

**EARLY CHILDHOOD EDUCATION IN THE CONTEXT OF COUNTY
GOVERNMENT MANAGEMENT: A COMPARISON OF LEARNER
PERFORMANCE BETWEEN PUBLIC AND PRIVATE
SCHOOLS IN KENYA**

BY

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DECLARATION

Declaration by Candidate

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DEDICATION

This thesis is dedicated to my lovely parents Mr. and Mrs. Philip Kilel for their long teaching support and encouragement throughout my life.

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ABSTRACT

The Kenya 2010 Constitution placed management and financing of Early Years' Education (EYE) under custody of County Governments. As such management and efficiency of early childhood education is expected to be more effective in offering quality ECDE in the counties than it was before devolution. This study emerges from the theoretical perspective that increased inputs should lead to increased outputs. The Education Production Function theory was employed. Increased expenditure after devolution and budgeting could change the quality of ECDE in counties. The purpose of this comparative study was to identify, compare and discuss factors which influence, and how they interact to influence, learning and achievement in public and private ECDE centres in the context of increased funding by the County Government. The objectives were: to compare qualifications and experience of staff in public and private ECDE centres; to compare teaching/learning methods and facilities used by teachers in public and private ECDE centres; to analyze factors affecting performance in public and private ECDE centres; and to use regression analysis to determine the factor with the highest affinity with achievement in ECDE centres. The location selected for this study was Kericho County. The target population for this study was all the 750 public and 258 private ECDE centres. This target population comprised of all the 1,066 teachers and 18,405 pupils in public ECDE Centres as well as all the 628 teachers and 4,180 pupils in private ECDE centres in Pre-Primary 2 (PP 2) in Kericho County. Sampling was done through stratified, purposive and simple random sampling methods. The sample size was determined using Krejcie and Morgan formula which gave a sample size of 254 teachers and 375 pupils from the public ECDE Centres and 155 teachers and 351 pupils from private ECDE Centres. In order to compare the impact of selected independent variables on academic achievement among ECDE learners the researcher chose to conduct a cross-sectional correlation survey study. Tools for data collection included questionnaires, observation schedules, document analysis guides, and interview guides. The instruments were piloted in the neighboring Bomet County. Qualitative and quantitative data collected was analyzed using quantitative and qualitative techniques. The quantitative techniques involved descriptive and inferential statistics in order to answer the questions posed for study. The results obtained showed that despite the increased funding to public schools, private schools had high academic achievement among learners. The study provides useful information for education policy makers in both levels of government for decision making with regard to devolution of management of ECDE centres, funding and academic performance. Proposed guidelines are intended to deliver, accountability for EYE funding, service delivery and increased quality service. The major findings of this study shows that inspite of funding by the County Government, Private ECDE centres continue to outshine their counterparts in the Public ECDE centres. This implies that there are other underlying factors that affect performance at this level other than funding. The findings were used to develop a model for County Government to establish uniform qualification of ECDE staff, common methodology to improve teaching and learning facilities hence universal instructions leading to achievement among pre-primary school learners.

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ACRONYMS

AEO:	Area Education Officer
ANOVA:	Analysis of Variance
BSID:	Bayley Scales of Infant Development
CEC:	County Executive Committee
CEYEB:	County Early Years Education Board
CO:	County Officer
CWSN:	Children With Special Needs
ECD:	Early Childhood Development
ECDE:	Early Childhood Development Education
ECE:	Early Childhood Education
EFA:	Education For All
EPF:	Education Production Function
EYE:	Early Years Education
EYEC:	Early Years Education Centres
FCEYE:	Facility Early Years Education Board
FPE:	Free Primary Education
GOK:	Government of Kenya
IAEYC:	International Association for the Education of Young Children
KICD:	Kenya Institute of Curriculum Development

KIE:	Kenya Institute of Education
KSRAT:	Kenya School Readiness Assessment Tool
KNEC:	Kenya National Examination Council
MANOVA:	Multivariate Analysis of Variance
MOEST:	Ministry of Education, Science and Technology
NAEYC:	National Association for the Education of Young Children
NRCHF:	National Research Centre on Hispanic Children
NZCER:	New Zealand Council for Educational Research
PP 2:	Pre-Primary 2
QASO:	Quality Assurance and Standards Officer
SEYEB:	Sub County Early Years Education Board
TSC:	Teachers Service Commission
UNESCO:	United Nations Educational, Scientific and Cultural Organization
UNICEF:	United Nations Children's Fund
WASCE:	West Africa School Certificate Examination
WEF:	World Economic Forum
WEYEB:	Ward Early Years Education Board

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

County Government Management of Early Years Education (EYE) is a proxy for increased funding to Early Childhood Education. In this comparative study it was hypothesized that qualification and experience of staff, teaching and learning facilities; Methodology used has an impact on the academic performance of ECDE learners in public and private ECDE centres in Kenya. In the subsequent pages the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, hypotheses justification of the study, significance of the study, scope of the study, limitation, researcher assumption, theoretical framework, conceptual framework, were discussed.

1.1 Background to the Study

From January 2003 each primary school in Kenya was required to create an ECDE annex. After the promulgation of the 2010 Constitution it became the responsibility of County Governments to manage ECDE. Once ECDE was developed County Governments were given budgets for infrastructure, hiring of teachers, and the purchase of instructional materials. One can argue that since 2013 there has been drastic increase in investment in public ECDE centres.

Funding is a critical input to education (Barret & Zhang, 2018). Increased funding is expected to provide better teaching and learning resources in form of classrooms, teachers, instructional materials and better nutrition for pupils at the early childhood stage. Increased funding should therefore increase enrollment and class attendance. Early Years' Education is the cradle of future learning. Early Years' Education is globally recognized as a crucial period in children's physical, mental and psychosocial

development (Austin, 2010). Early Years Education is the level of education when children acquire basic skills that serve as a good foundation for their later learning. ECDE develops the capacity to read, learn, and use Mathematics, to acquire information and think critically about the information acquired (Learning Policy Institute, 2018).

The Kenya primary school Grade One curriculum assumes certain knowledge levels among entrants: ability to speak in a given language with fellow children, ability to count, to draw and to describe their immediate environment. Children who attend early years' education classes have better chances of going to better high schools, performing better in secondary education and joining university. Brunner (1963) postulated that "any child can learn any content to high comprehension as long as that content is presented to the child in a way meaningful to the child." The purpose of Early Years' Education Centres is to provide education for all and cater for diversity in social income.

Children born in and attending school in rural set up are often disadvantaged in terms of language of communication in school and exposure to the modern technological society. Although primary school in Kenya is free, there is a dropout rate of 11% (Shahidul, 2013). A 2015 survey conducted by Uwezo Kenya indicates that the literacy skills in Kenya, alongside other Eastern Africa countries, are low. It established that, nationally only three out of ten children in Standard Three can do Standard Two work. Overall, 4.6% and 0.9% of children attending public schools in class three and eight respectively cannot read at all (Uwezo, 2013). These findings are vindicated by perennial poor Kenya Certificate of Primary Education results where many candidates score less than 100 marks out of 500.

There is a repetition rate of 4%. Repetition and dropout from school arise because learners are unable to learn and understand the Grade 1 content. Grade 1 teachers are often faced by pupils who have been differentially prepared for the primary curriculum. ECDE centres funded by County Governments are expected to provide opportunities for equalization. If it is assumed that ECDE is critical in the life of a child, then it is invaluable to establish the type of activities that public and private schools' teachers engage in to ensure meaningful learning. Given massive investment by the County Government in ECDE learning centres, it is expected that performance should be commensurate with the investment made. Has increased funding in public Early Years' Education centres led to improved performance among learners in public ECDE centres contrasted with private ECDE centres?

Education for the young has been in existence for as long as there has been parenthood. Nevertheless, management of ECDE has for the longest time been unstructured. Early Years' Education has at different times been managed by the family, the church, the community and the private sector. In Kenya rarely has ECDE been the responsibility of any government agency.

In traditional Kenyan society, the family and the community at large had the responsibility of bringing up children to fit in the society. Children were brought up from the earliest point to prepare for their adult roles. Formal Early Childhood Education (ECD) in schools was introduced in 1930s in schools in urban centres to benefit Europeans and Asian children who lived in towns. The initial pre-schools for African Kenyan children were set up in the 1950s. These were essentially safe-custody centres for children whose mothers worked in plantations owned by Europeans. Compared to European and Asian early years' education centres, African centres were

inferior. However, racial competition spurred Africans to realize the value of early childhood education.

Immediately after Kenya's independence the Simon Ominde-led African Education Commission of 1964 recommended the establishment and strengthening of early childhood education centres for Africans. Today the clamor for early childhood education is more widespread. Fifty percent of Kenyan children aged 3-6 attend ECDE centres.

The promulgation of the 2010 Constitution was to alter the landscape of ECDE completely. A new legal framework placed ECDE under county governments. An Act of Parliament (2014) came into force, stipulating the functions and procedures to be followed. It declares early years' education to be free and mandatory for young children in counties. The Act stipulates that every child has a right to education without undue discrimination, exclusion or restriction on the basis of birth, colour, sex, race, ethnic origin, tribe, creed or religion, social economic standing, political or other opinion, property, disability or other status. In Kenya funding and management of Early Years' Education is now the responsibility of the County Governments. The counties are expected to ensure the enjoyment of the right to early years' education by providing resources to ensure, among other things, availability and access to early years' education for all children within the county.

Nevertheless, the private sector remains an active participant in the provision of ECDE. Over the years public and private early childhood study centres have risen in competition. The private ECDE centres are perceived as more prestigious associated with better training and preparation for entry into primary schools. Public ECDE centres have been attached to primary schools since 2003. Every primary school in Kenya

created an ECDE wing. It was expected that public schools will be more efficient and make an impact on the future of the pupils.

The quality of ECDE has been studied previously by different individuals. Kyasanku (2017), the National Planning Authority in Uganda (2015), Mwaura (2006), Ngware et al. (2012) have all written on the challenges facing Early Years' Education in East Africa. There is evidence that ECDE is important for the child. ECDE can enrich physical well-being and psychomotor development, affective development, language development and cognitive skills. ECDE programmes can enhance school readiness; improve enrolment in the first grade of primary school; reduce delayed enrolment, dropout and repetition of grades; as well as increase completion and achievement. What is not known is whether there a significant difference in performance between pupils in public and those in private ECDE.

None of the studies mentioned earlier compares different management modes of ECDE centres. The quality of public ECDE centres today should ideally be compared to public ECDE centres of ten years ago. However, that is not possible given the paucity of documented evidence. One would also be comparing pupils of different historical periods living under different circumstances. This researcher sought to compare performance of public ECDE centres to private ECDE centres on the basis of increased funding from county governments. The quality of public ECDE centres in terms of infrastructure, staff qualification, methods of teaching used and academic performance were of interest to the researcher especially with the increased funding.

Under County Government management ECDE schools are comparatively heavily funded. For instance, in the 2014/2015 financial year, the department of Education and Youth and Social Services in Kericho County was allocated Kshs260.69 million out of

a total allocation of Kshs 4.81 billion for recurrent expenditure. Shillings two hundred and four million was used for development in the same period. In the 2015/2016 financial year the County received a budget of Kshs 5.7 billion from the Exchequer and budgeted to spend Kshs 473,170,000 on Education, Youth, Culture and Social Services. In the 2016/2017 financial year the Kericho County was allocated Kshs 6.29 billion from the Exchequer. Out of this the County spent Kshs 817,350,000 on development and recurrent expenditure. Each county is responsible for the establishment, administration, finance, and staffing of ECDE centres. It is the responsibility of county governments to construct classrooms for early childhood pupils, provide teaching and learning resources and to remunerate teachers for this level.

According to the National Constituency Fund classroom construction proposals the cost of putting up a permanent classroom in Nairobi should be around Kshs 650,000. Although outside Nairobi the cost is placed at the same amount but it is appreciably lower. A County which spends Kshs. 326,600,000 a year on development will be expected to put up about 500 classrooms for ECDE if they do nothing else with the money. Under this new arrangement it is expected that the quality of ECDE will rise against this background it is important to establish the influence of these allocations on the quality of ECDE centres. It was therefore logical to compare public and private ECDE centres. It is often assumed that investors in private ECDE centres provide better quality education. What is not known is whether the status quo remains after funding of the public ECDE centres. It is with this in mind that current study compared the performance in public and private ECDE centres.

1.2 Statement of the Problem

Recruitment of teachers as well as provision of learning space and resources should lead to improved performance in Early Years' Education. For the longest time, ECDE

has been run by local communities where children were herded for classes into churches and social halls. Since 2003 government policy changed to introduce ECDE centres at every primary school. In the 2010 Constitution Early Years' Education was introduced as a human right and placed under direct management of the county governments. Requisite funding is allocated to County governments to compensate for the increased responsibility. Increased funding to County Governments such as Kericho should enable improved uptake of quality education and lead to better performance at all levels. Early Years' Education impacts on future performance of learners.

With increased government funding to the early childhood education sector it is expected that space for private ECDE centres would shrink. Private ECDE centres should find it difficult to compete for children with public funded ECDE centres. Private ECDE centres are often financed either from family sources or church collections. Revenue generated is inferior compared to the level of funding emanating from the Exchequer to facilitate ECDE in counties.

It is 15 years since early childhood centres were set up in all primary schools in Kenya. It is 8 years since early childhood education was devolved to county governments for management. However, very little is known about the efficiency of the ECDE centres based on the mode of management and funding as a result of devolution of the ECDE function to county governments. In this study the researcher identified who teaches, what they teach, how they teach and the expected outcome in terms of academic performance. The researcher sought to investigate and describe the context in which the Early Years' Education is provided in public and private ECDE centres and consequently compare the academic performance of pupils in public and private ECDE centres.

1.3 Purpose of the Study

The purpose of this comparative study was to identify, compare and discuss factors which influence and how they interact to influence, learning and achievement in public and private ECDE centres in the context of increased funding to public ECDE centres by county governments.

1.4 Objectives of the Study

The study was guided by the following specific objectives:

- i) To compare qualifications and experience of staff in public and private ECDE centres;
- ii) To compare teaching and learning facilities found in public and private ECDE centres;
- iii) To compare teaching and learning methods used by teachers in public and private ECDE centres;
- iv) To compare performance on achievement test between pupils in public and private ECDE centres after one term of instruction;
- v) To analyze factors affecting performance in public and private ECDE centres.

1.5 Research Questions

Objectives 1, 2, 3 and 5 are qualitative. Research questions are set to help find answers:

- (1) What is the difference in qualifications and experience if any between public ECDE teachers and private ECDE teachers?
- (2) Are there in differences in the available facilities between public ECDE centres and those in private ECDE centres?

- (3) What are the similarities and differences between teaching methods used by teachers in public ECDE centres and those used by teachers in private ECDE centres?
- (4) Which factors appear to determine performance most in ECDE centres?

Objective 4 is quantitative in nature. Hypothesis is therefore set to be tested:

H₁: There is no significant difference in performance on achievement test between pupils in public and private ECDE centres.

1.6 Justification of the Study

Formal early childhood education in Kenya is less than a century old. Over this duration not much is known about many aspects of this important level of education especially the activities conducted in schools. Information on what happens or does not happen is important for social advancement if education is to be a major pillar in attaining Kenya's Vision 2030. Vision 2030 hopes to catapult Kenya to become a middle income country. This is expected to be achieved through education for production. In the words of Jerome Brunner (1996) future scientists are trained and prepared for their future roles at the early years' education level. Children at ECDE level should be taught to think critically, to communicate their choices both verbally and in writing even when it is only through writing their names, drawing, copying words, matching shapes and sorting things.

This study sought to add to the body of literature on what best works in ECDE centres. It provides an outline of what an ECDE centre should do to improve achievement among pupils. The knowledge generated from this study will provide new insight and so inform the management and conduct of learning in both public and private ECDE centres. The study will add to the existing literature on why children at ECDE level

vary in academic achievement. The study sought to provide explanation on why children of certain ECDE centres do well while others fail to do so. This study established the teaching staff available, resources available, methods of teaching used by teachers. This will in turn help to explain why there is a variation in academic achievement between pupils in private and those in public ECDE centres. It is at the ECDE centre that learning should be enhanced to be most efficient. This will help in improving the academic performance of those who attend the centres and lay a good foundation for higher levels of learning.

1.7 Significance of the Study

Knowledge engendered from this study will be of significance for future development of Early Childhood Education in Kenya. No other study has compared performance between public and private ECDE centres in the context of increased funding to the public ECDE centres especially in Kericho County. It is necessary to establish whether increased funding has an impact on the academic performance of pupils in ECDE centres.

The evidence collected as part of this research will add to the research understanding of how children learn. It will increase the understanding of what promotes or hinders effective learning in early years' education centres.

1.8 Scope of the Study

This study was concerned with establishing factors which determine efficiency of learning at early childhood level. The population of interest in this research included ECDE teachers, officers in charge of ECDE and children both in public and private schools. The location selected for this study was Kericho County. The target population for this study comprised of pupils in PP 2 and teachers in both public and private ECDE

centres within the county. The scope of independent variables covered the qualifications of teachers as volunteered by them, the sex of the teachers, experience in teaching, observed teaching methodology, the learning resources they use, and the category of school in terms of private or public owned. Teachers within the selected wards should be representative of teachers in other wards of Kericho County and indeed of other Counties in Kenya. The researcher focused on the concept of achievement as measured by an end term test administered to learners in their final year of ECDE. Data was collected by way of a cross-sectional survey which generates information at one point in time.

1.9 Limitations of the Study

Data collected was limited to that collected by the tools selected. It was not possible to generate any other information outside the scope of what the tools prepared could collect. Nevertheless, where tools were deficient the researcher mitigated for this weakness by adopting triangulation method of data collection so that weaknesses in one tool are strengthened by the strong points in the other tools.

The other limitation was methodological. Teaching at early childhood level takes time to show results. To note effects of independent variables would be ideally observed in a longitudinal study. Several panel tests over four or five years would be ideal. Nevertheless, owing to the nature of the doctoral programme the researcher was compelled to collect data by way of a cross-sectional survey. Should the findings of this study prove unsatisfactory due to the design weakness; the study will still have served the useful function of setting more specific research questions for future researchers.

1.10 Assumptions of the Study

The researcher assumed that;

- i) It would be possible to observe and record teaching activities used by teachers in private and public ECDE centres;
- ii) Management staff in public and private ECDE would cooperate in equal measure in providing information required for the study;

1.11 Theoretical Framework

Within the objectives for this study the independent variables are type of school in terms of private and public, teacher qualifications and numbers in private and public schools; availability and utilization of teaching/learning resources; and, teaching and learning methods used by teachers in public and private ECDE centres. These variables are essentially inputs by the different school management systems. The researcher sought to compare the different effects teacher qualifications, teaching/learning resources and teaching/learning methods in ECDE centres will have on achievement by learners at this level. Achievement will then be an output of the education function in the ECDE centre. The major question remains whether there is a variation in the recruitment of teachers, utilization of learning resources and selection of appropriate teaching methods between public and private ECDE centres.

