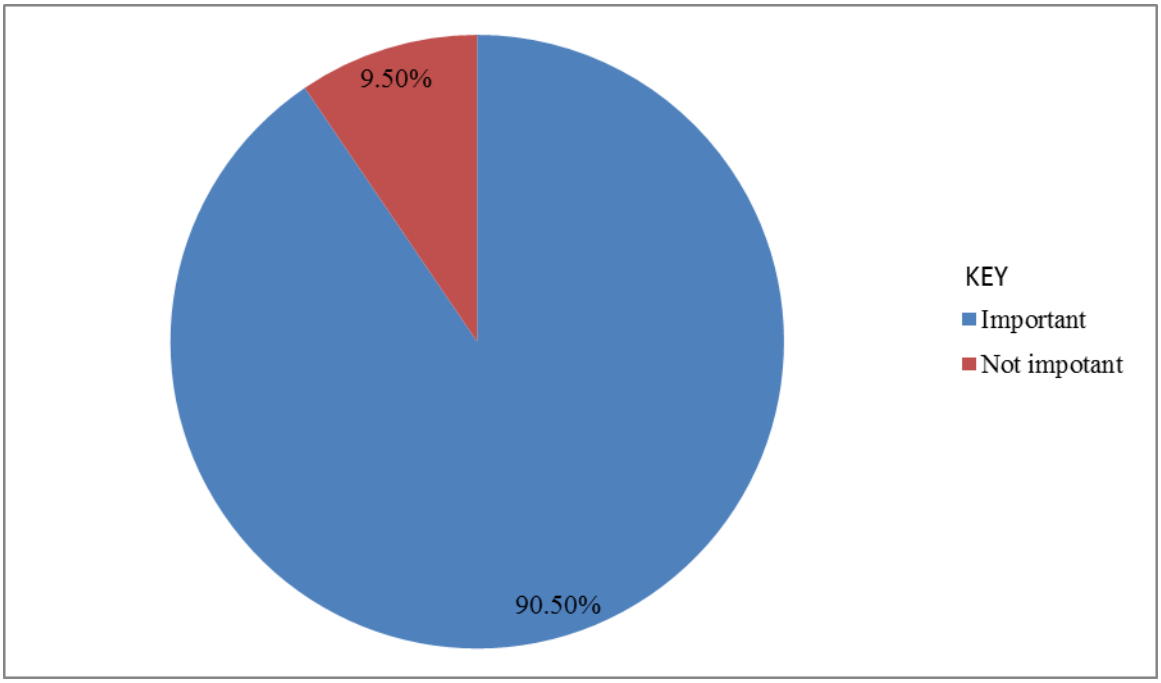

Figure 4.6: Teachers' responses on the Importance of PE

The findings in figure 4.6 show that 90.5% of the participating teachers indicated that PE had a lot of benefits to the learners 9.5% of the teachers felt that PE was not as important as to be strictly taught as per the recommended frequency. Head teachers were also asked to indicate the importance of PE to young learners and figure 4.7 represents their response.

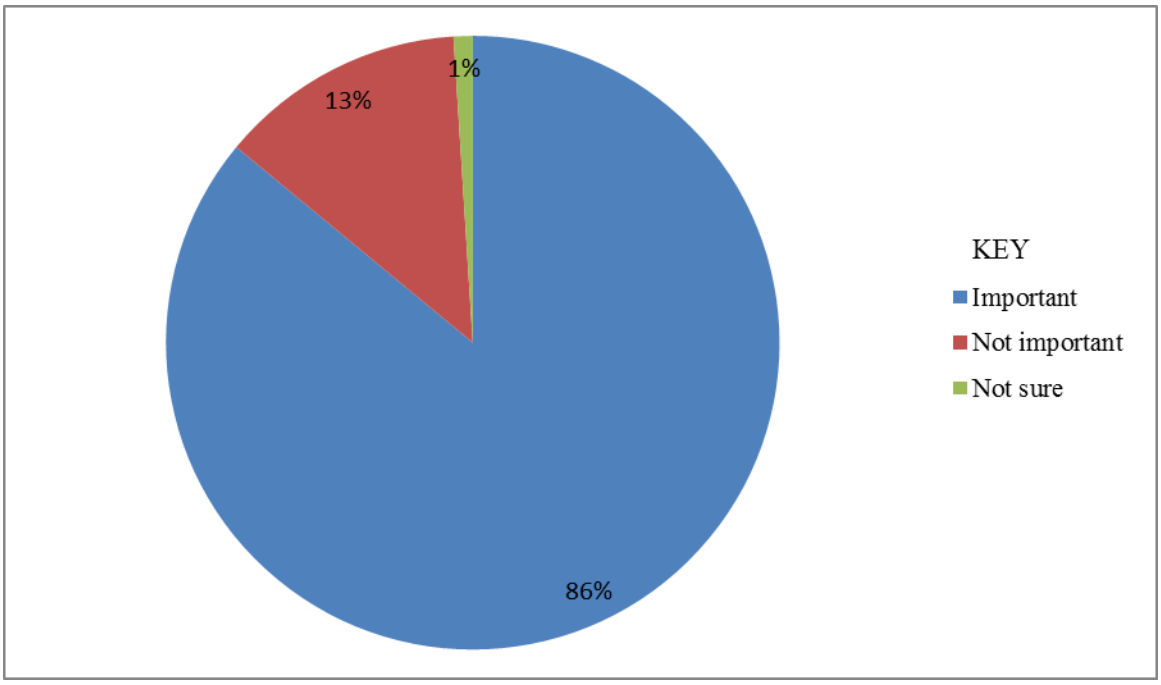

Figure 4.7: Headteachers' responses on the importance of PE

As indicated in figure 4.7 above, 86% of the head teachers indicated that PE was important to children's physical, mental and social growth. While 13% of the head teachers were of the opinion that the workload for lower primary teachers was too much to allow for PE teaching as per the recommended lessons. 1% of the head teachers were not sure.

4.3 Frequency of Engagement in PE by Early Childhood Learners

In section 4.4 which covered objective two, the researcher endevoured to establish the frequency with which early childhood learners both in private and public primary schools were engaged in PE lessons per week. Figure 4.8 summarises and presents the findings.

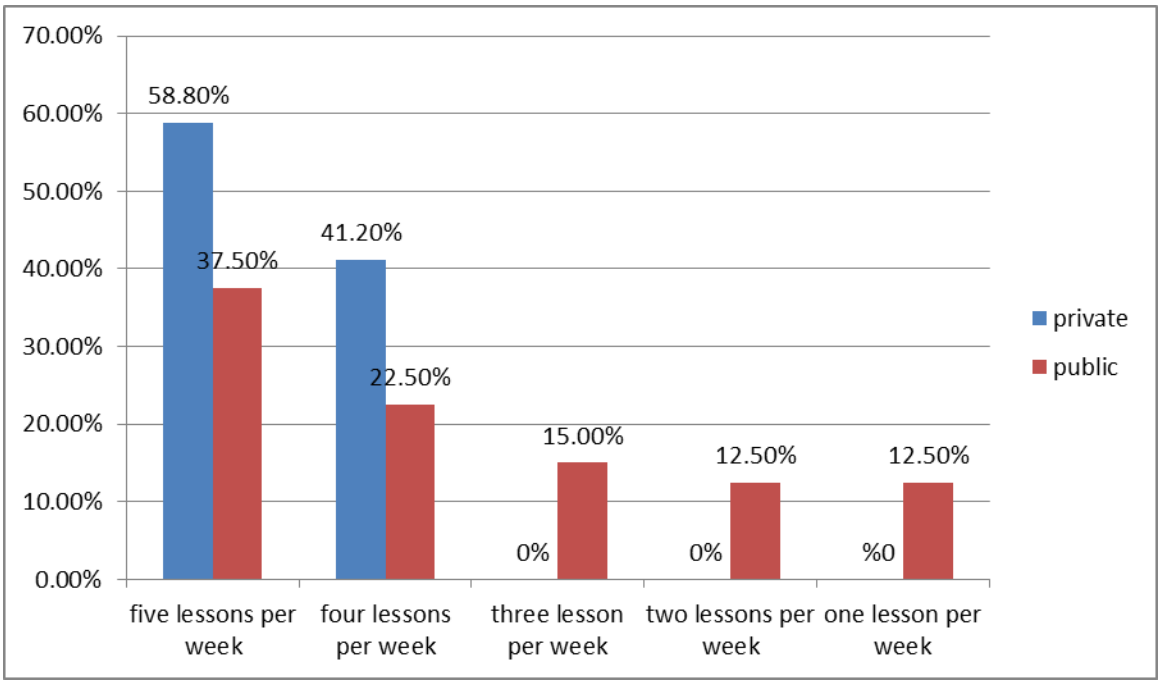

Figure 4.8: Frequency of PE in Early Childhood Classes

The study found out that 15 (37.5%) of teachers in public primary schools availed 5 lessons of PE per week to children while 9 (22.5%) availed 4 lessons per week, 6 (15%) of the sampled teachers availed 3 lessons per week, 5 (12.5%) attended only 2 lessons per week, another 5 teachers (12.5%) availed only 1 lesson per week .Teachers in the private primary schools were reported to avail PE lessons as follows, 10 (58.8%) 5 lessons in a week while 7(41.2%) availed PE 4 times in a week. Teachers in private primary schools availed more PE lessons per week compared to their public counter parts. It was also found out that children were given balls to play alone unsupervised during lesson breaks.

The study was informed that the higher the frequency of PE lessons to children, the higher the increase in growth of the children's psychomotor ability, good health and refreshing feelings after tedious classwork. It was also established that the higher the frequency in attending PE lessons, the higher the learners' interest in attending school hence the lower the absenteeism and truancy levels.

Wanyama (2011) revealed that the frequency of cancellation of PE lessons is very high in Kenyan schools and it's done by academic subject teachers who use allocate PE time to supplement that of examinable subjects. Whenever extra time is needed for academic or other school activities, PE lessons are often the ones to be reallocated.

4.4 School Factors Influencing Teaching of Physical Education

The study purposed to find out the extent to which various school factors influenced the frequency with which PE was taught to early childhood learners and type of school was one of them.

4.4.1 Type of School

The main task in this section was to find out influence of type of school on the frequency of teaching of physical education in early childhood classrooms as per objective number three. The respondents were thus asked to state the category of schools they were teaching in first according to sponsorship and Figure 4.9 presents the findings.