In view of these variables, and their link with the dependent variable, the most appropriate theoretical perspective adopted was the Education Production Function Theory. The relationship between inputs and outputs of education may be called the education production function (World Bank, 2004). Production function refers to the process by which inputs are converted to outputs. The Education Production Function (EPF) theory is derived from the general Production Function theory except for the fact

that the EPF relates specifically to education. Education is a production process which uses financial, physical and human resources to produce educated people. The school in this case is treated as a production firm but whose aim is not to make profits. School characteristics, teacher characteristics and pupil characteristics are considered as inputs. Academic performance by ECDE pupils is considered the output. The EPF postulates that the quality and quantity of inputs in an education system influence the outcomes seen among learners. The EPF can be used to analyze the internal efficiency of any education system. The internal efficiency of an education system concerns the relationship between the inputs such as teacher and resource quality, and the outputs such as marks attained by learners.

Psacharopoulos & Woodhall (1985) noted that the relationship between inputs and outputs of education is highly complex. Many factors are involved. The EPF theory assumes that the differences in quantities and qualities of school inputs are the ones responsible for the variations in the educational outcomes. Factors which may determine performance among school-going children include the type of school whether private or public, the number of trained teachers and how they teach, and, the available resources and how they are utilized. It is up to a researcher to isolate and measure the effect of the selected variables. The EPF theory may be represented by the formula shown below;

$$AP = f (Ts, Tq, Tr, Tm, E)$$

Where,

AP = Academic performance by ECDE pupils

Ts = Type of school (public or private)

Tq = Teacher quality in terms of training and experience

Tr = Teaching resources used

Tm = Teaching methods used in the schools

E = Error term.

The type of school was defined as public or private. The two types were separated through stratified sampling. Teacher qualification was defined as either trained or untrained. All trained teachers were placed in the same category regardless of the level. Teaching methods used were described as play way methods and formal, child centred and teacher centred and small group and large group. Resources were in the form of visual, audio, and touch. Resources were categorized as available and used, available not used or not available and therefore not used.

Educational outcomes are the product of very many inputs. However, this study focuses only on inputs such as teacher quality, teacher methods, learning resources and type of school. The importance of each independent variable for performance of learners is the basis of this study. To determine the effect of educational inputs on academic performance the researcher performed regression analysis of relationship between independent variables and the dependent variable. The regression model developed emerged from the EPF.

The model used was;

$$DV_1 = K + aV_2 + bV_3 + cV_4 + dV_5 + E$$

Where,

DV₁ is the dependent variable, learner performance

K is a constant

a, b, c, d, e, f are coefficient estimators

V_2 is independent variable type of school

V_3 is independent variable teacher quality

V_4 is independent variable teaching/learning resources

V_5 is independent variable teaching methods, and

E is some error time.

1.12 Conceptual Framework

Following from the theoretical perspective outlined above, the researcher was able to develop a conceptual framework. A theoretical framework provides a general representation of relationships between things in a given phenomenon. For example, the EPF theory discussed in Section 1.11 before outlines the general relationship between inputs and outputs. The theory is wider in scope than the conceptual framework. The conceptual framework depicts the researcher's understanding of the possible link between the Independent Variables (IVs), the Moderating Variables (MVs), the Dependent Variables (DVs) and the control variables. The researcher understands a conceptual framework to be an argument of how the IVs relate with the DVs. It is a way of linking all the elements of the research process, research disposition, interest and personality, literature and theory and methods as explained by Ravitch and Riggan (2013). Conceptual framework is purely a visual representation of a study's organization and the researcher's argument about the importance of the study and its rigor (Mugenda, 2012).

In the present study the conceptual framework shows that increased funding arising from devolution provides more resources which benefit education. Increased funding will lead to recruitment of better quality teachers as a result of training, better quality resources utilized in teaching, modern child-centered methods of interaction leads to better academic performance by learners in ECDE centres. In the model presented it is conceptualized that increased funding of ECDE centres has led to better resourced public schools which should dwarf private ECDE centres. The type of school attended may also influence academic output by the learner. Better resourced schools should have better teachers; and the better trained a teacher is, the better resources at the teacher's disposal, the more active teaching methods the teacher applies to the learning situation, the higher the achievement for the learner.

In this conceptual framework the two different sources of funding for ECDE Centres are the Independent Variables (IVs) while the expected learners' performance is the Dependent Variables (DVs). The Moderating Variables in this study includes Staff Qualification and Experience, Teaching/Learning Facilities and Methods. The visual representation of the variables selected for this study and how they relate to one another is shown in Figure 1.1:

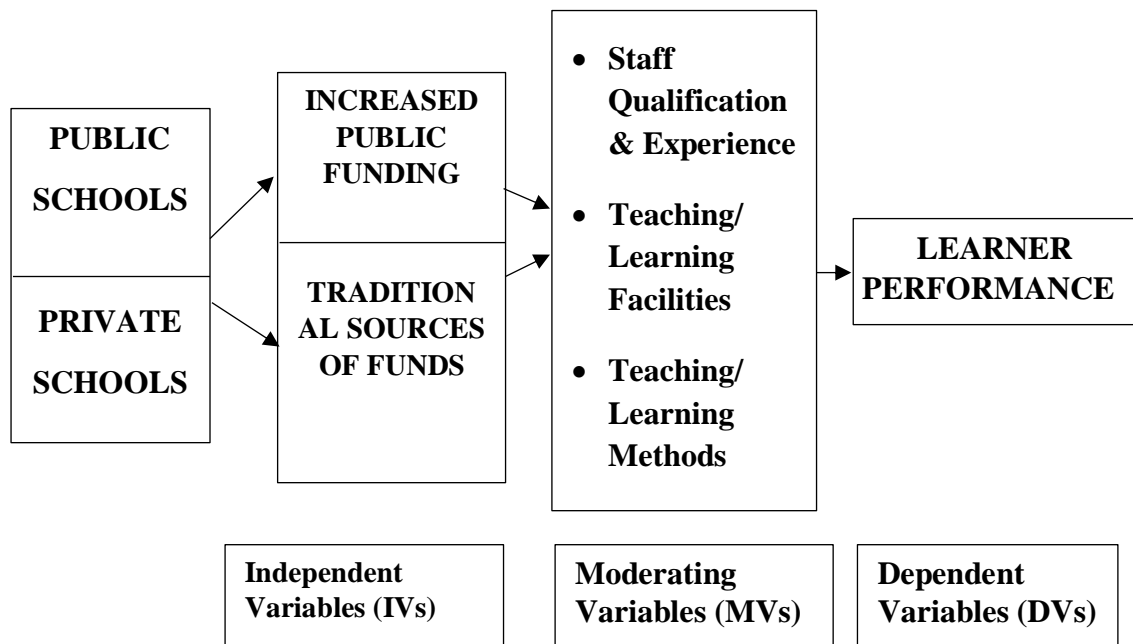


Figure 1.1: Conceptual Framework for Comparison of Learner Performance between Public and Private Schools in Kenya

Source: The researcher

1.13 Operational Definition of Key Terms used in the Study

Achievement is expressed as the total score on the tests given to sampled ECDE learners.

Early Years' Education has previously been known as Early Childhood Education. The concept of Early Years' Education was introduced recently in the Competence Based Curriculum lingua. In this study the term is used to refer to education provided to children between the ages 3 to 6 preparing to join Grade 1.

Inputs include teacher characteristics such as training level, experience, teaching resources used and methods of teaching adopted.

Learners: ECDE children given activities by their teacher through manipulating materials.

Management: is a set of principles relating to functions of planning, organizing, directing and controlling leading to application of these principles in enhancing physical, financial human resources efficiently and effectively to achieve learning outcomes.

Outputs were seen in terms of what the learner was able to do after the learning experience. This was measured in terms of performance scores

Portfolio: Are collections of student work representing a selection of performance, a folder containing a student's best piece and the student's evaluation of strength and weakness of the pieces.

Private ECDE centre: ECDE centres are funded wholly or partly by learners' tuition and administered by a private body.

Public ECDE centres: are administered and funded by the county government.

Pupils were those who attended "PP 2" during the period this study was conducted

Rubrics: Typically an evaluation tool or set of guidelines used to promote the consistent application of learning expectations and learning outcomes in the classroom.

Teacher Characteristics includes age, sex, educational level, training level, and teaching experience

Teaching Methods were distinguished on the basis of learner centred or teacher centred. Play way methods, modeling, role play, song and storytelling were such methods.

Type of school was categorized as either public funded by the County government or private funded by churches, communities or any other non-governmental investor.

1.14 Chapter Summary

In this chapter the problem investigated was introduced. The researcher identified, compared and discussed factors which influence and how they interact to influence, learning and academic achievement of pupils in public and private ECDE centres in the context of increased funding to public sector ECDE centres by county governments. The objectives of the study were laid out. The Education Production Function theory was presented and the framework around which the investigation was conducted has been stated. It is envisaged that the more the money spent the better the resources leading to better performance (Pitt, 2005).

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter presents literature related to the study. It is organized under the following sub-headings: the historical development of ECDE in Kenya; public and private ECDE centres; teacher characteristics; methods used for teaching in ECDE; and accessibility and utilization of resources for ECDE. The literature is presented in the funnel approach: on each factor the global literature is presented followed by Continental literature, Regional literature and finally County literature, if any. The researcher sought to emphasize what is known about each factor and pointed out what is not known thus justifying the present study.

2.1 The Concept of Early Years Education

According to Estes (2004), early years of a child marks a significant period of growth and development. Oduolowu and Olowe (2011) pointed out that the early years of children are years of thrilling vulnerability and great potentials. It is a period during which adequate protection, care and stimulation are essential to provide the foundation for well-being and development of the child. ECDE becomes a key factor in providing this foundation during the early years. Olowe, Kutelu, and Majebi (2014), opined that ECDE is any group programme that is designed to promote children's learning as well as intellectual, socio-emotional, language and physical development from birth to age 8. This informs the reason why the periods of the Early Years Education need to be handled with exceptional and thorough care as well as specialized attention.

The concept of Early Years' Education is a new addition in education lingua. Early Years' Education relates to learning for 3 to 6 year old children. It is supposed to enrich prior learning that has taken place in the home and the close environment. ECDE should

expose children to a rich variety of play activities and other learning experiences. The concept is a recent import from Britain coming into Kenya with the introduction of the Competence Based Curriculum. It means much the same as the Early Childhood and Development Education and Early Childhood Education both previously used.

Early Years' Education is defined as the period from birth to eight years of age (Brown & Iyengar, 2008). Clough, Nutbrown, and Selbie (2008) also defined it as the period between zero and eight years of age. However, in school terms, Early Childhood Education incorporates the group settings for infants through elementary school to grade three (Brown & Iyengar, 2008). In other words, Early Childhood Education is a special level of education serving children from infancy to elementary grade level of three (Gonzalez-Mena, 2008). In the context of this study Early Years' Education is education for 3 to 6 year olds. This excludes Grade 1 to 3.

Early Years Education is crucial for the cognitive development of children in later years of their life (Olowe, Kutelu, & Majebi, 2014). Emphasis on Early Years' Education is part of the Education for All (EFA) global movement led by UNESCO, aiming to meet the learning needs for all children, youths and adults by 2015. The Education for All movement is a global commitment to provide quality basic education for everyone. The movement was launched at the World Conference on EFA held in Jomtien (Thailand) in 1990, where representatives of the international community agreed to universalize primary education and massively reduce illiteracy by the end of the decade. Based on the Dakar Framework for Action Senegal, (April, 2000), a shared commitment was made to attain several EFA goals including expanding and improving comprehensive Early Childhood Care and Education especially for the most disadvantaged and vulnerable children of the world. Others EFA goals includes improving all aspects of quality of education and guaranteeing excellence so that recognized and measurable

learning outcomes are achieved by all learners especially in literacy, numeracy and essential life skills.

2.2 Historical Development of ECDE in Kenya

Modern Early Years' Education in Kenya, as in most parts of the world, has been developed over the years. It has been as a result of several seminars, task forces, workshops, commissions, policy declarations and private endeavors. Education for the young varied from time to time in terms of quality, quantity, service providers and principles governing its provision. It is important to note that in Kenya there once was separate early childhood education for Europeans, Asians and Africans.

In traditional Kenyan society, the family and the community had collective responsibility of early childhood development and education. Indigenous education was essentially education for living whose major purpose was to train the youth for adulthood within society (Sifuna & Otiende, 2006). Education was geared towards developing mastery skills among members of the society and instilling social-survival skills, values and behaviors. Indigenous education was aimed at transferring and preserving cultural beliefs, values, norms and practices. Children were made to understand themselves, their place in the society and society's expectation as they moved from one age set to the next. Education was therefore, aimed at creating a smooth transition and an understanding of the principles guiding the community and the society at large. The traditional education was normally informal and was continuous. Children acquired and learnt knowledge, skills and attitudes throughout life. Traditional educators applied various methods of instruction to attain the learning purpose desired (Sifuna & Otiende, 2006). Informal methods were such as learning through play. Children also learnt through make-believe activities which could be

described as initiatory, imaginative, and symbolic. Oral literature also constituted an important method of instruction.

The first nursery schools in Kenya were built in the 1930s in the urban centres by Europeans and Asians to take care of their own children as a result of British education system. They were meant to lay a good foundation of education for Asian and European children. The rural areas had no pre-schools; therefore, Kenyans continued to use their traditional way of educating their children. The advent of colonialism in Kenya influenced or changed the modes. In order to subdue the Africans, the colonial masters banned many of the African customs, tradition and practices that were expected to install cultural values into children. This meant that a vacuum in the early childhood education was created and children became disoriented.

The colonial period impacted heavily on ECDE in Kenya. The presences of Europeans' and Asians' pre-schools made some Kenyans realize the need of ECDE. Assisted by missionaries, African ideas on modern education ideas conceptualized. However, this did not take effect until after independence. The independent schools that were started before independence had little to offer in terms of ECDE knowledge and skills.

The first pre-school for Africans in Kenya were referred to as nurseries, day care centers or feeding centers. These were primarily for safe custody of the children as their mothers worked in plantations and their fathers got involved in the War, others were accommodated in these centers because their parents and other caregivers were in detention. These centers were mostly found in central and eastern province of Kenya but they were abolished after the war.

Many Kenyan adults, both men and women, were directly and indirectly involved in the Second World War between 1939 -1945. Strong men were recruited into the war

and women started tilling land to provide for their families. As they worked, the older children assisted them to earn a living for the family. This endangered the young children's 'education' as they had to go to the farms along with their mothers or older siblings. Out of this concern, the establishment of the first pre-school for the Africans commenced.

The Second World War was followed by the African resistance to colonial rule. Most popular was the Mau Mau resistance beginning from 1952 which was most active in central and eastern parts of Kenya. Armed conflicts led to detention of parents. Forced labor on the colonial plantation denied children the care they could have got from their parents. Parents had no time to cater and particularly train their children. This led to moral decay among most of the neglected children. In the plantation, however, early childhood centers were established. These centers were not meant for the education of children but nurseries where mothers would breastfeed and feed their young one as they worked in the plantations. The centers also served as rescue places for fear of being terrorized by the colonial rulers. When the emergency period was called off, these children were taken back to their parents and those who had no parents were taken up by their relatives. Therefore, there were no structured ECDE programmes for the African children before independence.

2.2.1 The 'Kindergarten' Idea

Globally, the idea of nursery school is associated with Friedrich Froebel who coined the term kindergarten or "children's garden". The kindergarten placed emphasis on play and its use of 'gift' (play materials) and 'occupations' (activities). Froebel held a belief that at birth, every child possessed his full educational potential. Favorable Educational environment was necessary to foster the child's growth and development in an optimal manner. His vision was to stimulate an appreciation, love for children and to provide a

new but small conducive environment (Watson, 1997). In the kindergarten, children would play with others of their own age group and experience their first gentle taste of autonomy.

Froebel's philosophy of education is comprised of four basic components of free expression: creativity, self-activity, motor expression and social participation. He supposed that stimulating voluntary self-activity in the young child was the necessary form of pre-school education (Watson, 1997). Froebel's major contribution to Early Childhood Education was his theory of introducing play as a means of encouraging children to get into self-activity for the purpose of giving external existence to their inner natures. As described by Dewey (1990), Froebel's interpretation of play is characterized by free play which uses all of the child's imaginative powers, thoughts, and physical movement using a sufficient form, his own images and educational interests.

Froebel's ideas have implications for ECDE. The kindergarten idea applies Froebel's basic philosophical principles including such as free self-activity especially free play activities; creativity -use of materials and language in constructing reality; social participation, social interactions, homely environment and motor expression - psychomotor activities.

Another contributor to the philosophy and practice of ECDE is Maria Montessori (1870 -1952). She was an Italian doctor who gave her life to the promotion of education for young children. Her ideas influenced virtually all subsequent ECDE programmes. Montessori programmes are very popular with those who dedicate themselves to teaching as a religious vocation such as catholic runs Montessori programmes are popular because of the following characteristics: Orderliness in the way children do

their things including working and walking, encourages independence; children learn to work on their own with little guidance; self-directed learning. It establishes a calm environment, and child centred learning process with autonomy for self-initiative and creativity.

Montessori believed that each child must be respected as a unique being with own educational needs which must be catered for individually. She argued that children are not miniature (small) adults and should not be treated as such. Thus adults must not impose their ideas, wishes and dreams or direct children to behave in certain ways perceived as good by the adult and which suppress the development of the child's own personality. Children should be encouraged to do things for themselves so that they can develop autonomy and positive self-esteem.

In a Montessori school, teacher's role is to make children the centre of learning. Teachers should not talk too much but to prepare and arrange a series of motions for cultural activity in a special environment for the child; guide the children without letting them feel the teacher's presence too much; encourage the children to use the freedom provided for them; to recognize sensitive periods and provide the best possible environment and tasks.

According to Nicole Akoukou Thompson, quality Early Years Education has a considerable influence on future education, health outcomes and employment, among the learners. The study highlighted important findings within Latino community. Centre-based child care and public pre-K programmes have a lot of effects on low-income Latino children especially kindergarten readiness. It also impacts academic achievement. The National Research Centre on Hispanic children and families (NRCHF) produced the report on children in public funded pre-school programmes in

Miami. Children entered Kindergarten with above average in areas of social behavior and pre academic skills. They found that dual language learners who attended public school pre-K are more proficient in English than those enrolled in centre-based care. According to the report, Latino children often enter school less ready to learn than non-Latino white children, they often lag behind their non-Latino white classmates in early language, literacy and mathematics. These findings are troubling because the academic skills children bring into Kindergarten sets the stage for later school success those who enter school behind often stay behind.

According to Smith (2014) ECE makes a significant contribution to the achievement, school completion and outcomes. Parents should be encouraged to access ECE programmes for their children and government should invest highly quality ECE programs.

2.2.2 The Modern ECDE Centres

Before the promulgation of the Kenya 2010 Constitution and the empowerment of the County governments to run ECDE centres the private sector appeared to have monopolized most of the ECDE centers with little government participation. Thus, the public education sector opportunities for ECDE were few in between or totally lacking, yet available data showed that at later formal education stages, public schools catered for well over 90% of Kenya's school going age (Magoma, 2013). ECDE faced challenges related to the following: funding, policy formulation, low participation rates of target age groups including special learners, lack of curriculum content informed by research based data, inadequate qualified educators, lack of schemes of service for educators, rising number of orphans, conflict in medium of instruction among others. Lack of practical approaches to inform the parents and lack of the Ministry of Education's funding and implementation initiatives further complicates the provision

of ECDE (Magoma, 2013). Public ECDE centres were well funded, there is a policy on ECDE in place, increased funding has increased participation of the target age group, each county is empowered to recruit teachers on their own terms, and the county can choose an acceptable medium of instruction.

Generally, it would appear that it is the private ECDE centres which are disadvantaged. Private ECDE centres still depend on church or individual family sponsorship. Nevertheless, there is need to find evidence on the impact of county government funding on achievement in ECDE.

2.3 Management of ECDE Centres

County government management of schools is a proxy for funding of schools. In this study schools are distinguished on the basis of funding: public funded schools and private funded schools. Education is both a private and social investment (Psacharopoulos & Woodhall, 1985). Governments subsidize education but in return derive higher tax revenues from the educated citizens. Three main arguments are used to justify public subsidy of education. First is the idea that since the social benefits of education exceed private benefits, governments subsidize education to prevent under-investment by individual consumers of education. The second point is about equity and equality of opportunity. If education was provided under market conditions, only those who could afford to pay tuition fees would enroll. Third, it is believed that education is subject to economies of scale and therefore it is better to finance education publicly (Psacharopoulos & Woodhall, 1985).

Financial constraints can lead to ineffective implementation of Early Childhood Education. However, with devolution of management of ECDE programs, it is expected that there will be an improvement in implementation and provision of adequate funds

to meet the rising needs in the centres. A study carried out on donor funding by Kilbride and Kilbride (2010) revealed that at macro level, Kenya has suffered a blow from the heavy obligation following its quest for funding from the World Bank and International Monetary Fund to finance fiscal policies such as the Structural Adjustment Programs. It is reported that these debts are partly responsible for significant reduction in government funding for subsidized health care, education, and other anticipated institutional expenses. The outcome has been that in the past families have had to carry the burden in implementation and management of Early Childhood Education curriculum and its programmes (Kilbride & Kilbride, 2010).

Early Years' Education is not compulsory in Kenya. The construction of ECDE centres at every primary school in Kericho County provides an opportunity for each child who wishes to enroll to do so. The demand for education by 3-6 year old children depends very much on the parents' attitude towards education. Attitude and effective demand for education is influenced by parental income. Even when fees are low, out of pocket expenses such as travel and school uniform represent a financial burden on poor families. High enrollment in the public ECDE often leads to decline in quality of instruction. This notwithstanding, it is argued that in developing countries parents' social economic background has much less effect on pupil achievement than in developed countries Schiefelbein & Simmons, (1978). When children go to ECDE at the early age of 3 and remain in school for the longest time, the effect of parental background is reduced. Owing to poor conditions in homes school environments are undoubtedly superior and attractive to learners. Funding by county governments will raise access to ECDE by those who would not otherwise have had access. In rural counties such as Kericho, increased funding to ECDE should create opportunities for

rural children to stay longer in school and therefore benefit more from school variables such as teaching and learning resources.

Literature reveals contradicting findings on the role of money in education. Jenks (1972) argued that, “The characteristics of a school’s output depend largely on a single input, namely the characteristics of the entering children. Everything else, the school budget, its policies, the characteristics of the teachers; is either secondary or completely irrelevant” Psacharopoulos & Woodhall (1985). Similarly, Hanushek (1996) found that there is no relationship between per-pupil expenditures and academic outcomes. However, using the same data Hanushek (1996) had used, Hedges, Laine and Greenwald (1997) found that increasing per-pupil expenditure has a significant positive impact on student achievement.

Despite lack of consistent findings, researchers in the area acknowledge that any effect of per-pupil expenses on academic outcomes depends on how the money is spent, not on how much money is spent (Lips, Watkins & Fleming, 2008). Increased expenditure per learner improves outcomes when it leads to smaller class sizes, additional instructional supports, better teachers, and therefore better interaction between the teachers and learners.

Although increased spending on schools will raise enrollment and influence learning positively, infinite spending on education does not necessarily raise achievement through the roof. Carey and Harris (2016) report a study in which Lafortune, Rothstein and Schanzenbach analyzed the results of the American National Assessment of Educational Progress which is taken by a representative sample of school children. They analyzed individual student scores. They discovered that in the long run, over comparable time frames, states that send additional money to their lowest-income

school districts see greater academic improvement in those districts than states which do not. Increasing funding to low performing schools yields better results (Strauss, 2018). In other words, there is optimum expenditure beyond which any further expenditure will not make a difference.

Developed countries appear to enjoy zenith level in terms of quality and number of schools, teaching materials and teacher recruitment. Developing countries on the other hand suffer the contrast: no classrooms, no schools, few effective teachers and little teaching material. Given the scenario in African countries where Kericho County is located, does increased funding such as what is offered by county governments make a difference in pupil achievement?

The mode of school funding affects the provision of infrastructure, recruitment of teachers, class size, supply of instructional facilities and therefore learning effectiveness. In subsequent sections of this chapter the researcher discussed the contribution of funding on school facilities, teacher characteristics, methods of teaching, achievement in schools and researches done on relationships between selected factors and performance.

2.4 School Facilities in ECDE Centres

According to Davies (2005), resources can be taken as anything in the school or its environment that may be used to facilitate teaching or learning. This includes people in various guises, buildings and their surroundings, physical plant and even actions resulting from a change in any particular section. According to Davies (2008), the conceptual framework for Jamaica early years curriculum from birth to five years, the development of interest corners is influenced by various dynamics which include the availability of appropriate materials, physical space and the practitioners' creativity.

The researcher explained that corners of interest provided in a classroom setting includes shop, home, science discovery, market, toys, art, music sound, contractions, blocks, water play, computers and special interest. However, the study in no case addressed the kind of suitable materials in relation to academic achievements of learners.

According to Bronfenbrenner (2004), children's development is influenced by the equipment, physical facilities, and materials present in the environment in which children live, and the interpersonal relationships of the persons with whom they interact.

A survey of K-12 teachers in Washington, D.C. cited in Buckley, Schneider, and Shang, (2004) found out that facility quality is an important predictor of the decision of teachers to leave their current position. In relation to the importance of the physical environment, the above study cites Hanushek, Kain and Rivkin (2004) who asserted that teachers might be willing to take lower salaries in exchange for better working conditions. This statement may appear like an overstatement, but it's not, considering that the quality of school buildings affects the quality of teacher life and educational outcomes. While the Kenyan teachers may not appreciate this, poor "Indoor Air Quality" (IAQ) reportedly leads to "sick building syndrome" which in turn increases student absenteeism, reduces student performance and affects both learners and teachers' health (Buckley, et al, 2004).

School facilities have a critical bearing on learner satisfaction. In Kenya, Nyaga, (2013) carried out a study on the administrative challenges faced by public primary school head teachers in the management of pupils in Embakasi District. A descriptive survey design was employed and a focus was made on head teachers in 42 public primary

schools in Embakasi District, Nairobi County. The County Education Officer (CEO), Embakasi and Area Education Officer (AEO), Embakasi were among those interviewed. Findings indicated that majority of respondent revealed that physical facilities were important. They complained that inadequate classroom and other facilities in the school was the main problem. It was established that classroom chairs and desks in their schools was inadequate to cater for the influx of the pupils in the recent years leading to inadequate learning facilities which is crucial for pupils' management and learning. The findings further revealed that the school sanitation was below standard. A number of toilets in majority of the schools were inadequate or below standard. This affected the implementation of the Free Primary Education (FPE) programme.

Erden (2010) carried out a research on problems that preschool teachers face in curriculum implementation in Turkey. A total of 223 preschool teachers teaching in public and private kindergartens in Ankara were used. Qualitative data was gathered through interviews with a group of participants selected from the 223 teachers. One-way repeated measure of ANOVA and Multivariate Analysis of Variance (MANOVA) was employed to analyze the quantitative data. Content analysis was conducted for the qualitative data. Findings from the study indicated that physical facilities were key issues affecting implementation of ECDE programmes. The study discovered that toilets, classrooms playing grounds were not adequate which affected the implementation on pre-school programme. Njoroge (2011) also conducted a study on factors influencing children enrolment in preschool education in Thogoto and Karai Zones in Kikuyu Division, of Kenya, a survey research design was used. The target population of the study included pre-schools pupils, teachers, head-teachers, proprietors of ECDE, and parents from Thogoto and Karai zones of Kiambu County. The sample

comprised of 3 head teachers, 3 directors, 6 teachers and 6 parents. The study showed that physical facilities in the public ECDE centres were not conducive hence parents were not willing to enroll their children in the public ECDE centres. Findings from this study established that physical facilities, teaching learning resources are the major factors influencing children enrolment in pre-school education. The study emphasized that the role of physical facilities is paramount in enabling teaching and learning in the ECDE centres. Recommendations were made that physical facilities should be available so that learning can be effective, and this finding informed the need for this study. Many ECDE centers in Kenya lack adequate teaching and learning resources and facilities suitable for ECDE in their learning environment.

A study carried out by Offenheiser and Holcombe (2008) attested that inadequate teaching, and learning resources, lack of properly ventilated classrooms, furniture suitable for children, kitchen, safe clean water, playground, toilets and play material have a negative impact on the effective implementation and management of ECDE programmes. Similar views have been posited by a study carried out by the International Association for the Education of Young Children (2011). Findings revealed that teachers do not have adequate teaching and learning resources to enable them to implement ECDE curriculum in their countries effectively. This affects implementation of ECDE curriculum positively. The creation of a conducive learning environment helps deprived children to improve their academic performance (Offenheiser & Holcombe, 2008). Nyaga (2013) also established that classroom furniture in their schools were inadequate to cater for the high enrollment of the pupils. The findings further indicated the fact that the school heads encountered insufficient learning facilities which is crucial for pupils' management and learning. It also points to the fact that the school lacked good atmosphere for learning since most of the classes

faced congestion and the available furniture being scarce for the pupils. A study by Takesure, Moses, Christmas, Kundzai and Emily (2013) on challenges faced by ECD centres at satellite schools in Mwenzi District Zimbabwe established that ECD centres encountered severe challenges which include lack of appropriate teaching and learning resources, understaffing and unsuitable medium of instruction. However, the study in no case determined particular resources because the learner was not involved in the study.

2.5 Influence of Teaching and Learning Resources on implementation of ECDE

According to Owoko (2010), Teaching and Learning Resources not only refers to teaching methods and materials but also to existing teaching time, awareness and abilities of teachers acquired through education and experience. Afework and Asfaw (2014) in their study established that the main goal of the teaching and learning process is to bring about a significant change in the behavior of a learner through active involvement and critical thinking. This cannot happen without the availability of adequate and relevant teaching and learning resources.

The Bayley Scales of Infant Development (BSID), created by Nancy Bayley during her work on Berkeley Growth Project has its counts basing on infant and child development research for a myriad of theoretical perspectives (Lennon, Gardener, Karmel & Flory, 2008). It is used for assessment in the areas of cognition, motor skills and behavior. The NAEYC'S (2007) guideline should be covered the following areas. Child development knowledge, individual characteristics of children, knowledge base of various disciplines, values of our culture, parents' desires and knowledge children need to function competently in our society.

According to UNESCO (2007) accurate and informed assessment of Early Childhood education in a data deficient environment has a dysfunctional impact on the monitoring and measurement of progress of children. Maghuson et al (2004) study of inequalities in pre-school Education and school readiness of children used the Peabody Individual Achievement Test-Revised and Wood Coodcock-Johnson Psycho-Educational Battery-Revised test to assess cognitive development of children. According to Wandle (2009) as cited in community play things (2009) after human interaction, the physical environment is critical in care and learning of young children. Childcare professional Anita Olds (2009) as cited in community playthings list five attributes to consider for each activity station.

According to Were (2014) the study conducted examined the relationship between teaching and learning resources for pre-school aged children in Rachuonyo South sub-district, Kenya. The study revealed that transition rate from pre-school to primary school depends greatly on efficient and effective use of materials since learners enjoy learning by doing.

According to Makokha (2017) it was revealed that in kindergartens there are various improvised scientific teaching materials that were not sufficiently used, the difficulty was that while teaching and learning resources were available they are not adequately used due to teachers' incompetence.

Kipkosgei and Kabwos (2014) in their study on factors that influence implementation of science curriculum in Kindergartens found out that the inadequacy of scientific teaching materials and equipment, storage facilities and study books negatively affected the implementation of the science curriculum in kindergartens.

According to Okoth (2014) in his research on the role of school teachers in provision of materials for environmental education in the Siaya district of Kenya, the study revealed that owners in many schools did not encourage teachers to use appropriate teaching learning materials in high school this provoked thought that learning materials should be implemented from early years education issues on teaching learning materials will not arise in higher institutions of learning.

Nzambi (2012) carried out a research on the role of head teachers in supervising the classroom as perceived by secondary school teachers in Kitui, Kenya. The study discovered that principals in most schools lead and assisted teachers in the use of materials by encouraging, bringing new ideas and promoting creativity, innovation and new skills by organizing workshops. Training of teachers in all level has a concept on use of teaching learning materials therefore teachers should not depend on school managers to encourage them rather than being self-driven to develop these materials with minimum supervision.

A study was conducted by Jeptanui (2011) on the efficiency of using educational material at public elementary schools in Kapseret area in Wareng district, Kenya. The researcher examined Dale's theory of learning. The target group comprised of 18 public primary schools, 213 teachers, 7338 learners and all 18 senior teacher. The research revealed that necessary learning resources were not available. The findings questioned the impact of management functions of school managers on the use of educational material, calling for a study on management of Early Years Education.

Space allocation in a study environment has a great impact on children's learning. Aggression and frustration occurs in a tight space, appropriate space allocation gives children an opportunity to explore and learn. The learning environment which is the use

and organization of the space in classroom, the daily schedule and routines, and socio-emotional environment is very crucial in the development of children (The Creative Curriculum Framework, 2011) the learning environment helps children become independent and confident learners. Children enjoy to explore and discover, entries and exists need to be clearly defined, boundaries protect children's activities from traffic, lunch and other distractions, encouraging sustained play enabling children to explore using all their senses and providing them with privacy. Play and sitting surfaces must be appropriate to support activities children undertake. All materials needed should be stored conveniently for easy retrieval and displayed attractively for effective use.

A study by Omayio (2013) found out that effective learning depends not only on children cognitive abilities but also on the learning environment which includes the availability and efficient use of resources for learning. The researcher established that early intervention programs have positive impact on learners. In another study by Mwonga and Wanyama (2012), the researchers found out that children who are exposed to different teaching and learning resources are actively involved in the teaching/learning process. Wambura (2015), in his study on the impact of educational material on the development and education of early childhood in Kiine Ndia Division in Kirinyaga revealed that most pre-schools centres had inadequate materials leading to poor performance.

A study by Nishimura and Tamano (2013) was conducted in Kenya to find out the determinant of emergence of private education in Africa. The private primary schools increased in number from 4.6% to 11.5% from 2004 to 2007. After introduction of FPE policy by the Kenyan government in 2003 public schools were over crowded due to rapid increase in enrolment leading to a reaction from parents who opted to take their children to private schools instead.

Creative curriculum classroom should be organized into ten interest areas namely dramatic play, toys, games, art, library, discovery, and, water, music and movement, cooking, indoor computers and outdoors activity. Classroom environment gives opportunities for children to explore, discover and grow. Physical environment includes the size of the room, type of floor, the amount of light, colours of the walls and the number of windows. A physical setting that is safe, attractive, comfortable and well-designed helps children engage in learning and developmental activities offered in the curriculum supporting learning goals for children enabling teachers to observe and interact accordingly.

Art is typically an area of exploration and competence for pre-schoolers (Potter & Edens, 2004), it is therefore necessary to provide materials for drawing, painting, three dimensional art and other activities that encourage individual expression Harms, Clifford, & Cryer 1998 as cited in Potter and Edens (2004). According to Adenike (2016); Early Childhood Education comprises essential programmes and activities which are critical to holistic development, academic success and future achievements of children. Estes (2004) described the early years as a remarkable period of growth and development in the lives of children. Oduolowu & Olowe (2011) noted that the early years of children are years of extreme vulnerability and tremendous potentials.

According to Olowe, Kutelu & Majebi (2014), ECE is any group programme that is designed to promote children's intellectual development, socio-emotional development, language development, physical development and learning from birth to age 8. Sooter (2013) agreed with Mahuta (2007) by stating the aims of ECE to include fostering proper development of children, identifying and addressing their problems, harnessing their potentials, molding their characters, enhancing their learning and

equipping them for life so that their actions are channeled towards positive personal, communal and global development.

Connely & Claninin (1988) asserted that teachers view role in curriculum implementation as an autonomous one. They select and decide what to teach from the prescribed syllabus or curriculum design. It is evident in work of (Goodman & Brand, 2009) that teachers as social beings from different backgrounds bring a lot of experience into their classroom. Goodman and Brand 2009 indicated that, teachers who are characterized as motivated, responsible, organized and are open to new learning opportunities are found to be high curriculum implementers than unmotivated lot.

The teacher holds the key to successful implementation of any educational enterprises. Goble & Itorm (2010) have submitted that whatever a person's profession is, the need for professional development is unusual because of professional needs to continually enrich their knowledge, early childhood professional development brings to the forefront the significance of the early years for children's learning and development and highlights the central role early childhood educators play in children's successful outcomes. Unfortunately, the pre-primary school teachers in Kenya in both public and private school seldom receive professional development training. This is because recruitment of teachers in pre-primary schools in Kenya depends on Public Service Board of all 47 counties based on different procedures.

Availability of resources for Early Years Education helps the teacher to nature and support the development of young children and to implement the curriculum successfully. According to Chulwbikem (2013) the quantity and quality of resources available for any educational programme would determine schools' systems capacity for the implementation of any ECE programme. In spite of the fact that resource is

critical to successful implementation of ECE programme they are not found in most pre-primary schools in Kericho County.

In addition of school infrastructure classroom resources may also play a role in effectiveness of learning. Teaching and learning resources for classroom use comprise reading materials for instance textbooks as well as non-reading materials such as charts and posters and realia. Lewis and Harclerod (2003) views textbooks as having benefits which include economy, individualization of instruction and enhancement of teaching practices among teachers. The advantage of economy is seen from the point that textbooks can be used repeatedly for a longer period of time. The textbook aids in individualizing instruction. It assists the learner to carry on with the learning process at a rate determined by his or her own abilities. Teaching and learning resources are crucial ingredients for meaningful learning to occur, and a preplanned programme is not easily implemented without these important resources.

For a designed curriculum to be wholly implemented as per a plan, schools need to be supplied with sufficient materials such as textbooks, stationery and teaching aids. This will facilitate teachers and learners to play their part satisfactorily in the curriculum implementation process without any hitch. Meaningful teaching and learning is a part of curriculum implementation. Such cannot take place without sufficient materials to be used by teachers. The materials must therefore be available to the learners in adequate quality and quantities, and at the required time to enable implementation of various educational tasks (Mungai, 2014). Materials used by the teachers are important because they help teachers prepare schemes of work and lesson notes which guide them in the course of teaching. They include the syllabi, the teachers' guides, chalkboard, maps, the globe, flash cards, cutouts, plasticine, charts and pictures among others. This study aims at examining how the availability, appropriateness and adequacy of teaching

and learning materials influence ECDE curriculum implementation and performance of learners in Kericho County of Kenya.

Learning resources play a vital role in enhancing the teaching process. They assist teachers in teaching by varying the teaching situation. The use of these resources involves using a wide range of human senses in the learning process at the same time. This helps in efficient learning and aids in conveying the intended message. According to Saunder (2011) eleven percent (11%) of what is learnt is through the sense of hearing and eighty-three percent (83%) is through the sense of sight. He further states that only twenty percent (20%) of what is seen is retained in comparison to fifty percent (50%) of what is both seen and heard.