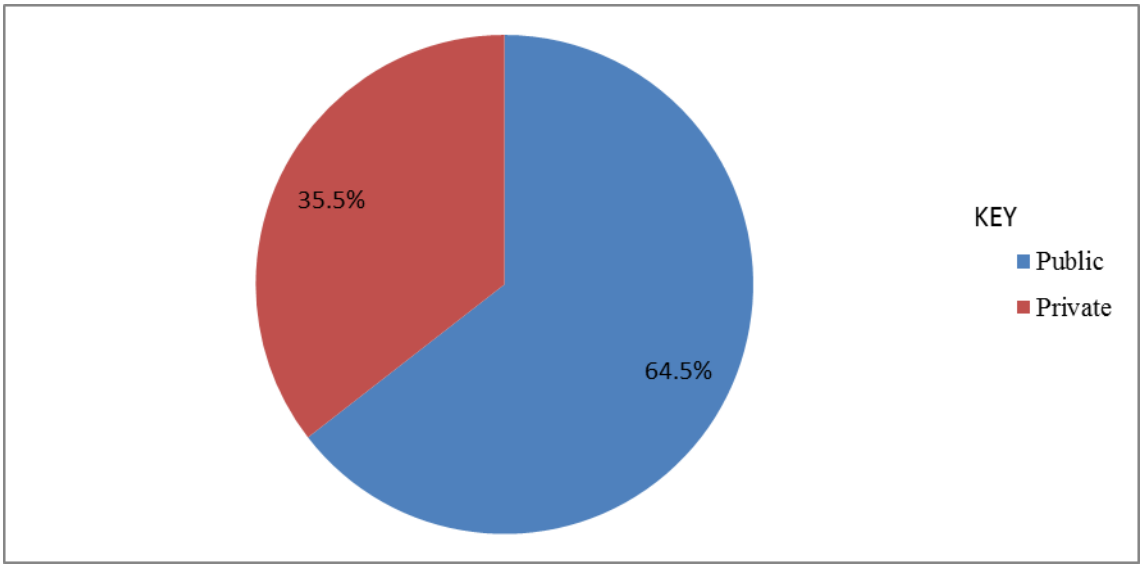

Figure 4.9: Category of Schools

As shown in Figure 4.9, majority 40 (70.1%) of the teachers were in public schools while 17 (29.8%) taught in private schools. This ensured that data was collected from all categories of schools. The study was conducted in 100 % mixed schools and this was good enough to give information on school characteristic influencing the frequency of teaching of physical education in lower primary classes in Laikipia East Sub County. Curtner-Smith (2011) found out that types of schools have influence on the frequency of teaching of physical education as it is determined at the local level. Jenkinson and Benson (2010) found out that types of schools (private or public), play an important role in influencing the teaching of P.E in that in private schools, there could be over emphasis of over drilling children in class work as compared to their public school counterparts.

4.4.2: Influence of type of school on frequency of teaching PE

This section mainly dealt on how type of school influence the frequency of teaching PE in lower primary classes. Teachers and head teachers were asked to indicate if type of

school influence the frequency of teaching of PE and Figure 4.10 is a representative of the findings.

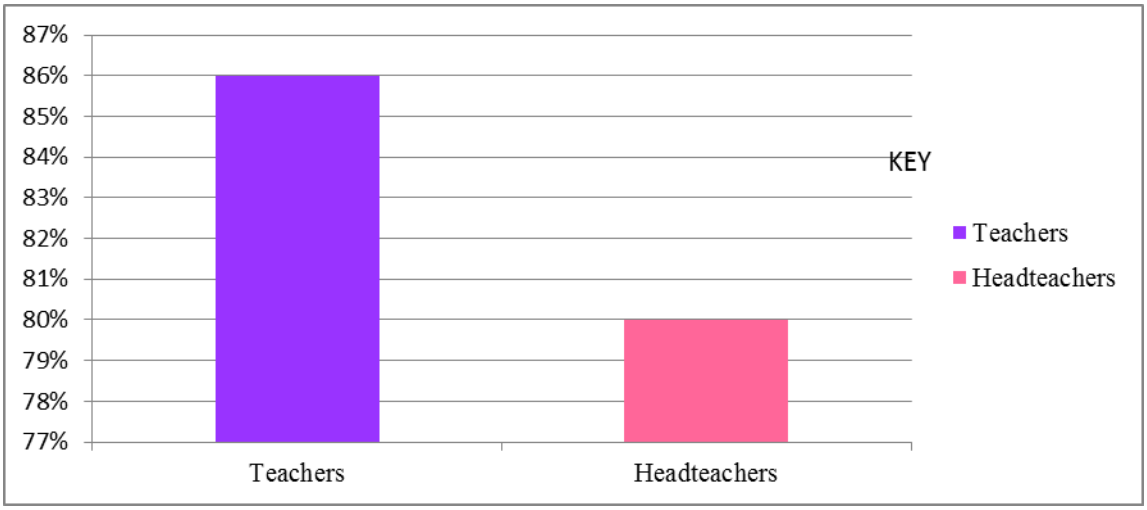

Figure 4.10: Influence of type of school on PE teaching

Figure 4.10 indicates that 49 (86%) of the teachers sampled and 15 (80%) of the head teachers informed this study that the type of school influenced the frequency of teaching PE arguing that a school with all facilities motivated both the learners and teachers in undertaking PE. The head teachers reported that the type of school determined the availability of PE facilities in that most public schools were poorly staffed and lacked enough PE facilities although play fields are available This concurs with Gathu, Ndung'u & Bommet (2015) who established that there is no enough time allocation for PE and that there are no facilities in schools for PE in addition to PE being inadequately staffed.

Adequate PE facilities, according to head teachers were an important element on the teaching of PE as there were situations where boys and girls hate to share facilities or to pair up during certain PE activities. Inadequacy in the said facilities impact negatively on

the frequency of attending PE. Pupils studying in day primary schools sometimes face economic challenges at home and this has an influence on the participation of PE in that if the learners do not feed well at home, they may have a problem in undertaking rigorous PE activities.

The head teachers also reported that public schools have very many learners especially in lower primary classes making the workload to be too much for the ECE teachers handling them hence PE lessons tend to be neglected to concentrate on the examinable subjects.

4.4.3 Eagerness of Pupils towards Engaging in PE

The teachers were asked to rate the eagerness of pupils towards participating PE lessons and Figure 4.11 presents the findings.

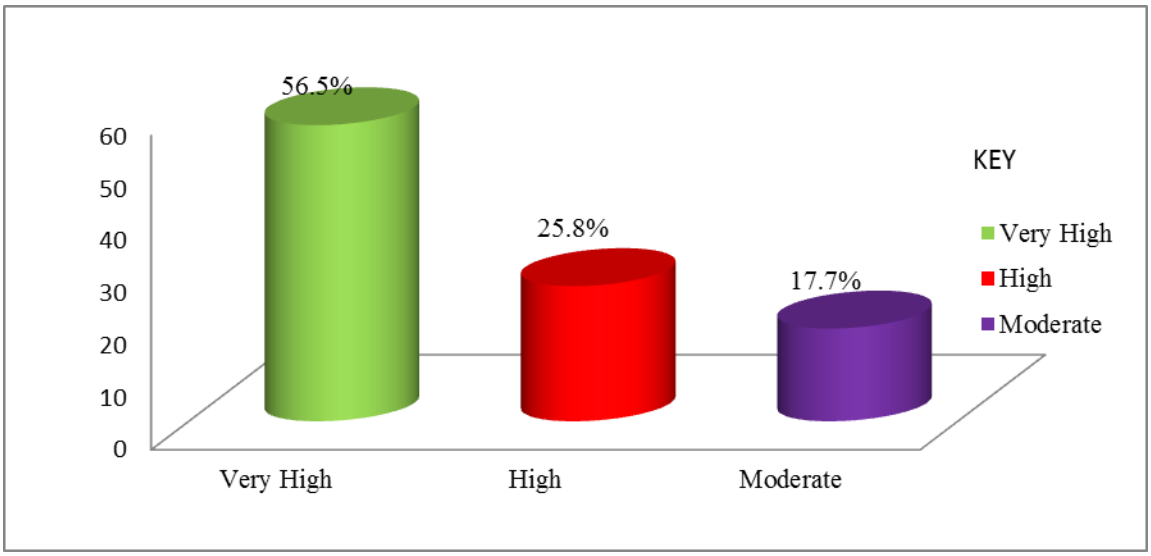

Figure 4.11: Eagerness of Pupils towards Participating in PE

As shown in Figure 4.11 above, 35 (56.5%) of the teachers said that learners were very highly eager to engage in PE lessons, 16 (25.8%) were highly eager and 11 (17.7%) moderately. Bevans et al (2010) concurs that learners are eager to use resources that

maximize their opportunities for physical activity during physical education (PE) class time in the United States of America. He confirms that students who are eager to attend schools with a low student-to-physical educator ratio had more PE time and engaged in higher levels of physical activity during class time. Head teachers were equally asked a similar question to rate the eagerness of the pupils towards attending PE lessons and Figure 4.12 presents the findings.

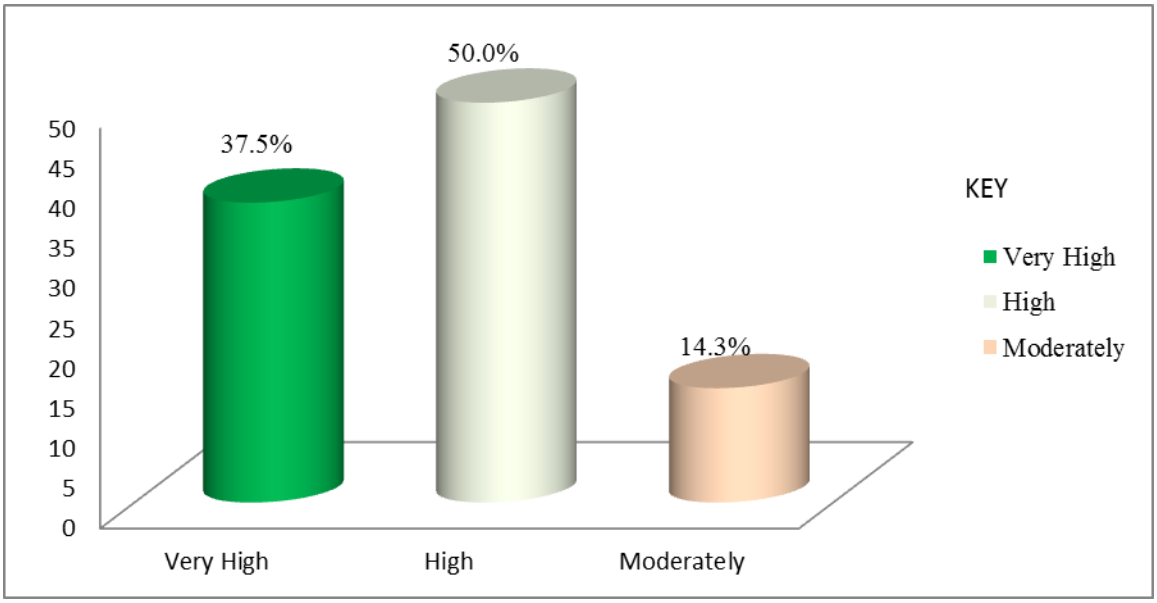

Figure 4.12: Eagerness of Pupils to Engage in PE According to Head Teachers

Figure 4.12 show that 50.0% of the head teachers indicated that pupils were very highly eager to engage in PE classes, 37.5% were highly eager while 14.3% were moderately eager towards participating in PE lessons. Jenkinson and Benson (2010) concur that schools can provide many opportunities for young people to engage in vigorous physical activity and are thus better placed amongst societal institutions to motivate them to live active lifestyles. It was also reported that children who enjoyed playing naturally were

made active even in class and it helped them develop motor co-ordination as well as their level of judgment.

4.5 Availability of Physical Facilities

Objective four of the study sought to establish the influence of availability of physical facilities on the frequency of teaching of physical education in early childhood classrooms. The physical facilities available in schools included football pitches, netball pitches, volley ball, discuss, short put and javelin among other facilities. The teachers were asked to describe the adequacy of facilities and Table 4.1 presents the findings.

Table 4.1: Adequacy of Physical facilities

Adequacy	Frequency	Percentage
Very Adequate	9	14.9
Adequate	23	37.1
Inadequate	24	38.7
Very Inadequate	6	9.7
Total	**62**	**100**

As presented in Table 4.1 above, 38.7% of the physical facilities were inadequate, 37.1% were adequate.14.9% were very adequate and 9.7% were very inadequate. Myton (2003) recommended that class sizes in Australian schools be reduced to 20 students. This was also supported by Hickey (2003) who cites various research and policy initiatives showing overwhelming evidence that small classes benefited students more. She

recommended that sustained efforts must be made to ensure Australian children benefited from small class experiences because small classes were superior in terms of students' reactions, teacher morale and the quality of the teaching environment. For instance, swimming classes should be small due to safety issues and also because a limited number of students ensure that the instructors can assist all learners in an un-crowded situation. Physical education involves a lot of movement that needs the teacher to be alert always to ensure the students are safe and concentrating on the lesson.