Hence, using more senses often leads to effective learning. This is corroborated by Njogah and Jowi (2009) when they say that for good communication and learning, students want certain media available and used not for the reason that media are interesting and seem to make school time pass quickly but mainly because when various senses are used in learning, there will be better perception, understanding and reinforcement and hence more retention of the subject matter. Ouma (2008) additionally notes the significance of using teaching resources in the classroom by saying that they encourage learners to take part in the learning process, motivate learners, cater for individual differences and assist learners to gain experience by use of the various senses. Teaching resources are used to perform several tasks.

Good teachers do considerably more than merely communicating information. Teachers will track the learners' progress, set themselves tasks to give practice, discuss such issues and try to create interest and relationships for the subject (Rorniszowski, 2005). Kariuki (2009), and Ifukho (2005) all point out from their researches that a

school which lacks resources is not likely to do well. The World Bank study reported by Onwu (2005) indicates that textbooks and other instructional media contribute to 66 percent of positive learning in Africa. But there are schools which may not have all the requisite material. In such circumstances the school may borrow from individual teachers, existing Teacher Advisory Centres, the Learning Resource Centre or any other institution or library closer to them (Ayot, 2009).

Moyo, Wadesango and Kurebwa (2012) in their study on factors affecting the implementation of Early Childhood Development (ECD) programmes in Zimbabwe revealed that ECD centres lack essential resources for use. Both school head teachers and teachers acknowledged shortage of basic teaching resources at their respective ECD centres. Lack of such resources was attributed to poor economic status of peasant parents as well as lack of government support. In addition, ECD centres lacked adequate qualified teachers to man ECD classes. This reduced teacher effectiveness as one teacher had to attend to many children. Chivore (1995) maintained that no institution can function without financial resources to back up its programmes. Therefore, if ECD centres lack basic resources proper implementation of ECD programmes could not be realized. The random sample in Chivore's study consisted of 12 primary school heads and 12 Early Childhood Development teachers in the Chiwundura Circuit in Zimbabwe. The research used a descriptive survey design. Random sampling was used to select respondents. Data was collected through questionnaires and semi-structured interviews. Frequency tables and descriptive statistics were used to present, analyze and interpret data. Lessons learnt from Zimbabwe point to the importance of learning resources in educational achievement. This research conducted in Kericho set out to find out the extent to which different forms of management or funding affect the

provision of teaching and learning resources and conversely influence the implementation of ECDE programmes in Kericho County.

2.6 Recruitment of Teachers

The recruitment of teachers in ECDE centres depends on availability and perceived motivation of the teachers. Teacher recruitment refers to the number of academic staff deployed to teach within the pre-primary schools. Teacher recruitment determines the teacher-pupil ratio in a given school. This ratio is observed as lower in the private schools than in the public pre-primary schools thereby decreasing the level of attention given to the pupils and as a result their dismal performance. According to Okumbe (1999), staffing is the process of bringing in and training the staff and maintaining proper work load. Their qualification and training levels varies to a great extent bearing in mind that it impacts on the quality of education.

Shau and Alfred (2002) defined staffing as a process of recruiting individuals and discovering the potentialities among them. Such trained individuals can assist in transferring knowledge, skills and attitudes that will facilitate an institution to carry out its key responsibilities necessary for the accomplishment of outlined aims and objectives. It is worth noting that according to the transformational theory, the role of the teacher is to create an environment where there is more trust and care of the learners. This should be enriched so as to enable a mutual relationship among other members of the institution which according to Paulo (1974) it leads to quality education. On the other hand, the teacher is seen as one of the custodians of knowledge. Learners emulate their teacher in whatever they do. Therefore, the teacher should be prepared to demonstrate his ability so as to stimulate learning and inspire change among learners (Cranton, 1994).

The teacher needs to assist the learners to query their own ways that would encourage change of the learner's worldview. For this reason, this study was keen on teacher recruitment at the different school types: public and private. Does the type of teacher determine or influence the quality of education in pre-school centres performance by pre-school pupils? In countries such as the United States of America, United Kingdom among others, early years children are taught by teachers holding Masters' degrees and are highly enumerated unlike in Kenya. The teachers' level of training greatly determines the quality of performance in their work.

According to MOE (2006), children who are taught by well trained teachers and studying in a clean and healthy environment are usually greatly motivated. Consequently, they attain higher grades in their education. Thus, the role of the government is to employ qualified teachers to provide necessary skills and knowledge to the learners. Teachers possessing a high level of understanding and in depth awareness of child development have the proficiency of using their skills to guide and model high quality learning standards with these young children taking into consideration their crucial stages of development. A school needs an adequate number of teachers with desired qualification in order to enable it achieve its objectives. Research has established that quality pre-school education is partly characterized by the teacher's proper implementation of the curriculum (UWEZO, 2014). It is envisaged in this study that teachers perform a key role in facilitating acquisition of quality education by pre-primary school age learners.

In the recent past one of the challenges ECDE centres in Kenya face is insufficient number of teachers. This is because the government does not employ pre-primary school teachers countrywide alluding to lack of funds and hence avoiding recruitment of such crucial workforce needed in Early Childhood Development centres. However,

the promulgation of the 2010 Constitution brought a paradigm shift. Early Years' Education teachers are now recruited and employed by County Governments. The impact of this shift in policy is yet to be established. On the contrary the situation in the private ECDE centres has remained pretty much the same. What is the difference in the teacher status between private and public ECDE centres in Kericho County? Hence the study reported in these pages. Cases of teacher overload compromise their general performance and consequently, standards of education (Heward, 2006).

The teacher is a critical agent in the teaching-learning process. Fullan (2001) argues for the importance of the teacher as a central change agent because the teacher is the one who is primarily responsible for the organization and management of the learning environment. According to Morrison, Bachman, & Connor (2005) the teacher's pedagogy, classroom management strategies, and interactions with students at classroom level can determine how much is learned.

A survey by GOK and UNICEF (1995) revealed that lack of teacher training and poor teacher retention as key barriers to effective curriculum implementation. The key to getting teachers committed to an innovation is to enhance their knowledge of the innovation. This means teachers need to be trained and workshops organized for professional development. Certainly an adequate teacher education program should include curriculum development if teaching is to be a profession and if opportunities for learners are really to be improved. Content knowledge aside, it is only when a teacher can communicate effectively that they will be able to draw upon the various social cultural contexts of the learner to facilitate learning.

One of the many challenges schools in Kenya face is shortage of teachers. ECDE centres in public schools have for a long time been understaffed or not staffed at all.

Enrollment is affected by the absence of teachers in ECDE. Now that County governments are in charge of teacher recruitment and remuneration is there a difference in staffing? The distribution of competent trained teachers in any education system is an essential determinant of the quality of education in those schools. Teachers working in a situation where teacher-pupil ratio is high are more likely to be overworked and demotivated by too much work. Nguru (2006) indicates that congestion in classes affects the process of teaching and learning. If children are crowded in their sitting arrangements, teachers find it challenging to move round a class. This means that in order to check the learners' individual work, teachers will not be able to reach all children with ease as they sit working in their places. Such inability to easily move freely in a class due to inadequate space means that the teacher cannot help the needy children mark their exercises as they work.

Kathuri (2005) indicates that qualified and committed staff is a great asset to the school. Teacher-pupil ratios are generally regarded as measures of school quality. The teacher-pupil ratio is an indicator for planning opportunities. A low teacher-pupil ratio may give a pupil a better chance of contact with the teacher, hence quality teaching or learning process. However, a lower teacher-pupil ratio increases the unit cost of education, since teachers' salaries constitute a large proportion of the total cost of schooling. The teacher-pupil ratio gives an indication of the utilization of teachers; that is, whether teachers are over utilized or underutilized.

Teacher-pupil ratio has been a subject of much attention among researchers in relation to the factors influencing teaching and learning process. In a study by Dodge & Colker, (2012), early childhood development education is discussed. Research indicates that the teacher-pupil ratio has expanded over the years. On average, teacher-pupil ratio for both 3-5 years old children and 6-8 years olds remains critical. Teachers are

overburdened by the increasing number of children in the classes they handle (Dodge & Colker, 2012). This makes them uncomfortable in their working environment. With this rising ratio, ECDE teachers are poorly remunerated and are left under the mercy of parents most of whom have little or nothing to offer as such.

In lower grades of school each class should be manned by two teachers. Nyaga, (2013) in her study on the administrative challenges faced by public primary school head teachers in the management of pupils in Embakasi District, found out that the teaching load for the teacher was very high. This high teaching load compromised the quality of education they offered to the pupils as they did not have enough time to organize for all the forthcoming lessons. This could be ascribed to the high teacher: pupil ratio in majority of the public schools. What was established as true for primary schools may also apply to ECDE centres. When there are few teachers in an ECDE centre quality is compromised. The study reported here sought to establish the number of teachers in each centre in Kericho County.

According to Obuchere (2011), teachers in early childhood education play a key role in the implementation of ECDE programmes and highly influenced by their; training, attitude, motivation and remuneration. Characteristics of a teacher such as motivation, adequacy, training, and teaching experience have a great impact on programme implementation.

Saide (2009) conducted a study on factors influencing the implementation of pre-school curriculum. Findings revealed that the teachers' level of motivation, teachers' experience and teachers' gender and age were factors that influenced implementation of the curriculum. The study employed descriptive survey design which involved 60 teachers and 120 preschool children. That is a smaller sample size as compared to the

sample size of this study that involves 430 teachers, 1,719 parents and 1 District Program Officer. The Saide study examined the role of teachers in integration of play activities, in ECDE curriculum in Emuhaya District, Vihiga County, Kenya.

A study conducted by Sarah (2013) on teachers' roles in promoting literacy in ECDE centres, assessed the role of the kindergarten teachers so as to encourage literacy during children's play. In this study, it is revealed that; teachers' age, gender, and teaching experience were certain factors that influence effective implementation of programmes. Whereas the study used observation only as a method of data collection, this study used questionnaire and interview schedule. Sarah (2013) sought to determine the role of teachers in integration of play activities in the entire ECDE curriculum however the current study was to discover the factors that affect the implementation of ECDE curriculum. Inadequate teacher training greatly affects the implementation of programmes. Untrained teachers are not able to implement educational programmes. On the other hand, trained and committed ECDE teachers are essential for effective ECDE implementation.

Teachers' attitudes are derived primarily from their own experiences as learners, their professional training, their teaching experiences, their interaction with colleagues, and the cultural values and norms of the society in which they live. The gender stereotypes and prejudices of teachers shape their classroom behavior. Female teachers, for example, often exhibit Math phobic behaviors. Teachers also facilitate children's gender biases by making gender as important by using it to level and organize students (Blakemore & Berenbaun, 2009). Pre-school teachers' labeling and use of gender increases pupils' gender stereotyping and avoidance of cross-gender playmates amongst themselves. Thus teacher factors such as attitude towards the curriculum,

teachers training in ECDE and their in-service on ECDE curriculum will have an impact on how the curriculum will be implemented (Carless, 1999a).

This study aims at establishing the influence of teacher related factors on the ECDE curriculum implementation. Results might point to the need to develop strategies geared towards motivation of teachers and provision of a friendly environment for the child in ECDE centres. Fulfilling teachers' hygiene needs, together with favorable terms and conditions of service, "good" remuneration, a manageable workload, as well as provision of a sufficient physical working environment is likely to result in effectively motivating them (Herzberg, Mausner & Snyderman, 2009). Makoti (2004) found good work conditions and terms of private preschool teachers' service to be a source of motivation.

Teacher motivation encompasses the teachers' desire and willingness to get involved in the education process. A teacher who is highly motivated is dedicated, happy, satisfied and committed in a way that they bring out their best in their workplace so that learners, parents and the society significantly benefit from their services. These kinds of teachers require minimal supervision since they delight in doing their work. This is a crucial factor for classroom effectiveness and school improvement. The teacher ensures that transfer to the learners of the philosophy of education, objectives, skills and knowledge are achieved both in and out of the classroom. The classrooms' atmosphere is important for teacher motivation. This is the reason why this study sought to find out the level of motivation of teachers and its influence on classroom delivery.

Intrinsic and extrinsic motivations are the two major types of motivation. Intrinsic motivation is internal mainly from the teachers and non-teaching staff, whereas government or private proprietors are the main source of external motivation which

include good remunerations, working environment, employee development, rewards and many more. Motivation to a larger extent defines the favorable work environment for the attainment of school goals and objectives as noted by Kalai (1998). Teachers may have both intrinsic and extrinsic motivation needs. Intrinsically motivated teachers may be perceived to work for their own sake, for the feeling of accomplishment or the satisfaction it provides and for self-actualization. In contrast, a teacher who is extrinsically motivated may accomplish the duty in order to obtain some form of reward such as salary.

Extrinsic motivation inspires a person's behavior to work harder in carrying out a given task. Benabou and Tirole (2003) affirm that extrinsic incentives are weak reinforcers of motivation in the short term and negative reinforcers in the long run. Hence, the goal of an institution should be to put more prominence on intrinsic motivation so as to enable teachers teach effectively and at the same time provide some extrinsic motivation along the way for school improvement (O'Neil, 1995). Armstrong (2008) maintains that motivation sets human resources into action by building enthusiasm in employees to work; improves the level of efficiency of employees that increases in productivity, reducing the cost of operations, and enhancing overall efficiency; leads to attainment of organizational goals, creates friendly relationships through monetary and non-monetary incentives, promotion opportunities for employees, disincentives for inefficient employees; and decreased employee turnover, hence stability.

The supply of basic utilities for instance water and electricity are also critical for the teacher to be satisfied. Also very important for motivating teachers to work at a given school are sanitary facilities (Ramachandran & Pal, 2005). Nonetheless, according to the teachers, learning materials and facilities are a minimal necessity but a necessary factor in teacher motivation. Once these needs have been met then intrinsic factors such

as career development, recognition and a right to be heard gets a profound impact on teacher motivation. Teachers desire support that boosts internal motivation such as achievement, recognition and career development.

The correlation between the relative effectiveness of extrinsic motivation in opposition to extrinsic incentives is an essential subject for teacher motivation in the developing world, whereby material resources intended to motivate teachers through extrinsic means are time and again very scarce. According to Bandura (1966), self-efficacy is the product of four components: Physiological and emotional well-being, verbal appraisal from others and learning from others experiences. The four components of self-efficacy are strongly related to Maslow's hierarchy of needs and interplay between extrinsic against intrinsic sources of motivation. Basic needs must be met before teachers can be motivated to fulfill their higher-order needs of self-actualization and professional goal attainment (Maslow, 1943). Once the extrinsic basic needs and environment factors are adequately met, more intrinsic factors more powerfully motivate teacher effort, performance and professional conduct in the long run.

A study in Nigeria by Adelabu (2003) established that the current level in pre-primary school teacher motivation is low and recommended ways of improvement. Teachers in Nigeria were reported to have been resigning from government schools to work in private schools. Like Kenya private schools are quite diverse ranging from those at the top market serving higher income groups to those that cater for low income groups which charge lower fees.

Job satisfaction influences the teaching character of a teacher and is a role of the real connection between what one wants from teaching and what one observes in teaching. Job satisfaction is one of the factors affecting the performance of a teacher. More

satisfied teachers perform better (Gana, 2011). According to Papanastasiou & Zembylas, (2005), teachers at the Early Years Education level from private schools have an advantage in job satisfaction since they are more satisfied by their status and reputation than those of public Early Years Education level.

Other factors which may account for higher level of satisfaction among teachers in private pre-primary schools include more conducive teaching and learning environment. This includes smaller class size, close supervision by management and proprietors and to some extent the availability of resources which reduces work-related stress arising from conditions of the work environment. In as much as teachers in private schools seem to have higher morale than teachers in public schools, they are more insecure about their jobs. Their mercy is always in the hands of their employers who are the proprietors of their schools, hence they lack job security.

Javaid, (2009), argues that head teachers who are the school managers can play an important role of being great examples and leaders. However, many of them lack the required training and experience. In Kenya, most primary school head teachers are the managers of the pre-primary schools. However, they have no training in early childhood practices and therefore might not do all that is expected in that foundation level. The other condition that could hamper the effectiveness of head teachers in improving teacher motivation include overly tight fiscal management policies, weak management systems as well as constrained powers vis-a vis teachers (Mpokosa & Ndaruhutse, 2008). Responsibilities that are too harsh or not rewarded with support can just as well reduce teacher motivation. Many inspections of schools at a time and a large number of parents' failure to recognize the teachers' effort decreases teacher job satisfaction although it increases learner achievement and decreases teacher absenteeism. Michaelowa (2002), Finnigan and Gross (2007) warn against de-motivating

consequences of continually sanctioning of poorly performing teachers or schools so as to improve their performance.

Durham (1992) noted that a large number of teachers are not able to earn a job promotion in their profession. This in itself has led to a certain discontentment among staffs which eventually affects their relations with the authority. A research in Ghana by Akyeampong (2007) indicates that private school teachers are more motivated than their counterparts in the government sector. Teachers who are well motivated feel responsible and committed to their professional commitment which in turn improves learning outcomes and hence quality of education.

Bernell and Akyeapong (2007) found that low motivation results in absenteeism, underutilization of class time, professional misconduct, reliance on traditional teaching practices, poor preparation and engaging in secondary income generating activities that distract teachers from their duties. All these lead to learners not acquiring skills and knowledge as required hence poor quality of education. Research also indicates that higher teacher motivation is significantly linked to improved learner learning outcomes.

A study conducted by Desimone et al. (2004) found out that teachers who are well motivated always show better performance in classroom implementation. Intrinsic factors such as knowledge of professional area, interest in teaching and motivation are significant features in the delivery of program and can also be impediments for proper curriculum implementation if there is inadequacy in any of them (Lewthwaite, 2006). Fraser (1992) also states that lack of teacher motivation makes many good teachers leave the profession for better motivating jobs. Teacher motivation can be measured in terms of proper remuneration, teacher retention, teacher promotion level and career ladder improvement. A teacher who stagnates at one level for a long period will always

feel de-motivated to work. In as much as many research concerning motivation of employees in many fields of job markets have been conducted, such a research has not been carried out in Kericho County and more so targeting motivation of teachers in both public and private pre-primary schools hence creating the knowledge gap.

Teacher's age and gender had a significant relationship with teachers working conditions and hence implementation of ECDE programme. A study by Moyo, Wadesango and Kurebwa (2012) on factors affecting the implementation of ECD programmes in Zimbabwe acknowledged effects of teacher qualification on the implementation of effective ECD programmes. Most of the ECD teachers were unqualified. Interviews also confirmed that unqualified teachers lacked knowledge and skills in implementing ECD programmes hence hindered the implementation of the programmes. Unqualified ECD teachers lacked basic skills in ECD syllabus interpretation hence they resorted to formal teaching which literature discouraged.

Smith (2000) maintained that further education results in higher quality interactional patterns. Therefore, unqualified teachers engaged in ECD programmes might hinder programmes implementation. Results cited that unqualified teachers resorted to formal academic teaching methods. Another study by Moyo et al, (2012) revealed that teachers' attitudes were indicated by genuine interest in their work. Parents' attitudes were shown by the number of enrolled children in ECD classes. Both teachers' and parents' attitude contribute to cognitive and non-cognitive gains to the children (Bronfenbrenner, 2004). The evidence that all sampled institutions had ECD classes could be cited as positive attitude of parents and teachers towards implementation of the programmes.