4.5.1 Conditions of Physical Facilities

The respondents were further asked to state the condition of the available physical facilities and Table 4.2 presents the findings.

Table 4.2 Status of Physical Facilities as observed by the Researcher

Condition	Frequency	Percentage
Very Good	7	11.3
Good	38	61.3
Poor	16	21.8
Very Poor	1	1.6
Total	**62**	**100**

Table 4.2 shows that 61.3% of the physical facilities were observed to be in good condition, 21.8% were in poor condition and 11.3% in very good conditions. Only 1.6% of facilities were in very poor condition.

4.5.2 Other Teaching Resources

The respondent teachers were further asked on the teachings resources that were available in their respective schools and Table 4.3 presents the findings

Table 4.3: Other Available Teaching Resources

Resources	Frequency	Percentage
PE Books	25	40.3
PE Charts	14	22.6
PE Field	53	85.5
Video on Sports activities	8	12.9

The respondent teachers were allowed to give multiple responses and the study established that majority 85.5% of the schools had PE fields, 40.3% of the schools had PE books and 22.6% had PE charts while only 12.9% had video on sports activities. Shehu (2009) agrees that availability of PE facilities is important and deficiency of essential resources seriously devalue its status.

4.5.3 Adapting Physical Facilities

To understand the usage of physical facilities, the respondent teachers were asked to state how and what method they adapted the facilities for their learners and Table 4.4 present the findings.

Table 4.4: Adapting Facilities for Learners

Resources	Frequency	Percentage
Providing a variety of equipment	36	58.1
Adjusting the rules to suit learners needs	30	48.4
Reducing size of the court	25	40.3
Adapting activities to suit learners' needs	48	77.4
Modifying Equipment	31	50.0
Lowering goal posts	25	40.3

As shown in Table 4.4 above, 77.4% of the teachers adapted the activities to suit needs of the learners in their respective schools, 58.1% provided a variety of equipment and 50.0% modified the available equipment. The study further revealed that 48.4% adjusted the rule of the game to suit learners' need while 40.3% reduced the size of the court and lowered goal posts respectively.

The study also revealed 59 (98.3%) of the teachers believed that the availability of physical facilities influenced the frequency of teaching PE. Toriola et al (2010) agrees that the presence of facilities and infrastructure plays a fundamental role in influencing the frequency of teaching of physical education.

This is because a school without the facilities could easily change to any activity without any guidance. Secondly with the availability of PE facilities, teachers and the learners will be motivated to attend most if not all the lessons. The head teachers reported that the availability of equipment and other facilities increases the eagerness of learners to attend all the PE lessons.

4.6 Attitude of Caregivers

Objective five of the study sought tofind out the influence of head teachers' and ECE teachers' attitude on the frequency of teaching of physical education in early childhood classrooms. The respondents were therefore asked to state the extent to which they agreed with various statements describing the head teachers' perception towards the teaching of PE. Table 4.5 presents the most preferred response.

Table 4.5: Teachers' Response Towards Head Teachers' Attitude towards PE

Statement	SA	A	U	SD	D
Appreciates teaching of PE	25 (49.0%)	18(35.3%)	4(7.8%)	1(2.0%)	3(5.9%)
Appreciates need in service on teaching of PE	10 (20.4%)	19 (38.8%)	14 (28.6%)	1(2.0%)	5 (10.2%)
Encourages teaching of PE	19 (35.8%)	29 (54.7%)	2 (3.8%)	-	3 (5.7%)
Ensure PE facilities for pupils' use are adequate	17 (34.0)	17 (34.0%)	3 (6.0%)	3 (6.0%)	10 (20.0%)
Has a positive attitude towards the teaching of PE	28 (54.9%)	16 (31.4%)	2 (3.9%)	1 (2.0%)	4 (7.8%)

Table 4.5 shows that 84.3% of the teachers agreed that head teachers appreciated PE in their schools, 90.5% agreed that their school head teachers encouraged the teaching of PE. The study further revealed that 68.0% of the teachers indicated that their head teachers ensured that PE facilities for pupils' use were adequate and 86.3% indicated that head teachers had a positive attitude towards the teaching of PE by ECE teachers. The attitude of teachers and head teachers in regard to whether or not physical education is availed to children is of importance and has far reaching influence in the teaching of PE. Shehu (2009) found out that due negative attitude, school cultures have isolated PE teachers and deprived them of meaningful badly needed support systems necessary for professional learning. The teachers' respondents said that for PE teaching to be successful in schools, head teachers must exhibit a positive attitude as it will make the teachers strictly follow the time table.

4.6.1 Teachers own Attitude towards Teaching of PE

The ECE teachers handling the lowers primary classes were also asked to state their own attitude towards the teaching of PE and table 4.6 represents the findings.

Table 4.6: Teachers attitude towards Teaching of PE

No. of Teachers	Percentage	Attitude
44	78.1%	Very Positive
11	20%	Negative
6	1.9%	Reluctant

Table 4.6 shows that 78.1% of teachers were very positive towards teaching of PE, 20% were negative citing lack of facilities as the contributing factors and 1.9% were reluctant towards PE citing lack of time to mark learners' books. The respondent PE teachers were also asked to state the kind of activities they encouraged on their learners. This helped to enhance the findings on the attitude of teachers towards teaching PE .It was revealed that PE activities that require the teachers' presence were mostly avoided. Table 4.7 presents the findings.

Table 4.7: PE Activities Pupils Engaged in

Activities	Frequency	Percentage
Body movement/Exercise	45	81.8
Jogging/Walking, running races	42	76.4
Swimming	3	5.5
Ball games/singing games/dances	46	83.6
Others	22	40

As shown in Table 4.7 above, majority 83.6% of the teachers encourage their students to play ball games, singing and dances, 81.8% encourage their pupils to do body movement and exercise, 76.4% encouraged their pupils to jog and running races among other sporting activities.