Teachers are human beings. Therefore, they carry into the workplace their past experiences, their beliefs regarding how children learn and develop affect the quality of the curriculum implementation. In a study by Jones (2006), it is elaborated that if the teachers' age, training, experience and level of motivation were not consistent with the philosophy of the curriculum, then they affected the success of ECDE implementation adversely. Parallel to this study, Kern, Kruse and Roehring (2012) found that teachers' level of motivation is strongly influencing the implementation of ECDE programme. On the other hand, Butera, Czaja, Daniels, Goodman, Hanson, Lieberal and Plamer (2009) claimed that teachers' personal characteristics have an impact on the ECDE programme implementation. According to the study results, teachers characterized as motivated, open to changes and willing to try new learning opportunities are found high curriculum implementers compared to teachers described as unmotivated, and not open to changes. On the other hand, intrinsic factors such as knowledge of professional area, interest in teaching and motivation are significant features in the delivery of the program and can be barriers to proper ECDE implementation if there is inadequacy in any of those (Lewthwaite, 2006).

Besides personal elements of the teachers, institutional based factors are influential in ECDE implementation. Fishman, Gallagher, Penuel and Yamaguchi (2007) found that allocating time for teachers to plan ECDE implementation and providing technical support is a necessity for promoting program implementation. According to Lewthwaite (2001) institution-based factors such as learning and teaching resources, provision of teachers, and provision of finances are important elements for effective ECDE implementation. He further states that, the common listed institution based factors are time constraints and resource inadequacy, which are limited equipment, space and facilities.

Muthaa (2011) conducted a study on factors affecting implementation of early childhood development education in public centres in Imenti South District, Kenya. The study sought to determine the factors that affect the implementation of Early Childhood Development Education (ECDE) Programme in Imenti South District. Data was collected from a sample of 297 respondents comprising of ECDE teachers and CMC members. The instruments for data collection were questionnaires for ECDE teachers, focus group discussion for CMC members and observation schedules. The findings indicated that parents had a positive attitude towards ECDE programmes. The study recommends that the Government should provide the required physical facilities and teaching and learning materials to enable proper implementation of ECDE programme and ensure that the centers have the required ECDE teachers.

2.7 Approaches and Methods of Teaching in ECDE

According to Ingersoll and Perda (2008), teaching is to help someone to learn something. Teaching is never an end in itself. It is crucial that learning takes place. What the teacher does is to facilitate the environment for learning to occur. The environment consists of the classroom, the world outside the classroom, videos, games, plays, stories, and dances. Therefore, educators should be able to judge the results of successful teaching. Learning is defined as a process through which we gain and retain knowledge, develop skills and form attitudes that cannot be credited to inherited behavior patterns or physical growth. Kinson et al (1987) describes learning as a relatively permanent change in behavior. Teaching essentially involves a teacher transmitting knowledge, skills, values and the desirable attitudes to learners. Learning starts early right from pre-natal period of a child. At about four months inside the womb, the foetus responds to sound within both the internal and the external environment by moving or kicking.

Stimulating children through various activities such as feeding, cuddling, talking to, singing to, touching are vital in supporting learning right from birth, children must be taught what is acceptable and not. In light of this, a suckling baby who bites their mother's nipple ought to be made to recognize that it is wrong to do so. Children have to be taught to appreciate the environment. Parents are actually the first teachers who train their children as they bring them up. As such they should hold on to this fact since through them children can learn to trust the world around them (Erickson, 1963).

A set of ideas and opinions to explain a phenomenon is known as a theory. Various theorists have come up with a number of philosophies on how best learning and teaching can take place, these theories could largely contribute to child's ability or inability to learn. So as to be good caregiver understanding of the different theoretical views and basic principles of teaching and learning during early years is very crucial. Researchers in child development are correlated and thus a child's physical development will have an impact on his/her socio-emotional as well as cognitive development and therefore learning that places knowledge of the theoretical principles in child development and instructional methods helps individuals comprehend stages through which a child passes and capabilities of learning or doing.

The theory of classical conditioning was developed by Ivan Pavlov (1908). In his experiment Pavlov taught a dog to salivate each time its meat was brought to it. He did so by ringing a bell and providing food. Later he and then would later ring the bell and no food was brought but the dog nonetheless salivated which clearly indicates that learning had already taken place. This can be compared to giving a child a reward such as a smile, nod, and clap for correct responses.

Different theories help to explain the learning process. According to cognitive theorists' intake of information from the environment is active and systematic rather than passive and controlled by external stimuli. Learning involves active cognitive processing of information acquired through learning are sorted, filled and cross-indexed rather than stored in isolation from one another. According to Brunner we are constantly bombarded with stimulation to all of our senses more than we can process at the same time.

The most important point to be noted by teachers of Science from the ongoing discussion is that they should always make the content they are supposed to impart to the pupils interesting by using relevant examples which have application in real life situation and whenever possible pupils should be allowed to have hands-on experience during learning process. Brunner's view is that; knowledge is organized into categories that simplify the task of processing the retaining information by allowing us to interpret the new with reference to the familiar. Secondly, learning is an ongoing process of developing an increasing sophisticated cognitive structure for representing and interacting with the world.

Brunner described the learning process as follows:

- i) Growth is characterized by increasing independence of response from the stimulus
- ii) Growth is made possible because events are internalized into a storage system, which amounts to an organized model of the environment. Thus children can go beyond merely responding to immediate stimuli because they have a model of the world that they use to make predictions about what will happen if they initiate particular kind of changes.

- iii) Intellectual growth involves increasing capacity to say to one, or others, using words or symbols what one has done or will do. This development gradually frees children from reliance on trial and error behaviour and enables them to solve problems through logical thinking.
- iv) Intellectual development is stimulated through systematic and contingent interaction between a tutor and learner that is appropriate instruction stimulates intellectual growth beyond what would occur through spontaneous exploration and discovery.
- v) Teaching is greatly facilitated by medium of language which provides not only a means of communication but a means of imposing orders on our experiences. -
- vi) Intellectual development is marked by increasing to deal with several alternatives simultaneously to attend to several sequences during the same time period-and to allocate time and attention in a manner-appropriate to these multiple demands.

Bandura A. too contributed to the current thinking on teaching and learning in ECDE centres. Bandura (1977) argued that learning is a result of observation, limitation and modeling. Learning therefore occurs as the child gets involved in social interactions with those in his/her environment. Thus, children learn through what they see, experience or do. By having positive models to emulate, children learn to do the right thing and vice versa. It is therefore imperative for teachers and parents to be great role models for the children imitate.

Basic theoretical principles of teaching and learning in Early Childhood Education are to ensure that the caregiver should meet all the children's need. Children study best when all their needs are catered for physically: food, clothing, health care, play and rest; and, when they receive love, security, reinforcement, support learning, ethics and recognition. A good teacher often bears in mind that children are curious, explores, active, sociable, unique and persistent and hence structured learning opportunities should be considered to fulfill all the needs hence holistic development.

Learning occurs when children interact with the environment and people. These should be enriched through opportunities for the children to explore their surroundings. Provision of opportunity for discussion, questions and answer sessions, news telling, singing, storytelling, riddling, poetry, etc. as children interact with others enables them learn through identification and imitation. An interaction environment is essential for learning and development of ethics. Children are capable of constructing their own knowledge as an interaction between their internal and external environment occurs when provided with opportunities that let them make use of their senses (Piaget, 1978). They create new knowledge when they do things practically or try new experience through trial and error, observation, exploration, experimentation, reasoning, problem solving, hypothesizing, role play, imitation and identification with socializing agent. Good teachers will more often provide many opportunities for children to generate their own knowledge.

2.8 Teaching Approaches and Methods

According to Chepkemoi, Osman and Kipng'etich (2013), the main components of teaching are; stating Instructional objectives - this is identifying what is to be achieved in a given teaching situation. Identifying the content to be taught in relation to the themes specified. The content is discussed from integrated and thematic approach, by

selecting appropriate teaching methods and techniques. This relates to how to go about it, in relation to the nature of the learners to be instructed and identifying suitable instructional resources. It points to what materials to be used for the objectives to be realized for example pictures, models, clay, crayons, doll and toys. Identifying suitable thematic activities so that learning is activity based comprising of actual presentation of the content/lesson using appropriate methods, resources and activities. Evaluation of what takes place in the whole process of learning through observation, oral questions, quizzes etc. and getting feedback on whether the objectives set had been achieved or not.

2.9 Role of the Teacher in a Pre-School

A teacher in a pre-school plays important roles and is seen as an instructional expert and a stage setter, custodian of knowledge and its impartation, motivator, manager and time planner, counselors, guide, a model, reflective professional, sympathetic reality facer, casual and impartial revealer and supporter of what it is (simplicity and candors), humane, friends, companion of children and a communicator.

According to Hoppenbrouwer (2011), a teaching strategy is a way of organizing and facilitating learning experiences. There are two teaching strategies: Expository (transmission) and Heuristic (discovery) strategies. Expository is a teacher centred approach to teaching where a teacher imparts or exposes knowledge to the pupils. It is further defined as a strategy that is particularly effective for presenting declarative information in a step by step way through explanations and provision of guided practice through oral drills or written seat work (Flowers et al, 2015).

Heuristic approach, also known as discovery or inquiry or experimental, refers to an approach in teaching and learning where the learners are left to explore, find out

information for themselves. Teachers assume non-directive role. In ECDE, the emphasis is on heuristic approaches whose main characteristic is child centeredness. The concept of child centeredness in education was ushered in many years ago in Europe following the education theories of Jean Heinrich Pestalozzi (1746 - 1827), John Dewey (1859 - 1952), and Maria Montessori (1870-1952).

Their theories gave rise to new deals and practices in ECDE. There was a shift from "Content Centeredness" or "Curriculum Centeredness" in early education to the child as the focus of learning. The aims of education in child-centered education reflect the interests and characteristics of the child. They include aspects like intrinsic interest (eagerness, curiosity, absorption); and, autonomy (making independent judgment choosing with confidence, self-direction and learning discovery).

In his role as teacher, facilitator, guardian and other roles the teacher should be able to see each learner as a unique individual with differences from the next child (Hoppenbrouwer, 2011). Children are unique beings, they develop at different rates and hence what they can do depends on their socio-emotional, physical and cognitive maturity. When all needs are provided children learn best. They should be given opportunities to work individually or as assigned. A good teacher ought to involve the family or community in children's learning.

2.10 Characteristics of Child-Centered Approaches

These are the characteristics of a learner -centered learning approach, with the learner as the focus of the learning teaching process, learning takes place in a relaxed but busy atmosphere, conducive atmosphere for learning with numerous and varied learning apparatus that are simple, realistic, interesting, easy to self-administer and which are self-correcting (Dahlberg, Moss & Pence, 2007). Emphasis on individual difference

with group work catering for individual needs, every child to be left to learn at its own pace, the classroom being attractive, bright and colorful, use of display, emphasis on the child being left to manipulate and judge through application of senses, physical and intellectual judgment (Chepkemai et al, 2013), Children ought to learn leadership skills through sharing of their own materials and tidying up.

Meaningful memorization or what the children recite or memorize should be based on understanding and should have meaning to them. Emphasis on repetition especially in routines of practical life, coercive and learning atmosphere with no place for corporal punishment (Hoppenbrouwer, 2011). The teachers' role is to guide, to regulate a child liberty, to organize and provide special learning materials while giving minimal instructions.

2.11 Advantages of Child-Centered Approach

The child-centred approach stimulates the children's mental activity because it calls for the learners' participation in the learning process (Chepkemai et al, 2013). It develops fluency in expression among the children, it encourages the children to discover information for themselves; it caters for individual differences, builds the child's critical analysis, creativity, independence and self-concept. It also develops the whole child recognizing their ability and thus making them the centre of the learning process. Hoppenbrouwer (2011), points out that Child-centred approach facilitates retention of learnt materials, it trains in the democratic principle and in leadership responsibilities at an early age.

2.12 Disadvantages of Child-Centered Approach

Hyvonena, Jarvelaa, Maattaa, Mykkanena, and Kurki (2014), points out the following limitations of child-centered approach: Time-wasting and consuming, very expensive

in terms of resources, teacher's role is compromised and is seen as more of an observer in the learning process. Too demanding: It demands teacher creativity and patience.

2.13 Thematic and Integrated Approach

Thematic learning is learning based on themes where a teacher identifies a theme, which runs through the objectives of the curriculum and spends a week or two on that theme. Examples- activity areas like: Science, environment studies, mathematics, language, music, movement, physical/psychomotor and creative activities. A study by Bitok, Chepsiror and Too (2013) on thematic approach and resources capacities supporting the teaching at ECD centres in Uasin Gishu indicated that a good number of centres had insufficient resources and capacities for both human and physical resources necessary for implementation of thematic approach, the research failed to establish specific resources and capacities for teachers. Integrated learning approach refers to learning of various activity areas in an integrated manner throughout the use of a theme. Under this the children acquire knowledge, skills, and attitudes on different activity areas as they cover a given theme.

2.14 Characteristics of Thematic and Integrated learning

Major characteristics of the thematic and integrated approach to teaching in early childhood education are as follows:

- i) Incorporation - Many activities are incorporated under one theme.
- ii) Continuity - The theme integrated runs through the planned period
- iii) Learning Corners - The presence of learning corners portrays the theme or learning.
- iv) Catering for individual's differences - The interests and ability of the children are taken into considerations.

- v) Flexibility in choice of themes - The teacher decides freely which activities should be integrated under which themes.
- vi) Natural - It is the most natural method of helping children to learn.
- vii) Individualization - Learning is at the pace of the children.

2.15 Organization of Learning Using Thematic and Integrated Approach

Learning should be organized under two approaches in a number of ways: - The teacher will select a theme to be taught at school, market, shop, and kiosk. The teacher will assess the entry level of the learners. The instructor will help the learners to acquire new knowledge skill and positive attitudes. Teaching will revolve around activity areas. Activities go with ages of children.

Table 2.1: Thematic learning activities developed by KIE (1999)

Family members	School
mother, father, aunt etc	Teacher, children, toilet, books,
Buildings at home	Uniforms
House, toilet, granary, cowshed, kitchen, storeroom	Market
Kitchen	-open air market supermarket stall, cashier
Utensils, cooking food, fire place	Shop / kiosk
Sitting room	shopkeeper, buyer
Furniture e.g. chairs, tables radio, Televisions	- shop, item/goods, cashiers
Bedrooms	Hospitals
Clothes wear	-wards, casualty rooms, doctor, nurse, patient, medicine
Equipment (mirror, bed, fan heater).	Weather and seasons
	- Sun, cloud, rain, thunder, lightning, floods, dry, wet, wind.

2.16 Advantages of Thematic Approach

Knowledge is viewed as a whole, avoiding compartment of knowledge into subjects, variety, novelty, learning centers making learning interesting and alive for children.

Their involvement in creating these centered making learning relevant, meaningful and real to them. It caters for individual differences and by so doing appeals to the interests and potential of learners, learning is related to the life of the learners and the environment. It tends to be flexible because the material or content taught can be adapted according to age, ability, attitudes and background of the children.

2.17 Demerits of Thematic Approach

The thematic approach to teaching requires plenty of time and skill in preparation by the teacher. The teacher should be very resourceful.

Under approaches the teacher ought to be able to select the methods of teaching. In the pages that follow we describe methods appropriate to the Early Years Education.

2.18 Methods and Techniques of Pre-School Education

There are two categories of methods. These are the interactive and presentation methods. Interaction is between the teacher and groups of pupils or individual pupils or between pupils themselves. Presentation involves articulation of content by the teacher to the whole class or to individual pupils. Presentation techniques are such as teacher demonstration of phenomenon, narration and storytelling and audio-visual presentations. According to Riley and Roach (2006), teacher domination should be discouraged and kept to the minimum at the early years' education level.

2.18.1 Interactive Methods

These are methods which encourage the children to react and respond to the knowledge, experience, insight, and ideas of their teacher and peers as well as reflecting on their own experiences. They include the following: Play methods, guided or open discussions, questions- answer, buzz groups and brainstorming.

2.18.2 Play Methods

According to Read et al (1993) play is at the heart of any program for young children. Child initiated, child directed, teacher supported play is an essential component of develop mentally appropriate practice (Bredekemp 1987 in Read, 1993). Play is a primary vehicle for and initiation of children's mental growth. Through it children develop skills of collaboration, cooperation, initiative, and creativity. Play prepares children socially, emotionally and intellectually and it is a way of enabling children to master their emotional intelligence. There are two types of play initiated by children: the dramatic play and self-initiated personal play. The play way method is a mode of learning which encompasses all the other learning methods. In the play way method children do learn through exploration as they manipulate play objects, they are able to exercise their bodies, reason with their brain and thus attain holistic development.

2.18.3 Question and Answer Method

Asking questions is the core of teaching at school. The process of asking questions can be defined as a "carefully designed strings of questions which lead the learner to arrive at an answer. Purpose of questioning among children include; Stimulation of interest, imagination, initiative, creativity, assertion of control and establishing rapport with learners to keep them alert and attentive in the lesson. Questioning prepares learners for new content by assessing their knowledge level on a given topic, encouraging self-expression, developing appreciation of ideas and encouraging verbalization on knowledge and thoughts and learning from each other, encouraging a problem solving approach to thinking and learning.

2.18.4 Small Group Discussions

This comprises creation of groups from whole class. The group consists of around 3 to 5 members for syndicate groups and 2 learners or quick reference as pair groups

Types of Grouping

- (i) Random grouping
- (ii) Friendship grouping
- (iii) Interest grouping - volunteer to construct, paint, draw
- (iv) Achievement level grouping e.g. bright, average or weak children.
- (v) Differential ability grouping - different leadership and academic abilities
- (vi) Gender indirect - to promote competition between boys and girls

2.18.4.1 Advantages of Small Group Discussions

Small group discussions in ECDE have the advantage of providing an opportunity for all participants to interact in a way that is not possible in a class situation; promoting self-discipline and reduce classroom management problems (Stanford, 1977); enabling learners to develop the skill of listening as well as talking as they listen and exchange ideas; allowing individual children to let off steam when they seem restless and bored; generating growth in confidence as they discuss, argue, exchange ideas with each other; facilitating emergence of leadership qualities through sharing of responsibilities; and, enabling children to develop children's higher-level cognitive, interactive and communication skills and increase accountability and independence (Flowers et al , 2015).

2.18.4.2 Limitations of Group Discussion Methods

Small group discussions among young children have the disadvantages of taking plenty of time to organize meaningfully; some children use the opportunity to show off; it is quite difficult to attain maximum interaction when the group is large; and, weak pupils are at times shouted down upon by the louder ones thus embarrassing into silence.

2.19 Presentation Methods

Teacher presentation methods are such as demonstration, narration and story-telling and audio-visual presentations.

2.19.1 Demonstration

It is a teacher based technique of exposing information to the learners. A demonstration is the process of teaching someone how to make or do something in a step-by-step process. According to Fenton (1967), Andayani (2007), Nisbet (2007), Gall et al (2010), Giridharan et al (2017) demonstration is used to show how something works through accurate procedures and operations. It is always accompanied by explanation. When using these methods, the teacher ensures that all the materials and apparatus needed are available. They stand in a strategic place where everyone can see them and what they are demonstrating and use a variety of activities questioning, observing and drawing to ensure children active participation.

2.19.2 Narration and Story-Telling

It is an oral presentation of a series of events often with explanation of events in terms of causes and effects. It is an effective method of teaching young children. Story telling techniques are effective when the teacher ensures familiarity with events being narrated, ensures relevancy of narration to content being taught, makes use of easy and simple language, uses gestures, facial, expressions; uses modulated voice while narrating. Narration is also effective when the teacher makes use of visual aids allowing children to tell their stories with almost similar themes.