In summary, the respondents suggested that to enhance the frequency of teaching of PE, schools should make available more PE materials and introduce more extra curriculum

activities like swimming. The teachers suggested that schools should ensure that there is a manageable class size to effectively handle children and attend to most of them. Myton (2003) agrees that the size or the number of children can affect use of physical facilities availed for children's use. He recommended that class sizes be reduced to 20 students. A small number of children makes it easier for the teacher to be able to manage them and utilize effectively the facilities availed.

In the study, 80.0% of the teachers were unanimous that children's play facilities must thus be properly maintained under all costs and availed in adequate numbers for use in terms of quantity for teaching of physical education in lower primary classes in Laikipia East Sub County. According to Milder (2006) Adequate equipment and appropriate facilities should be provided to implement the curriculum and adequate budget for physical education should be provided on a yearly basis, adequate number of indoor and outdoor teaching stations should be available for the number of students, classroom space is availed for school physical education programs, equipment and facilities are clean, safe and are inspected on a regular basis.

In terms attitude towards the teaching of PE, Gitonga et al. (2011) agrees that PE should be mandatory for every teacher learner and must be taken in spite of interest, gender, age or physical environment. Sakwa et al. (2003) confirms that students with positive attitudes towards participation in physical education have their performance significantly above average. Therefore, physical education teachers could be role models, not only as teachers in the gymnasium, but also taking the part of a physically-fit physical educator.

The researcher recognizes that to become a PE teacher requires strong preparation in the subject matter knowledge, the development of pedagogical skills, right dispositions and the acquisition of the ability to make good judgments in practice. This implies that, head teachers and teachers of early childhood education should be well equipped with requisite information, to impact the specific knowledge and skills to the pupils. This study thus sought to establish the school factors influencing the frequency of the teaching of P.E in lower primary classes in Laikipia East Sub County.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter contains the summary, conclusion and recommendations of the study on school factors influencing the frequency of teaching of physical education in lower primary classes in Laikipia East Sub- County. The study was based on the following objectives: to find out whether or not teachers understand the importance of PE to children, establish the number of times children in early childhood classrooms within primary schools are engaged in PE lessons per week.; the influence of type of school on the frequency of teaching of physical education in early childhood classrooms; the influence of availability of physical facilities on the frequency of teaching of physical education in early childhood classrooms and to establish the influence of ECE care givers' attitude on the frequency of teaching of physical education in early childhood classrooms.

5.1 Summary

In terms of demographic information, the studies found out that majority of the lower primary teachers were females with more than ten years of teaching experience. In contrast, headship of primary schools was dominated by male teachers. On the qualification levels, all cadre of academic and training qualifications were represented .Majority of the teachers had a diploma in early childhood education, a few had bachelor's degree in education while one had a Masters degree in education .A small number had the primary school certificate popularly known as P1. The same was revealed

in the head teachers 'qualifications. All the head teachers were further found to have to have more than ten years of teaching experience.

On the importance of PE to early childhood education, a section of the sampled teachers were of the opinion that PE is important to learners in ECE, while still another felt that PE was not really necessary as there was a lot of academic work to be covered. A Section of teachers felt that breaks are enough for children's play time. It was established that teachers in the private primary schools availed more PE lessons in a week compared to their colleagues in the public primary schools. It was established that majority of the teachers sampled were in public primary schools while a few taught in private primary schools. The study was conducted in 100% mixed primary schools. Sampled teachers informed the study that the type of school influenced the frequency of teaching PE, majority of the sampled head teachers strongly felt that the type of school impacted greatly on the frequency of teaching PE. Some of the facilities were inadequate while others were just adequate. There were facilities that were found to be adequate and a good number was very inadequate. Most of the fields were unkempt and uneven.

In schools with learners with special needs, an attempt was made to adapt play facilities to suit their needs but a few schools did not cater for children with special needs at all. On the caregivers' attitude on the frequency of teaching of physical education in early childhood classrooms, the study established the teachers agreed that head teachers appreciated PE in their schools and encouraged the teaching of PE in Early Childhood

classes and generally had a positive attitude towards the teaching of PE in Early Childhood Classes. Most of the early grade teachers were positive on teaching PE.

5.2 Conclusion

Based on the findings, the study concludes that teachers were qualified to handle the teaching of PE to early grade learners and influence positively to the frequency of teaching physical education. It also concluded that trained teachers have experience and understanding of benefits of physical activities and all teachers were found to have various levels of training.

None of the schools sampled avail PE lessons completely as the school time table dictates. However, private primary school teachers skip fewer PE lessons as compared to their colleagues in the public primary sector.

The data was collected from all categories of schools where it was concluded that types of school have influence on the frequency of teaching of physical education. Different types of schools can provide many opportunities for young people to engage in vigorous physical activity and are thus better placed amongst societal institutions to motivate children to live active lifestyles. The head teachers reported that the type of school determined the availability of PE facilities in that most public schools were poorly staffed and also lacked facilities although fields are available. Public schools were reported to have very many learners particularly in class one making the workload to become too

much for the teachers and many tend to neglect PE lessons to concentrate on examinable subjects.

Presence of facilities and infrastructure play a fundamental role in influencing the frequency of teaching of physical education. Without the physical facilities teachers easily changed to any other activity. Secondly with the availability of PE facilities, teachers and the learners were motivated to attend most if not all the PE lessons and this increased the eagerness of learners to attend to PE too.

The attitude of teachers and head teachers in regard to whether or not physical education is availed to children is of importance and has far reaching influence in the teaching of PE. Due to negative attitude in some schools by their head teachers, ECE physical education teachers have been isolated and deprived of meaningful badly needed support systems necessary for professional learning and for teaching of PE to be successful in schools. Head teachers must exhibit positive attitude as it will make the teachers to strictly follow the time table. On the other hand, due to negative attitude by some teachers, frequency of cancellation of PE lessons was found to be very high in schools and was done by academic subject teachers who use allocated PE time to supplement that of examinable subjects.

5.3 Recommendations

Based on the research findings, the researcher came up with the following recommendations to the Ministry of Education, curriculum developers and teachers of primary schools.

i. Teachers handling early grade learners and head teachers of primary schools be given occasional sensitization workshops on the benefits of PE to young children.

ii. Teachers of PE should endeavor to empower the young learners to take responsibility of their own lives through availing PE lessons to learners as frequently as is recommended in the school syllabus and Education Field Officers to ensure it is done through supervision and prevailing upon head teachers to do the same in their respective schools.

iii. PE lessons should be examinable in lower primary school.

iv. Schools should make available more PE materials and introduce more extra curriculum activities like swimming.

v. Schools should also ensure that there is a manageable class size to enable teachers to effectively handle children and attend to their individual needs.

vi. Children's play facilities to be properly maintained under all costs and availed in adequate numbers for use in terms of quantity for teaching of physical education in lower primary classes.

vii. PE teachers should be retrained or offered in-service or refresher courses to update their methodology in handling PE.

5.4 Suggestion for Further Research

The researcher made some suggestion for further research as follows:

- It is necessary to carry out a similar study in the upper primary and secondary institutions to establish if the trend is similar to lower primary schools.
- A similar study to be done in other counties where no such studies have been undertaken.
- A study on the possibility of making PE an examinable subject should be carried out.

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APPENDICES

APPENDIX I: TEACHERS' QUESTIONNAIRE

Introduction:

I am a student undertaking degree of master of education, Kenyatta University, currently carrying out a research on **School Characteristics Influencing the Teaching of Physical Education in Lower Primary Classes in Laikipia East Sub-County, Kenya**. I kindly request you to provide the required information with utmost honesty by responding to the questions in the questionnaire. The information required is purely for academic purposes and will be strictly treated with confidentiality. The results of the report will be used solely for academic purposes and a copy of the same will be availed to you upon request. I will appreciate your corporation in this academic exercise.

Thank you.

Ms. Githaga Elizabeth Muthoni

Student Registration No: E55/NKI/PT/23434/2012

SECTION I: TEACHERS' BACKGROUND INFORMATION

1. Gender

   Male [ ] Female [ ]

2. What is your professional qualification? Tick as appropriate.

   Diploma in Education [ ]

   Bachelor of Education [ ]

   Masters in Education [ ]

Others; Specify_____

_____

SECTION 2: IMPORTANCE OF PE

3. According to you, what would you say is the importance of frequent PE lessons to early grade children?

_____

_____

SECTION 3: NUMBER OF PE LESSONS IN A WEEK

4. How many PE lessons do you partake in a week? (*tick as appropriate)*

   One lesson per week [ ]

   Two lessons per week [ ]

   Three lessons per week [ ]

   Four lessons per week [ ]

   Five lessons per week [ ]

5. How would you rate the eagerness of pupils towards attending PE lessons?

   Very High [ ]

   High [ ]

   Moderate [ ]

   Very low [ ]

SECTION 4: SCHOOL FACTORS INFLUENCING FREQUENCY OF TEACHING PE

A. Type of School

What is the category of school by sponsorship?

Public [ ]

Private [ ]

6. (a) In your opinion does the type of a school influence the frequency of teaching of PE? *(Tick as appropriate).*

Yes [ ]

No [ ]

(b) Please explain your answer in question 7(a) above.

_____

_____

_____

B. Physical facilities

7. (a) What PE facilities are there for children use in your school?

_____

_____

_____

8. (b) How can you describe the condition of the PE facilities you have indicated above?_____

_____

_____

(c)Are the PE facilities you mentioned above adequate or enough for your learners?

_____

_____

_____

9. Does your school have any of the following PE equipment? *(Tick against what you have).*

i. PE books [ ]

ii. PE charts [ ]

iii. PE fields [ ]

iv. Videos on sports and games activities. [ ]

(d) Do you adapt PE facilities to cater for all learners including any with disabilities?

		Yes	**No**
i.	Providing a variety of equipment	[ ]	[ ]
ii.	Adjusting tools to suit learners needs	[ ]	[ ]
iii.	Reducing size of playing court	[ ]	[ ]
iv.	Modifying facilities to suit learners with special needs	[ ]	[ ]
v.	Lowering goal posts	[ ]	[ ]
vi.	Any other.(explain)_____		

_____

(e) What other PE equipment do you have apart from those already mentioned?

_____

_____

_____

(f) Tick against the activities you engage your pupils in

i. Body movement exercises [ ]

ii. Jogging [ ]

iii. Running [ ]

iv. Walking [ ]

v. Swimming [ ]

vi. Ball games [ ]

vii. Singing and dancing [ ]

viii. Others(specify)_____

(g) In your opinion, does the availability of adequate and well maintained PE facilities and equipment influence the frequency of teaching of PE in early childhood education? (Explain your answer)

_____

_____

_____

(h) How do you adapt PE facilities for your learners? (Tick appropriately).

Providing a variety of equipment [ ]

Adjusting the rules to suit learners' needs [ ]

Reducing the size of the court [ ]

Adapting activities to suit learners needs [ ]

Modifying equipment [ ]

Lowering goal posts [ ]

(i) Which other PE equipment does your school have apart from the already mentioned?

_____

_____

_____

(j) In your opinion does the availability of physical facilities influence the teaching of PE? Please Explain

_____

_____

_____

C Teachers' Attitude

10. Tick as appropriate to describe your own attitude towards teaching PE.

Statement	Yes	Rarely	No
I appreciate teaching of PE			
I appreciate need for in service training			
I attend PE lessons without coercion			
I supervise as my students use various facilities			
I ensure learners use facilities safely			
I love PE and have a positive attitude towards it			

D Head Teachers' Attitude

(k) To what extent do you agree with the following statements regarding your head teachers' attitude towards teaching of PE in the school? *(Tick as appropriate).*

SA –Strongly Agree A -Agree U-Undecided D -Disagree SD –Strongly Disagree

Statement	**SA**	**A**	**U**	**SD**	**D**
Head teacher appreciates teaching of PE.					
He supports and appreciates need for teachers' in-servicing on the teaching of PE.					
He encourages and supervises teaching of PE in the school.					
He Ensures PE facilities for pupil's use are adequate for all the learners and that they in good condition.					
He generally has a positive attitude towards the teaching of PE especially to lower primary school learners.					