2.19.3 Audio-visual Presentations

This is a method where the teacher uses video tape, film, sound slides, or television to pass content to the learners. It could include feature films (video), sets of slides with

audio cassette and animations on films or video tape. The show should be based on children and their activities or on cartoons focusing on children activities.

2.20 Reasons why Students fail to Succeed in School

According to Thames (2012) the first thing you learn when you become the parent of more than one child is that no two children are the same. Some children come out of the womb and seemingly know what they want and how to express it, while others have a great difficulty articulating what they want or need. Some children are able to work independently, while others depend heavily on parent or teachers' assistance to accomplish the smallest task. It is not easy to nurture a child into an independent learner and it is difficult to sit back and watch your child fail, when the common goal is to succeed. Knowing why students fail to succeed in school will help one know when to step in and help. Children should be allowed to suffer the consequences of achieving a lower grade for having missed an assignment or failure to prepare adequately parents should know that overwhelming students, like doing homework for a child will lead to under achievement among learners, parents should step in when there is a confusion, re explain the concept and let them attempt to complete the assignment. If solid foundation is laid in ECDE, the average child will slowly take on more independence and by the end of standard three should be independent. Uwezo Kenya trained standard two and three children on sounds that should have been done at the ECDE level.

2.20.1 Poor Time Management Skills

Children should be taught to manage time at the foundation level, teachers know when a student has rushed a project child should be encouraging to do homework and develop study habits from an early age, provision of organizers, calendar, tools timetable should be essential, as they transit to higher levels, children will not depend on parents and teachers to tell them when assignments and tests are approaching.

2.20.2 Fear of failure and lack of Self Confidence

Lack of self-esteem can prevent a child from building on his or her strengths; the thought of not being able to succeed is enough to stop them from attempting at all. Let children know from the earliest age that we all learn from our failures and more on all new skills require practice and repetition before achievement.

2.20.3 Reliance on others

Independence is paramount. Each child must know that he or she is responsible for their own learning, completing assignments, tasks, tests bringing the right books and equipment to every class and taking everything home. Establishment of routine and good habits should be instilled at an early age leading to a self-directed learner in future.

2.20.4 Lack of Desire

Many children are underachievers, they lack motivation to succeed, they are usually those who can do the work, highly intelligent but decide not to concentrate. They are distracted by outside factors, emotional issues and less work is given to them. Rewards in ECDE children might make them want to achieve when there is something to gain children who tend to be lazy should have teachers or parents who are strict who may say no to their unnecessary request at the 11th hour and the child will learn to complete tasks.

How children fail is a non-fiction book by John Holt published in 1964 and republished in 1982 in a revised edition he held a belief that traditional schooling does more harm than good to child's ability and desire to learn. He said that children love to learn but hate to be taught, as a teacher and a researcher he concludes that every child is intelligent. However, children become unintelligent because they are accustomed by teacher approval and the right answers, sees this as a power game of school. He further

says children believe that they must please and obey adults at all costs and learn to manipulate teachers to gain dues, they mumble, straddle the answer, get the teacher to answer their own question and take wise guesses. Children are naturally curious about the world, trying diligently to figure out what is real. As they become “producers” rather than thinkers they explore no more and start fishing for right answers with little thought. They fear wrong answers and shy away from challenges. A teacher should help them overcome fears of failure and explore the problem for real learning.

Holt (1982) maintains that when teachers praise learners, they rob them the joy of discovering truth for themselves. They should be guided to explore and learn as their interests move them. Holt believes the end of year achievement tests do not show real learning. Teachers believe that learners, who generally cram the content, would forget the materials shortly after the test because they were not motivated by interest and has no practical use.

Based on his personal teaching and research experiences Holt (1982) believes that traditional schooling does more harm than good to a child’s ability and desire to truly learn. His belief is that children love to learn but hate to be taught. His experiences in the classroom as a teacher and as a researcher brought him to conclude that every child is intelligent, but can become unintelligent because they are accustomed by teachers and schools to strive only for teacher approval and ‘right’ answers and consequently forget everything else. Children see value not in thinking, discovery and understanding but only in playing the power games of school. Children hold a belief that they must please and obey adults and teachers at all cost. Through the teacher’s body language and facial expression and other clues, they learn what might be the answer. They mumble, straddle the answer, get the teacher to answer their own question and take wild guesses while waiting to see what happens to establish a right answer.

Holt argues that children have natural curiosity about the world trying diligently to figure out what is real. As they become ‘producers’ rather than ‘thinkers’ and fall away from exploration and discovery they start looking for the right answer with little thought. They fear wrong answers and shy away from challenges because they may not have the right answer, causing a lot of disservice in thinking and learning. Teachers should help children overcome fear of failure allowing them to explore and discover, teachers do the opposite by making children believe that failure is never allowed, teachers should make children see failure honorable and helps them construct meaning should be seen as a step to real learning. They should not be afraid of mistakes so that they’ll understand their own mistakes. Children fear in school is added by humiliation and punishment which can scare children into wrong thinking Holt maintains that when teachers praise student they rob them the joy of discovering their real picture. He holds a belief that end of year achievement tests do not show real learning.

2.21 Achievement in Early Years Education

Outputs of education are often expressed in the form of pupil participation and learning outcomes measured in the form of test scores. According to Isola (2010) Teaching and learning materials such as textbooks, teaching aids and stationery affect academic performance of learners. A research was conducted on the effects of instructional resources on student’s performance in West Africa School Certificate Examinations (WASCE). Data were collected from the subject teachers in relation to resources used in the teaching process, a conclusion was made that material resources have a significant effect on students’ achievement in each of the ten subjects examined. Adeogun (2001) cited a strong positive significant relationship between instructional resources and academic performance.

Shabir, Wei, Chon, Marwat and Ahmed (2014) carried out a study to compare performance achievement and effectiveness of government versus private primary schools in rural areas of Azad Jammu and Kashmir to check on performance of both private and public schools. A survey was conducted through questionnaires for four stakeholders including the headmaster, teachers, parents and students. The research findings revealed that private schools perform better than public schools in maximum measures of performance. It was evident that both sectors still deprive of quality of human and capital resources for provision of standard education, parents desire for I level of achievement of their children in education. This desire puts pressure on both public and private schools thus making them competitive.

A survey was conducted in a poor area of Lagos State, Nigeria and it was found that 75% children were enrolled in private schools, while the teaching activities were higher in private schools as compared to public schools (Tooley, Dixon & Olaniyan, 2005). Mostly in developing countries, the public sector plays a main role for the provision of education; even education is largely publicly provided. Bedi and Garg (2000), conducted a study in Indonesia to examine the effectiveness of public versus private schools by taking the labor market earnings as a measure of effectiveness by controlling the personal characteristics and school choice. The findings show that private school has an advantage of better performance as compared to public school (Bedi & Garg, 2000).

Another study by Udosen (2014) on the teaching and learning materials and learning performance at elementary schools in Nigeria. The study specifically examined the responsibilities of head teachers and found that many teachers in the schools did not have the skills and abilities to use the teaching materials available. Moreover, Udosen found a link between teaching/learning materials. The equipment played similar roles

thereby resulting in comparable performance. Consequently, the study recommended that the government should organize workshops to provide teachers with knowledge and skills in dealing with improvised materials.

Mohammed (2016) conducted a study on the role of school leaders on quality education and effective school management of primary school in Nigeria. The researcher noted that effective teaching and learning depends on the use of relevant teaching learning materials the researcher did not investigate whether the use of materials leads to better performance.

According to Livumbaze and Achoka (2017) it was established that learners withdrew from secondary school education due to factors related to teaching and learning materials in their study on the impact of high school learners in Hamisi district, Kenya. A recommendation was made that the government should provide a fund to facilitate the resource, for better academic performance.

Measurement is the allocating of numerals to individuals or objects in a systematic manner as a means of presenting the properties of the individuals or object (Ingule et al, 1996). Assessment is the overall process of observing, recording and then documenting the work learners do and how they do it as a basis for educational decisions that have an impact on the child (Bredekamp, 1987). This leads to determining their strengths and weaknesses. According to Said et al. (1997) the progress of ECD children ought not to have academic achievement as their main concern but should monitor areas of development such as creative activities, physical, social, mental and emotional aspects. Assessment and measurements generally should establish to what level the child is capable of achieving.

Observation is the prevalent tool used by Early years' teachers. Brief and precise information of each child in terms of interest ability and achievement in all developmental areas ought to be made, identifying any problems and establishing the presence and absence of a particular skill. Oral questions could be asked to establish how much they know about home, school and community environment, from their awareness the teacher will discover the actual areas that children need reinforcement. Oral discussions can also be used to determine how well they can communicate, Early years Educations teacher should pay attention to children conversing amongst themselves and take note of the children's strengths and weakness so as to make corrective intervention measures. Practical work will help the Early Years Education teacher to seek strengths and capabilities; it provides an opportunity for the teacher to discover children weakness and to offer appropriate support. Additionally, it can help the teacher to assess the effectiveness of teaching methods.

Preparation of tools/Records for measurement and Assessment:

The following are samples of some records that were used to assess children's performance in private schools and a small number of public ECDE Centres used the records. Samples of language and mathematics are drawn below, this will enable the teacher to rate the pupils if learning outcomes have been achieved.

Sample of children's language Activities Progress Record in most schools

	Child's Name	News telling oral works	Story telling	Picture reading	Naming	Recitation alphabet	Recognition of sound
1.							
2.							
3.							
4.							
5.							
6.							

Key: Good •

Average •

Below Average □

Sample of children's Mathematics Activities Progress Record

	Child's Name	Sorting and grouping	Matching & pairing	Ordering & sequencing	Rote counting	Recognition no. 1-10	Valuing 1-10
1.							
2.							
3.							
4.							

Competency Based Assessment:

The main purpose of assessing learners according to competency based curriculum is to inform teaching and learning decisions, establish the level of learner's competence, ascertain progress against the learning outcomes, encourage learners to make judgements, about their performance, enhance learner motivation, identify where intervention, focused support or referral subject, course and career pathways.

Unlike the previous curriculum, competency based assessment is grounded on the process rather than the product and has the following components, formative assessment or Assessment for learning, this is an investigative tool to monitor progress of an individual learning in meeting the learning outcomes in a subject or learning area. It involves gathering data during learning process and provides feedback to both learner and the teacher.

Assessment as learning occurs in the process of learning enabling a learner to be self-directed to set personal goals. Summative assessment of the learning process carried out at the end learning and other forms of assessment include checklist, rating scale, questionnaires, project method, portfolio as well as journaling. Summative assessment which include tests, examinations, performances, presentation, portfolios and rubrics of written, oral and visual methods which provides feedback on learners' achievement for making decisions.

Learner's Progress Records

Competency based curriculum indicates that learning outcomes require different assessment methods. Rubric is away to assess a learner's progress with standards in a detailed manner. A rubric is a teacher generated tool that maps specific learning outcomes specifying performance, levels of success and mastery of the outcomes. Rubrics are meant to help Early years' teacher in measuring the product, process and progress of learning, the EYE teacher will decide on the rating.

The curriculum designs use exceeding expectation, meeting expectation, approaching expectation and below expectation.

An example of the Rubric:

Actual area Hygiene and Nutrition learning

	Name	Folding sleeves	Applying soap	Scrubbing hands	Running water	Assisting each other	Rinsing wiping
1.							
2.							
3.							
4.							
5.							

Key: • Exceeding expectations

- Meeting expectations
- Approaching expectations
- Below expectations

Sample report

Name: _____ Grade: _____ Year: _____ Term: _____ Age: _____

Learning areas	Skills	Performance indicators
Language	Articulation of sounds	
	Following simple instruction	
	Tracing	
	Colouring	
	Drawing	
	Pattern writing	
	Story telling	
Mathematical	Counting	
	Number recognition	
	Number writing	
	Identifying colours	
Environmental	Naming self	
	Feeding self	
	Sharing	
	Relating with others	

The sample report of children's performance was used by PP2 Teachers who had been trained on CBC. Rolling out was done in 2018 and the ministry of education together with KICD trained primary school teachers and ECDE teachers were left to the county. At the time of the study most teachers were not conversant with the new curriculum. Trainings were done in churches with a large number of teachers, terms like rubrics, and portfolio were new.

2.22 Research on Factors Affecting Performance in ECDE

Quality of human resources depends largely upon the quality of education of a country. According to Nasir and Nazli (2010) sustainable economic development needs skilled manpower which is raised through productivity and efficiency of individuals that is only possible through education. Unqualified human resource is a main barrier to economic development. The whole education system today rotates around academic achievements of the learners. Parents desire high achievement at early years' education

level, a lot of pressure is put in private and public school, making them competitive, this study sought to establish which sector is more effective and efficient in the learning process. Several studies have been conducted all over the world.

Adenike (2016) carried out a research on challenges in implementation of early childhood education in Nigeria, the finding from the study indicated that despite all intentions and the efforts of the government identified comprising of professional qualification of teachers/caregivers, resources, early childhood curriculum, professional development training, staff-child ratio and funding; the study recommended that since ECE at pre-primary school level is under the control of UBEC, seminar should be organized for public and private teachers to equip them with knowledge and skills needed for successful implementation of ECE programme.

Ntumi (2016) carried out a research on challenges pre-school teachers face in implementation of the Early Childhood Curriculum in the cape Coats Metropolis, the findings from the study indicated that teachers face a lot of problems in curriculum implementation and made a conclusion that inadequate teaching and learning materials, lack of in service teaching, inadequate pre-school teachers knowledge on implementation of curriculum, the researcher recommended that private proprietors and government authorities, should oversee the pre-school programme especially in-service training to overcome their challenge.

Andiema (2017) carried out a research on ECDE teachers training and its effect on learning in selected pre-schools centre in West Pokot County, Kenya. The study was conducted in 14 ECD centres within the division; a sample size of 42 ECDE teachers was selected. It emerged that policy framework governing ECDE Programme in Kenya was both being fully practiced in the zone; majority had never attended refresher

courses since training. The research concluded that were not qualified professionally, a large number underwent part time courses, finally a recommendation was made that ECDE teachers should be facilitated and supported by stakeholders to undergo training and attend refresher courses in order to be conversant with emerging issues.

2.23 Community-Owned and Privately-owned Early Years' Education and Care Centres

According to Linda Mitchell Senior Researcher New Zealand Council for Educational Research (NZCER) Occasional Paper new findings show statistically significant differences in the employment of staff holding teaching qualification and staff holding no early childhoods qualification between institution, community and privately owned education and care centres in New Zealand, showing consistent differences between type of centres and regulatory measures that appear to help address these difference.

Current situation indicates that at July 2001 there were 3450 licensed early childhood education services. 800 of these were privately owned and 758 were community based owned education and care centres, between 1990 and March 2002, there was no difference in the funding rates for privately owned and community eligible for Equity funding while privately owned were not legible. Institutions/corporate employ the highest percentage of staff holding qualification 54% and the lowest proportion of staff with no early childhood qualification 26% corporate/ institutions are community organizations such as polytechnics, schools, universities and city councils. Community owned centres employ the next highest proportion of staff holding teaching qualification of 42% and next lowest proportion of staff with no early childhood education at 31%.

Privately owned ECDE centres employ the lowest proportion of staff holding a teaching qualification 35% and the highest proportion of staff with no early childhood qualification at 36%. New Zealand, Canadian and United states have examined links between structural and rating of quality and ECDE centre type defined as non-profits or community ECDE centres and private or for profit ECDE centres. Findings that show consistency across the three countries indicate that private ECDE centres tend to pay their staff less and offer poorer working conditions, employ fewer staff holding an appropriate ECE qualification and place a higher priority on building and equipment, community owned ECDE centres place priority on staff wages and conditions. Parents are less involved in private ECDE centres, there strong predictors such as wages, training and qualification of quality of ECE and rating of process quality tend to be higher in community owned ECDE centres, Kohanga reo, Kindergartens, play centre, home-based networks.

Database for institutional comparison in Europe indicates that ECEC is a provision for children from birth through to primary education that falls within a national regulatory frame work. It may be provided by public or private bodies; public settings are owned and operated by public authorities at central, regional or local level, nonprofit-driven but aim to provide a public service. Private setting may be self-financing, drawing their funds from private sources or they may be publicly subsidized. European countries are a mixed economy with both public and private funding, it's also noted that in many countries the private sectors enroll rather low percentages of older children. Centre based provision encompasses provision that is within the regulatory framework and is provided outside the home. The services provided are most commonly referred as nurseries, day care centres crèche and kindergartens. The provision of education and care for younger children is largely delivered by private providers who depend mainly

on parental fees in Cyprus, Luxemborg, Malta and the United Kingdom (England, Wales and Northern Ireland). In these countries between 60% and 100% of children attend private ECEC. In some countries, home-based provision forms an important part of ECEC for younger children.

In Belgium (Germany-speaking community), Germany, France and Iceland, this type of care is private but subsidized by public authorities. Private (Publicly subsidized) home based provision also predominates in Belgium (French Community). Public home based provision is prevalent in Belgium (Flemish Community), Denmark and Finland.

During world conference on early childhood care and Education on 27-29 September 2010 in Moscow, Russian Federation, Chiam Heng Keng from Performance Management and Delivery Unit (PEMANDU) Prime Minister Department, Malaysia presented a paper on the topic Development Capacity in Quality Early childhood care and Education through Public-private partnership; the Malaysian Experience. The argument based a lot of emphasis on the importance of a child's early formative years, appropriate early experiences given to a child through quality care and educational provisions are essential to his/her development and access to quality early childhoods care and education is not a privilege but a rights of the child; challenges encountered is the quality ECCE is expensive, the ration of early childhood educator to children has to be low to provide care and learning experiences, Educators must be professionally trained, in most countries childcare providers are inadequately prepared for the crucial task of caring and educating young children. Situation in Malaysia indicates that pre-school teachers in Ministry of Education have Bachelor of Early Childhood Education (ECE) while preschool teachers in other government agencies and in private sectors attend short courses and on-the -job training. Pre-school enrolment was 67% in 2009.

Basing on Government Transformation Programmes (GTP), Early Childhood Care and Education was identified as one of the areas capable of increasing Malaysia's Gross National Income (GNI).

Way forward for Malaysia's ECCE programme at the time was based on Access to quality ECCE by raising pre-school enrolment from 67% in 2009 to 97% in 2020, increasing the percentage of child centres from 4% to 25% by 2020, minimum requirements for Early Childhood Educators to be Diploma and scaling up the private sector participation in the provision of ECCE. Public versus private school debate can go on for life. Both types of institutes have much to nurture and produce future champions of Malaysia. Public School in Malaysia are administered and funded by local, state or National government whereas private schools are fully funded by a private body. Private schools are independent from the interference of the public. Public schools according to image via Malaysia mail online are offered to all children without charge, they are wholly or partly funded by taxation, the curriculum is decided at the National level, admission I managed by the government, public schools have greater number of learners. It is important to note that public schools always hire highly qualified teachers, Teachers must meet all state-manipulated requires and be proficient in their subjects to work in school.

According to image via Tenby schools Malaysia, Private school is neither funded nor administered by the government. It is controlled by a private body and funded wholly or partially by students' tuition.

Types of schools

Several types of schools have appeared in recent years; the choice of school is no longer a simple matter. Public schools get their financing from local, state and federal

government funds and admit children who lie within the borders of their sub county or county. Charter schools and magnet schools are two relatively new kind of public schools. Charter schools began appearing in the early 1990s. They are independently operated public schools started by parents, teachers, community organizations and for profit companies. Charter schools do not charge tuition.