(l) How does attitude of the head teacher influence the teaching of PE in the school?-

Explain----------

THANK YOU

APPENDIX II: HEAD TEACHERS' QUESTIONNAIRE

Introduction:

I am a student undertaking degree of master of education, Kenyatta University, currently carrying out a research on **School Characteristics Influencing the Teaching of Physical Education in Lower Primary Classes in Laikipia East Sub-County, Kenya**. I kindly request you to provide the required information with at most honesty by responding to the questions in the questionnaire. The information required is purely for academic purposes and will be strictly treated with confidentiality. The results of the report will be used solely for academic purposes and a copy of the same will be availed to you upon request. I will appreciate your corporation in this academic exercise.

Thank you.

Ms. Githaga Elizabeth Muthoni

Student Registration No: E55/NKI/PT/23434/2012

SECTION I: HEAD TEACHERS' BACKGROUND INFORMATION

1. Gender

   Male [ ] Female [ ]

2. What is your professional qualification?

   Diploma in Education [ ]

   Bed [ ]

   Masters [ ]

   Others; Specify_____

3. Teaching experience in years?

   Less than 1 year [ ]

   1-5 years [ ]

   6-10 years [ ]

   Above 10 years [ ]

SECTION II: IMPORTANCE OF PE CHILDREN

4. In your opinion, is PE of any importance to early grade learners? Explain your answer.

   _____

   _____

5. Do you think your PE teachers understand the importance of PE to early grade learners?

   _____

   _____

6. Are students in your school eager to attend PE lessons? Explain

   _____

   _____

SECTION III: FREQUENCY OF PE LESSONS

7. (a) Do your teachers of early grade learners attend every PE lessons as scheduled in the timetable?

   _____

   _____

b) If not, give reasons for not attending all the lessons.

_____

_____

_____

_____

8. How do you ensure that PE lessons are duly attended to and not being utilized for other activities?

_____

_____

_____

_____

SECTION IV: SCHOOL FACTORS INFLUENCING FREQUENCY OF TEACHING PE

A. Type of school

9. Tick against your type of school.

Public [ ]

Private [ ]

10. Tick against the composition of your school

Girls only [ ]

Boys only [ ]

Both genders [ ]

11. (a) Do you think the type of school influences the frequency of teaching of PE?

Yes [ ] No[ ]

(b) Explain your answer in 11[a] above

_____

B. PE facilities

12. List all the PE facilities and equipment available in your school.

_____

_____

13. How can you describe the adequacy of the PE facilities mentioned in 11 above?

Very adequate [ ]

Adequate [ ]

Inadequate [ ]

Very inadequate. [ ]

14. In what condition are the PE facilities in question 13? Tick as appropriate.

Very good [ ]

Good [ ]

Poor [ ]

Very poor. [ ]

15. . Tick against the PE resources in your school from the list below.

PE books [ ]

PE charts [ ]

PE fields [ ]

Videos on PE, games and sports [ ]

16. How do you ensure use of PE facilities by learners with special needs? Explain

_____

_____

17. In your opinion, does the availability of adequate and properly maintained facilities impact on the frequency of teaching PE? Explain your answer

_____

_____

C. Teachers' Attitude

18. Do you think the attitude of the early grade teachers in your school has any influence on the frequency of teaching PE? Explain your answer.

_____

_____

THANK YOU

APPENDIX III: OBSERVATION CHECK LIST

Presence/ condition of the following PE facilities/ equipment/ materials in the school

Availability of Facility, Equipment/ Materials	**Condition**		
	Very Good	**Fair**	**Below Average**
Swimming pool [ ]			
Gymnasium [ ]			
Running Tracks/ Field [ ]			
Permanently fixed PE equipment [ ]			
Small movable apparatus [ ]			
Others			

Frequency of activities

Activity	**Frequently**	**Moderately**	**Not used at all**
Body movements/ exercises			
Walking/ Jogging/ Running races			
Swimming			
Ball/ singing games/ dances			
Others			

Presence of the following material in School

Play Materials	**Frequently**	**Moderately**	**Not used at all**
Balls			
Hoops			
Skipping ropes			
Tyres			
Bean bags			

APPENDIX VI: AUTHORIZATION LETTER FROM GRADUATE SCHOOL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: E55/NKI/PT/23434/2012

DATE: 13th January, 2017

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR GITHAGA ELIZABETH MUTHONI – REG. NO. E55/NKI/PT/23434/2012

I write to introduce Ms. Elizabeth Githaga who is a Postgraduate Student of this University. She is registered for MED degree programme in the **Department of Early Childhood Studies.**

Ms. Githaga intends to conduct research for a MED Project Proposal entitled, **"School Factors Influencing The Frequency of Teaching of Physical Education in Lower Primary classes in Laikipia County, Kenya".**

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

GK/awn

APPENDIX VII: PERMIT FROM NACOSTI

THIS IS TO CERTIFY THAT:
MS. ELIZABETH MUTHONI GITHAGA
of KENYATTA UNIVERSITY, 43844-100
nairobi,has been permitted to conduct
research in *Laikipia County*

on the topic: *SCHOOL FACTORS INFLUENCING THE FREQUENCY OF TEACHING OF PHYSICAL EDUCATION IN LOWER PRIMARY CLASSES IN LAIKIPIA COUNTY, KENYA*

for the period ending:
11th February,2018

.....
Applicant's Signature

Permit No : NACOSTI/P/17/18425/15624
Date Of Issue : 13th February,2017
Fee Recieved :Ksh 1000

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

CONDITIONS

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

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEACH CLEARANCE PERMIT

Serial No.A 12786

CONDITIONS: see back page