These schools must adhere to be basic curricular requirements of the state but are free from many of the regulations that apply to conventional schools. They are not subject to scrutiny of school boards and government officials. These schools usually challenge standard education practices and sometimes specialize in a particular area such as technology or the arts or adopt a basic core subjects approach. Some charter schools specifically target gifted or high risk kids. They usually have small classes and offer more individual attention than conventional public schools.

As of 2010, there were over 4500 charter schools in the United States with an enrolment of 1.3 million students and 60,700 teachers. In exchange for this autonomy charter schools are held to higher standards. The contract is usually for a period of five years, during which the school is expected to perform exceptionally, meeting or exceeding the educational standards of the state. The school is held accountable for the achievements of its students and if it cannot prove itself, the charter can be terminated. The education commission of the states provides profiles of the charter laws in each state.

Magnet schools are free public schools that can be highly competitive and highly selective. They're renowned for their special programmes and high academic standards. They may specialize in a particular area such as science or the arts students who apply to these schools may go through a vigorous testing and application process some

magnet schools have boarding facilities to allow students from other communities to attend.

Magnet schools were first launched in the 1970s to help desegregate public school systems by encouraging children attend schools outside their neighbourhood. Public school choice programs free families from having to attend their assigned neighbourhood schools. Some areas voluntarily offer school choice; others are required to provide parents with options.

According to the national independent private schools' association, Private schools rely on tuition payments and funds from non-public sources such as religious organization, endowments, grants and charitable donations. About a third of the elementary and secondary schools in the United States are private.

Independent schools are private, non-profit schools governed by board of trustees. This category includes such famous private schools. They may be affiliated with religious institutions but cannot receive funds or governance from the 34,000 private schools in the United States, only about 2,000 are independent. Many accept boarding and day students.

Parochial schools are church related schools, commonly owned and operated by catholic parishes or dioceses and also by protestant denominations and Hebrew schools. The majority of private schools in the United States are parochial schools. The academic curriculum of these schools is supplemented with required daily religious instruction and prayer. Teachers may be clergy or lay persons who may or may not be trained. A child doesn't have to be catholic or protestant to attend a parochial school, but he/she will still be required to attend religious education classes and prayer services.

Proprietary schools are private schools run for profit. This is a relatively new category of school. They do not answer to any board of trustees and elected officials, so they claim to be able to respond quickly to the demands of the market.

According to home school legal Defense Association, a growing number of children are educated at home by parents on private tutors or thorough online programs. A few of these home schooled students attend school part time, but most do not. Some home schooling families join cooperatives to share resources and learn in a group setting. Most parents who choose home school emphasize on religious and moral instructions according to recent household education surveys. Many other parents are worried unhappy with the quality of instructions in public schools.

Families can create their own curriculum or buy educational materials developed for home schoolers. States regulate home schools and set requirements. State oversight varies widely. Some states don't even require notification that a child is being educated at home, while others require home schooled students to take tests, or have their progress evaluated in some way. In a few states, homeschooling parents must have a curricula approved by the state, obtain teaching credentials or undergo home visits by state officials.

The No child left behind Act of 2001 defines a high needs school as “within the top quartile of elementary and secondary school statewide, as ranked by the number of unfilled, available teacher positions or is located in an area where at least 30 percent of students come from families with incomes below the poverty line or an area with a high percentage of out of field teachers. Essentially, high needs school require teachers because they cannot fill job vacancies or retain teachers or they have teachers who are not qualified or who teach in subjects outside their field. High needs school also serve

communities of higher poverty rates where classrooms are influenced by the difficulties of their students' lives. Most high needs schools are located in rural and urban areas.

Fees are usually higher in private schools; they tend to have better facilities and up-to-date technology. Private school for the same curriculum as decided by the government. The school administrators decide on fees and admission; it also decides on criteria for the recruitment of teachers. The class size is smaller than that of public school.

A research conducted by Mutindi, Kabwos and Jeruto (2014) on teacher factors affecting implementation of Early Childhood Development Education in Kericho Municipality Kericho County, the findings revealed that teachers were well prepared to use the available Instructional Resources (IR), though they did not maximize the use of IR, a good number of challenges were established in selection and use of IR, the researcher recommended that all stakeholders and the government should fund ECDE centres for the purchase of adequate IR, trained ECDE teachers in public ECDE Centres to be employed by the government and the stakeholders should provide adequate and standardizes ECDE infrastructure and improve remuneration with a scheme of services. This study focused on teacher preparedness in selection and use of instructional resources for effective implementation of ECDE curriculum in public school this calls for a research on Early Childhood Education in the context of county government management a comparison of learners' performance between private and public schools in Kenya.

Otieno, Kisimbii & Said (2018) carried out a study on Determinants of successful implementation of Early Childhood Development Education by County Government in Kenya. Implementing partners perspective, the researcher employed descriptive researches, the population for the study was implementing partners working with

county governments in Kenya to support ECDE, ten organizations were examined. Findings from regression analysis showed that the coefficient of determination indicated that 63.5% of the variations on implementation of ECDE by county governments could be explained by staff capacity, management of ECPE, the availability of physical facilities and ECDE policies. The study suggested that county governments ought to allocate more funds for renovation and construction of more ECDE centres, allocate sufficient funds for implementation of ECDE and organize in-service training and employ more ECDE staff. The questions that arose are how much funds have been allocated since decentralization of government began? Who are these Early Years Schools, those in public only or also those in private, what has the county government done after the increase of funds for Early Years Educational public centres as compared to the traditional funding of private Early Years Centres? Studies should therefore consider the core business which is the academic performance.

A study by Ratemo (2016) on Quality of pre-primary school Education; A comparative study of private and public pre-primary school centres in Nairobi County, Kenya, sought to compare quality of pre-primary in Nairobi County, among the findings of the study were that staffing affects quality of education, the researcher emphasized the role played by preschool teachers, head teachers and parents in implementation of ECD in schools. Recommendations included: there should be a need for the policy makers who are majority the government officials to increase educational funding for pre-primary schools to improve on quality education, head teachers to recruit qualified staff for effective curriculum implementation finally a recommendation was made on parents need to increase their support to schools in procurement and purchase of facilities namely desk, classroom, land, instructional materials and hiring of new teachers. What is not known is the difference between performances of children attending public and

those attending private EYE centres; after the promulgation of the 2010 constitution it became responsibility of county government to manage EYE and given budgets for infrastructure, hiring of teachers and purchase of instructional materials, since 2013 there has been 100% investment increase in public EYE centres, this calls for a research on management and performance in EYE centres.

A study by Cherotich, Kosgei and Lelan (2018) on prospects and challenges facing the Devolved system of Government in provision of Early Childhood Education in Bomet Sub County-Kenya. The study population comprised of 143 headteachers and 183 ECD teachers from all preschools within the sub county, a sample of 52 headteachers and 68 ECD teachers was used in data collections, the study established that the county government of Bomet did not actually engage in training of ECD teachers, employment of ECD teachers was done appropriately, officials were not adequately equipped to handle inspection and assessment of ECD services, remuneration of teachers was inadequate, physical facilities were inadequate by establishing that the classroom size were not in line with the Ministry of Education guidelines, the study recommended that the County government should allocate resources for training ECD teachers, ensure availability of resources, ECD teacher's salary should be consistent; this indicated that there is a gap in management of ECDE programmes in ECD in county school therefore what happens to ECDE children in the county schools and private school?

A study by Kibet, Kapkiai & Sinyei, Kayere (2016) on the role of county government on service provision in Early Childhood provision in Early Childhood Development Education in Elgeiyo Marakwet County, a case of Keiyo South sub County, Kenya. The study revealed the extent to which the devolution had enhanced a provision of instructional materials and infrastructural development. The study findings indicated that funds had been allocated from constructions for classrooms. Minimal supply of

teaching learning materials were noted; a recommendations as made basing on housing, provision of medical allowance and assurance of safety in the working environment for the teacher, a suggestion was made by the researcher on functions of National and County government on provision of service in ECD centres leading the researcher to question the place of the learners as conducive conditions is given to the ECD teachers, hence a research on the context of county government management.

A study by Odundo (2018) on Revolution of Early Childhood Development and Education in Kenya Improvement in the status of infrastructural facilities and its influence on enrolment, the study focused on determining infrastructural facilities that influenced ECDE enrolment during the first three years of devolution 2013/14, 2014/15, 2015/16, 145 participants comprising of education officers, administrators and teachers, 12 participants comprising senior education officers, non-governmental agencies and headteachers of primary schools hosting ECDE centres were included, the study showed that even though one-half of participants affirmed that the status of ECDE classrooms had improved over the preceding three years of devolution a significant portion indicated lack of improvement the increment skewed in favour of centres with new classrooms leading to serious congestions in such centres and older ones were deserted, this calls for better planning and management of Early years education, the researcher established that centres hosted in primary school compounds, some congestions were not only caused by skewed enrolment other attributes such as unlawful take over ECDE classrooms by head teachers to host primary schools for use by their pupils, the study saw it necessary for county government to focus on making ECDE centres self-reliant as a pre-requisite for the establishment of management boards, of the five types of infrastructural facilities examined by the study only classrooms and furniture improved, the county governments ignored other aspects of

infrastructure such as sanitation, outdoor play equipment and assistive facilities for learner with disability. This calls for a research on management of early years education sector and performance of early years education learners.

A study by Chepkwony (2016) on Early Years Management in devolved system of government revealed that Early Childhood Education is a basic foundation for development in any county and it entails acquisition, transmission and adaptation of information, knowledge, skills and attitude. The study was carried out at Bureti-Sub County in Kericho County, the study adopted cross sectional design, the researcher sought to find out age group of children were included in Early Childhood Sector, how competent were the personnel the study found out that children in public schools were 4 to 5 years old. It was discovered that a lot of teaching problem arose on the management side. Sub county government dealt with public schools only. A gap was discovered, posing a question, who manages ECDE programs in the devolved government? Who are the ECD learners? Those in the public only? What happens to learners in private schools? The researcher therefore went out to establish Early Childhood Management in the context of County government and to compare learner's performance amongst private and public schools in Kenya. Early Years Education is not about public and private schools it's about a child in the contemporary society who should be well prepared to meet the impending challenges.

EYE qualifications indicates the type of knowledge skills and competencies the EYE staff has received, professional development provides opportunities for staff who are already working in the sector for a long time to update and enhance their practices, this calls for in-service, continuous education or workshops.

Quality matters in Early Childhood Education and Care, Finland OECD (2012) indicates that staff qualification initial Education and professional development contributes to enhancing pedagogical quality, which is highly associated with better child outcomes, it is not the qualification that has an impact on child outcomes but the ability of better qualified staff members to create a high quality pedagogical environment, which include involving children, stimulate interaction.

Research has also shown that working conditions can also improve the quality of early Years Educations, better conditions improves staff job satisfaction and retention, which influence staff behavior, conditions. That impact quality of Early Years Education includes staff-child ratio, competitive wages, reasonable workload, conducive physical environment, a competition and supportive managers of EYE programs.

Application of Early Years guidelines in the county:

Information should be provided and clarified on interpretation of Early Years Education requirements. The quality areas for the provision of EYE at the county level encompass issues of Nutrition, health, safety, structural quality, Education. Proposed guidelines are intended to deliver, accountability for EYE funding, certainty for service providers, increase in the quality of services, this includes professional development of the workforce and a culture of continuous improvement of Early Years Education. The specific focal quality areas EYE learners, EYE programmes and practice, physical environment, staff arrangement, collaboration with partners, leadership and county management.

2.24 Chapter Summary

The literature review related studies emphasis were put on the concept of Early Years Education, the kindergarten idea, modern ECDE centers, Management of ECDE

centres, influence of teaching learning resources, teachers' capacity, methodology and achievements in Early Years Education. The next chapter comprises of the study design, the study area and methodology used in analyzed data obtained have been described.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter covers the various methods that were employed by the researcher in carrying out the study. It contains the research paradigm, research design, research location, target population and sampling procedures. The section also focuses on the instruments for data collection, pilot study, validity and reliability of the research instruments. The data collection procedures and data analysis as well as logistical and ethical considerations are also described in this chapter. In this chapter, quality assurance and standards, data collection procedures and data analysis are discussed.

3.1 Research Paradigm

According to Mackenzie and Knipe (2006), the term paradigm in educational research is used to describe a researcher's 'worldview'. This worldview is the perspective, or thinking, or school of thought, or set of shared beliefs, that informs the meaning or interpretation of research data.

The paradigm selected for this study was the mixed methods paradigm. It is a mixture of the qualitative and the quantitative paradigms. Mixed methods research is an approach to inquiry that combines both qualitative and quantitative forms. Qualitative research is a means for exploring and understanding the meanings individuals or groups ascribe to a social or human problem (Creswell, 2014). The mixed method approach helps to neutralize biasness in any one method. Triangulating data sources is a means of seeking convergence across qualitative and quantitative methods. The specific strategy used in this study is the sequential mixed method approach. The researcher sought to elaborate on and expand on the findings of one method with another method. In this case the researcher began with qualitative techniques such as interview and

observation to follow up with quantitative techniques such as survey on a large sample. Objectives (i), (ii), (iii) and (v) are qualitative in nature. The qualitative approach is used for those objectives.

Quantitative research is the process of collecting and analyzing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations (Vogt, 2005). It is a means for testing hypotheses by examining the relationship among variables. The variables can be measured using instruments which give numbered data which then is analyzed using statistical procedures (Creswell, 2014). Objective (iv) is quantitative in nature. Quantitative techniques were used to pursue those objective.

In the mixed methods paradigm adopted in this study, the world view espoused is pragmatic. Tashakkori, Abbas, and Teddlie (2008) and Morgan (2007) advocate for the superiority of the pragmatic approach to derive knowledge about the research problem using pluralistic approaches. Creswell (2013) subdivides mixed methods into sequential, concurrent and transformational. Data for all objectives was collected concurrently. However, the data was analyzed sequentially. Data obtained guided by objectives (i), (ii), (iii) and (v) formed the basis for analyzing objective (iv).

3.2 Research Design

A research design is a plan that is used to generate answers to research problems (Orodho & Kombo, 2002). In order to compare the impact of selected independent variables on academic achievement among ECDE learners the researcher chose to conduct a cross-sectional survey design. Cross-sectional surveys collect data from participants in different fields almost simultaneously, hence the term “cross-section”.

Correlational studies are concerned with assessing relationships among independent and dependent variables.

The study investigated whether a statistically significant relationship exists between variables. It was then be possible to predict one variable using information available on another variable. For example, the existence of a certain method of teaching young children can be used to predict the likely performance of the learners on a test. Prediction and correlation are similar concepts. Correlation refers to the degree of association between two or more variables. It is a measure of how one variable, factor or attribute varies in relation to another. The variation could be positive or negative. The age of a teacher could affect teaching effectiveness positively or negatively. The higher the education a teacher has could be associated with better performance in the classroom. However, in this study correlation was not taken to explain or infer cause and effect. Even if the information gathered in this study may be causal the researcher left it to later researchers to confirm causality in true experimental designs.

The rationale for choosing this design was based on its ability to provide the researcher with appropriate techniques for systematic collection of extensive data from a large group of respondents through interviews and administration of questionnaires (Orodho, 2009). In addition, checklists were also used to guide observations in line with the scope of the study.

3.3 Location of the Study

The study was conducted in selected schools in Kericho County. Kericho County is located in the Rift Valley. It borders the following counties: Nandi to the North, Uasin Gishu and Baringo to the North East, Nakuru to the East and South East, Bomet to the South, Nyamira and Homa-Bay to the South West and Kisumu to the West and North

West. The county lies between longitude 35° 02' and 35° 40' East and between the equator and latitude 0° 23' South with an altitude of about 2002 metres above the sea level.

The researcher conducted an induction course for ECDE teachers in five counties between 2015 and 2017, during evaluation Kericho County had employed teachers and constructed 10 ECDE centres in every ward, Bomet had employed teachers, and was planning to construct ECDE centres, the other three counties had not employed ECDE teachers nor built the ECDE centres. This prompted the researcher to do the research in Kericho County to give a fairly even ground with the private schools in Kericho County, piloting was done in Bomet.

Kericho County was purposively selected due to the fact that no studies have been carried out in this area on this topic. In addition to this, there are private ECDE centres for the very rich and ECDE centres for those who are not well endowed. It therefore has many public and private ECDE centres. The ECDE centres have varied characteristics important for this study. This area was suitable because it provided an opportunity for comparison as to whether private schools are better than public schools despite a lot of funds being invested into the counties to develop ECDE centres for the public in the community.

3.4 Target Population

Joncas (2012) defines population as the totality of all objects, subjects and members that conform to a set of stipulations. It refers to the entire group of individuals, objects, items, cases, articles or things with some common attributes or characteristics (Mugenda & Mugenda, 2012). The population of interest in this study consisted of all Public (750) and private (258) ECDE centres, all teachers in public and private ECDE

centres and all pupils in the “PP 2” of all ECDE centres. A target population is that population to which a researcher wants to generalize the results of a study. In this case the target population consisted of all ECDE pupils, teachers in ECDE and ECDE centres in Kericho County and to a limited extent such population found in rural Counties similar to Kericho.

3.5 Sample Size

It was not possible to study the entire population identified for this study. Therefore, it was necessary to select a sample of the population for study. According to Gupta et al (2002) in the sample technique of collecting data only a part of the universe is studied but conclusions may be drawn and applied to the entire wider population on the basis of findings of the sample to apply to the entire universe. A formula recommended by Krejcie and Morgan (1970) on how to calculate the sample size was used to select ECDE teachers and pupils to participate in this study. The Krejcie & Morgan table helps the researcher to determine the sample size. For example, if the population is 2800 people, by referring to the table, the researcher chooses to collect data from 338 people. Results in Table 3.1 shows the Krejcie & Morgan table used to determine the sample size.

Table 3.1: Krejcie and Morgan table for determining sample size of known population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384
<i>Note: N is Population Size; S is Sample Size</i>					<i>Source: Krejcie & Morgan, 1970</i>				

In this study, the use of the Krejcie and Morgan table (Table 3.1) gave a sample size of 254 public ECDE centres and 155 private ECDE centres from a population of 750 Public and 258 private ECDE centres respectively. Consequently, from population 750 and 258 teachers from public and private ECDE centres respectively, a sample of 254 and 155 from public and private ECDE centres respectively. Finally, out of a population of 18,405 pupils and 4,180 pupils from public and private schools respectively, a sample of 375 (public) and 351 (private) pupils were randomly selected for use in the study.

3.6 Sampling Procedure

Stratified simple random sampling technique was employed for the study. First the schools in each category (public/private) were randomly identified using choose and replace procedure. The schools thus having been selected, the ECDE centres and the

teachers for those centres were then purposively selected. ECDE teachers in the randomly selected schools were selected to participate in this study. Similarly, a total of 726 pupils taught by the selected 409 teachers were selected to participate in the study. This method allowed the researcher to achieve the desired representation of various sub-groups in the population. According to Gupta et al (2002), the universe to be sampled is subdivided into groups which are mutually exclusive and include all items in the universe. In this study there were teachers and pupils in the public school category and others in the private school category. The ECDE centres were categorized as private and public. Individual participants in each category were thereafter randomly selected and used as respondents in the study.

3.7 Sample Size

The sample sizes of schools, teachers and pupils selected randomly and purposively for this study are shown in the sampling frame shown below. The sample size is based on the recommendations of Krejcie and Morgan (1970) except for the number of teachers at both types of schools which had to tally with the number of schools selected. Table 3.2 shows the sampling frame used in this study.

Table 3.2: Sampling Frame

Unit	Population		Sample	
	Public	Private	Public	Private
Schools	750	258	254	155
Teachers	750	258	254	155
Pupils	18405	4180	375	351

The results in Table 3.2 shows the number of schools, teachers and pupils from both private and public ECDE centres selected for use in the study.

3.8 Tools for Collecting Data

The selection of tools had been determined by the nature of the information to be collected, the time available and by the objectives of the study. According to Rolls (2005) the validity and reliability of the study can be enhanced by using “triangulation” where more than one method or tool is used to examine the same problems. Several data collection methods were used to study the problem at hand. The instruments used in this study include, questionnaires, interview guide and observation checklist.

3.8.1 Questionnaire

A questionnaire is an instrument containing statements designed to obtain a subject’s perception, attitudes, beliefs, values and non-cognitive traits. Questionnaires were used to collect data for Objective (i) in this study. The objective set out to discover teacher characteristics in terms of qualifications, training, and experience. Such information can be best assembled through the use of questionnaires (O’Leary, (2014). Data collected would then be analyzed and used to compare the teachers in public and private schools.

3.8.2 Interview Guide

Interviews are primarily done in qualitative research and occur when researchers ask one or more participants general, open-ended questions and record their answers. Often audiotapes are utilized to allow for more consistent transcription (Creswell, 2009). The use of interviews in research involves oral questioning of subjects and recording their responses.

In this study, the researcher proposed to have face to face contact with respondents, asking them questions pertaining teaching and learning in their schools. Oral interviews were used to triangulate and reinforce data collected by the questionnaire. Through

interview the teacher sought clarifications and possible explanations to issues not easily discernible from interviews.

According to Gupta et al (2002) information obtained in direct interviews is likely to be more accurate because the interviewer can clear up doubt of the informants about certain questions thus obtaining correct information by cross examining the informants, supplementary information can be captured and collected. Interviews were conducted by the researcher and information recorded on audio tape.

3.8.3 Observation Checklist

The key method used was observation. Data collection was done using an observation Checklist so as to explain Objectives (ii) and (iii). An observation checklist is perhaps the most dependable tool in a study. On the checklist a researcher records what they see. It was used to collect important data on what really goes on in schools. It was administered by the researcher and trained assistants in one school at a time, from one school to the next. The researcher observed methods of teaching, interaction between teachers and learners, and record the type and utilization of teaching/ learning resources. Observation is often accurate and augments what may be reported in the questionnaire.

3.8.4 Pupil Performance Tests

Objective (iv) was about performance by learners in the ECDE. After teaching and learning it is necessary to determine the level of achievement. The most objective tool for testing amount and level of learning is the Performance Test. Tests were prepared for English Language Writing and Number Work. The Writing Test had 5 questions that required pupils to name objects by matching objects with the correct name, writing parts of the alphabet, writing the names of numbers given,

3.9 Quality Standards: Reliability and Validity

In research it is important to ensure quality of findings. This was done by adopting strategies which enforce reliability and validity of tools used. A pilot study was conducted to find out the extent to which tools used for data collection are valid and reliable.

3.10 Pilot Study

According to Creswell (2013), a pilot study is a small scale preliminary study conducted so as to assess feasibility, time, cost, adverse events and sample size in an attempt to predict an appropriate sample size and improve upon the study design prior to performance of a full scale study. Porta (2008) further stated that a pilot study is a small test of methods and procedures to be used later on a large scale. According to Porta (2008), a pilot study helps in developing and testing adequacy of research instruments, establishing whether the sampling frame and techniques are effective and assessing whether the research protocol is realistic and workable.

The pilot study schools were situated in a neighbouring County and were not part of the final sample. It was conducted in 10 schools in Bomet County. Bomet County has schools and populations similar in social status and living standard to those of Kericho County. Five schools were public schools and five schools were private. The results of the pilot test were used to identify areas where the questionnaire requires adjustments such as changing the order of questions and omitting repeated questions. During the pre-test teachers were asked to leave unanswered those items they find ambiguous. Later, completed questionnaires were collected and improved depending on the need. Three indices found in the literature were used to decide the suitability or unsuitability of an item:

- a. The average score index for each item;
- b. The “undecided index” or the frequency of undecided responses made on each item;
- c. The “ambiguity index” or the number of respondents who considered an item ambiguous.

Thus, suitable items used in the final questionnaire were those which received a high average score, a low undecided index, and a low ambiguity index. Those items which receive more than 4 frequencies of “undecided” responses and more than 4 tallies of “ambiguous” were left out of the final questionnaire. The questionnaire was then administered to the same participants for the second time to establish if the adjustments had improved the questionnaire on teacher characteristics and methods of teaching.

3.11 Reliability of the Instruments

Reliability is the extent to which results are consistent over time and an accurate representation of the total population under study. If the results of the study can be reproduced under a similar methodology, then the research instrument is considered reliable Joppe, (2000).

In this study, the researcher used the Cronbach's alpha (α) test for reliability to estimate the reliability of the items in the instruments using the data collected during piloting. Cronbach alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. A high value for alpha does not imply that the measure is unidimensional. If, in addition to measuring internal consistency, one wishes to provide evidence that the scale in question is unidimensional, additional analyses can be performed. Cronbach's alpha (α) is a coefficient of reliability (or consistency). The more the number of items in a test the

higher the Cronbach's alpha. Additionally, if the average inter-item correlation is low, alpha will be low.

Cronbach's alpha statistic is widely used in the social sciences, business, nursing, and other disciplines. The term item is used to mean anything—questions, raters, indicators—of which one might ask to what extent they "measure the same thing." Items that are manipulated are commonly referred to as variables. One advantage of the Cronbach test of reliability over the other tests is the fact that it is done only once. It is not repeated. In the case of this study the Cronbach test was done for the pupil performance tests. The machine calculation of alpha revealed a coefficient of $\alpha = 0.72$ giving confidence that the items in the test are closely related and measure internal consistency.

3.12 Validity of the Research Instruments

According to Thatcher (2010), validity is the extent to which the instrument measures what it purports to measure. Validity refers to a researchers' ability to draw meaningful and justifiable inferences from scores about a sample or population (Creswell, 2014). There are four types of validity. These are content validity, criterion-related validity, construct validity and consequential validity. Content addresses the match between test questions and the content or subject area they are intended to assess. Criterion-related validity looks at the relationship between the test and an outcome.

Construct validity refers to the degree to which a test or other measure assesses the underlying theoretical construct it is supposed to measure. Messick (1995) defined consequential validity as the evidence and rationales of evaluating the intended and unintended consequences of score interpretation and use both the short and long term. For this study content validity was considered most important and relevant. The content

validity refers to the extent to which the items in the questionnaire and the scores from these questionnaires are representative of all possible teacher-related variables that influence teaching at ECDE level.

The researcher engaged and sought assistance from her supervisors and members of the postgraduate class at Moi University to read and assess the relevance of the research instruments against the objectives of the study. The supervisors' and students' suggestions and opinions were incorporated to help improve the questions in the questionnaire and in the interview guide. The final result was a product of this detailed and rigorous process and was therefore considered valid.

3.13 Procedure for Data Collection

Data was collected by the researcher assisted by two research assistants trained for a period of one week. The researcher visited schools. Instruments were not posted. Questionnaires were distributed to respondents who were given time to respond. Later they were collected physically to ensure high return rate. The interview sessions were carried out face to face, probing questions were used for further explanations and clarifications, responses were recorded by the researcher during the session following interviewers' permission. The researcher observed methods of teaching, interaction between teachers and learners, and record the type and utilization of teaching/ learning resources.

3.14 Data Analysis

Data was analyzed by objective. Qualitative objectives were analyzed qualitatively. Data was organized around themes which answer specific questions. Quantitative data was analyzed quantitatively and organized in tables. Descriptive statistics involved

computing frequencies, percentages, drawing histograms and pie charts among others. It also involved computing means and standard deviation.

Inferential statistics involved computing correlation such as the Pearson Product Moment Correlation Coefficient and Analysis of variance. Regression analysis helped to develop a model to explain the impact of increased funding on academic achievement.

3.15 Ethical Considerations

Ethical practices are important for the acceptability of a research. The researcher kept in mind ethical practices at all stages of preparation of this thesis. During identification of the research problem the researcher selected a problem which was useful to the individuals being studied (Punch, 2005). There is need to improve efficiency in ECDE. Any research that appears to contribute to a better understanding of how ECDE should work forms a welcome contribution to participants in early childhood education. Ethical practices have also been upheld in preparing the purpose statement and research questions (Blumberg, Cooper, & Schindler, 2005).

The purpose of the study was to identify, compare and discuss factors which influenced and how they interacted to influence, learning and achievement in public and private ECDE centres in the context of increased funding to public sector schools by county governments. It therefore involved teachers and pupils as respondents during the study. To engage them as participants in the study, the researcher sought and obtained permission and authorization from relevant authority. The researcher sought consent from the School of Education, the Dean of the school and the National Commission for Science, Technology and Innovation (NACOSTI) seeking consent to conduct research. A copy of the corrected proposal containing the research tools was attached. After

receiving the research permit from NACOSTI, the researcher sought authorization from the County Commissioner (CC) and County Director of Education (CDE). This was then followed by notification of the head teachers of the selected ECDE Centres. Participants were requested to be cooperative enough during the period of the study assuring them of confidentiality of any information shared by them.

During data collection ethical practices were upheld. The researcher did everything possible not to put participants at risk Sieber (2000). The researcher sought consent of the participants Sarantakos, (2005). Information which is intimate but harmful to the reputation of individuals was not disclosed as a result of this study. Respondents to questions in this study had their identity concealed. During interpretation of the data the researcher provided an accurate account of information collected. There was no falsification of data. Finally, when results of this study released to readers the research design was included so that readers can determine for themselves the credibility of the study Neuman, (2000).

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter deals with data presentation and discussion of the research findings. The purpose of this study was to identify, compare and discuss factors which influence and how they interact to influence, learning and achievement in public and private ECDE centres in the context of increased funding to public sector schools by county governments. Questionnaire, Observation checklist and interview schedule were used to collect the required data. The study sought to achieve the following objectives:

- i) To compare qualifications and experience of staff in public and private ECDE Centres;
- ii) To compare teaching and learning facilities found in public and private ECDE Centres;
- iii) To compare teaching and learning methods used by teachers in public and private ECDE centres;
- iv) Compare performance on achievement test between pupils in public and private ECDE centres after one term of instruction;
- v) To analyze factors affecting performance in public and private ECDE centres.

The first section of this chapter presents the background information of the participants. The second section presents an analysis of the responses to specific objectives of the study as obtained from the participants' responses to the questionnaire, recordings of the observations of events in the classroom and from interviews. The study hypothesized that there is no significant difference in impact between selected

independent variables such as teacher characteristics, teaching methods, teaching resources on achievement among learners in private and public ECDE centres.

4.2 Demographic Information on the Respondents

Zechmeister, Shaughnessy and Zechmeister (2003) state that demographic variables are an important type of variable frequently measured in survey research. They are used to describe characteristics of people who are surveyed. Demographic information provides data regarding research participants and is necessary for the determination of whether the individuals in a particular study are a representative sample of the target population for generalization purposes and also to serve as independent variables. General information regarding the respondents' age, professional qualification, and length of service and the status of the school was sought. The findings are presented under the following sub-headings.

4.2.1 Age of the Respondents

The first item in the questionnaire for teachers required the respondents to indicate their age brackets. Information on age was relevant for this study because numerous studies have shown that age can make a difference in the way people understand issues in life. The results are presented on Table 4.1

Table 4.1: Age of the Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
25 years and below	54	13.3	13.3	13.3
26-35 years	191	46.7	46.7	60.0
36-45 years	136	33.3	33.3	93.3
46 years and above	28	6.7	6.7	100.0
Total	409	100.0	100.0	100.0

As shown on Table 4.1 54(13.3%) of the respondents were aged 25 years and below. Similarly, 191(46.7%) ranged between 26 to 35 years, 136(33.3%) were between 36 to 45 years, while the remaining 28(6.7%) were above 46 years of age. This shows that majority of the respondents lay between 36 to 45 years of age. Research has shown that teaching experience is a critical variable in students' learning outcomes in school. Fetler (1999) found that student achievement increased as the number of years of teaching experience increased. Similarly, Rugraff (2006) established that the percentage of student scoring advanced and proficient increased as the number of years of teaching experience increased, peaking at years 11-19 and then decreasing for teachers with 20 or more years of experience.

4.2.2 Gender of the Respondents

The respondents were required to state their gender. Data on gender was necessary to this study because it is commonly believed that a person's gender can have a huge effect on their way of thinking, thus majorly affecting the result of the survey. Men have a stronger left hemisphere while women can balance both hemispheres. This is the reason why women tend to be more aware of their emotions versus men, while males tend to think from an objective, task oriented point. Replies on the question of gender are presented on Table 4.2 and Figure 4.1.

Table 4.2: Gender of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	27	6.7	6.7	6.7
	Female	382	93.3	93.3	93.3
	Total	409	100.0	100.0	100.0

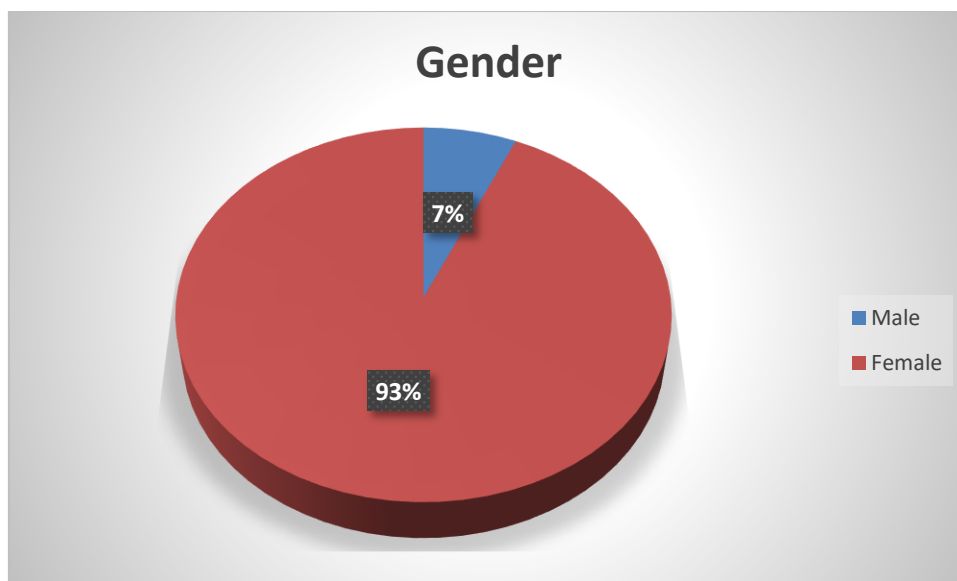


Figure 4.1: Gender of the Respondents

As shown on Figure 4.1 a measly 27(7%) of the respondents were male while the rest 382 (93%) were female. This implies that majority of the teachers in the ECDE centres where the study was carried out were female. Moyo, Wadesango and Kurebwa (2012) identified gender as one of the factors affecting implementation of early childhood education programmes. In this study, it was envisaged that gender of teachers affects achievement of learners in the early childhood education centres.

4.2.3 Professional Qualification of the Respondents

Boyd et al. (2008) explored that improvement in teacher qualifications appear to have resulted in improved student achievement. In this study, the respondents were asked to state their highest professional qualification. Professional qualification is one of the most important characteristics that might affect the person's way of looking and understanding any particular social phenomena. Teacher quality is the most influential factor that determines students' success. In a way, the response of an individual is likely to be determined by his educational status and therefore it becomes imperative to know the professional qualification of the respondents. Hence the variable 'Professional

Qualification' was investigated by the researcher and the data pertaining to qualification is presented on Table 4.3.

Table 4.3: Qualifications of the Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Certificate	123	30.0	30.0
	Diploma	272	66.7	96.7
	BED	13	3.3	3.3
	Total	409	100.0	100.0

As shown on Table 4.3, majority of the teachers, 272(66.7%) were graduates of diploma level of training, 123(30%) were qualified at the certificate level while only 13(3.3%) had attained a degree qualification. From the table, 70% of the teachers' qualification was of diploma and above. It was important for the study to investigate this factor owing to Martinez-Beck and Zaslow (2006) view that early childhood educators are required to meet certain qualifications and receive professional development to enhance their abilities to support children's learning. This study, therefore, envisions that children handled by teachers of higher level of qualification are more highly motivated to teach and their learners will achieve higher scores in achievement tests. According to Okumbe (1999), the process of bringing in, training the staff and maintaining a proper work load is known as staffing. Diverse ranges and levels of qualification and training of staff in education have an impact on the quality of education.

Shau and Alfred (2002) defines staffing as a way of realizing the potentialities of people who can help in imparting knowledge or skills and attitudes that will enable an institution to carry out responsibilities required for the attainment of aims and objectives. According to the transformational theory, the role of the teacher is to build

an environment whereby trust and care of the learners is enhanced and to facilitate sensitive relationship among other members of the institution.

Nguru (2006) indicates that overcrowding in classes greatly affects teaching and learning. If learners are congested in their sitting positions, teachers find it hard to freely move round a class. For this reason, teachers will not be able to reach with ease all children so as to check their individual work while they sit and work in their places. Failure to move freely in a class means that the teacher can neither help the needy children nor mark the pupils' exercises as they work. Koedel (2007) found that variation in teacher quality is an important contributor to student achievement. Kathuri (2005) indicates that good and quality staff is an asset to the school. Teacher-pupil ratios are generally regarded as measures of school quality. The teacher-pupil ratio is an indicator for planning opportunities. A low teacher-pupil ratio may give a pupil a better chance of contact with the teacher, hence quality teaching or learning process. However, a lower teacher-pupil ratio increases the unit cost of education, since teachers' salaries constitute a large proportion of the total cost of schooling. The teacher-pupil ratio gives an indication of the utilization of teachers; that is, whether teachers are over utilized or underutilized.

Table 4.4: School Type versus Qualification

		Qualification			Total
		Certificate	Diploma	Bed	
School Type	Count	16	124	13	155
	Private % within school type	10.0%	80.0%	10.0%	100.0%
	School % within qualification	11.1%	40.0%	100.0%	33.3%
	% of Total	3.3%	26.7%	3.3%	33.3%
School Type	Count	102	152	0	254
	Public % within school type	40.0%	60.0%	0.0%	100.0%
	School % within qualification	88.9%	60.0%	0.0%	66.7%
	% of Total	26.7%	40.0%	0.0%	66.7%
Total	Count	123	273	13	409
	% within school type	30.0%	66.7%	3.3%	100.0%
	% within qualification	100.0%	100.0%	100.0%	100.0%
	% of Total	30.0%	66.7%	3.3%	100.0%

Comparing teachers' qualifications of teachers in private and public schools on Table 4.4, a bigger portion of teachers in public schools, 124(26.7%) than in private schools, 16(3.3%) were of certificate level of training, the same goes for Diploma teachers 152(40%) and 124(26.7%) for public and private respectively whereas one 13(3.3%) in Private school and non in public school and obtained a degree in Early Childhood education. This shows that a higher percentage of teachers in public schools were of lower level of training as compared to teachers in private schools and therefore cause their pupils to perform better in tasks. This fits in with Cranton's (1994) assertion that the teachers' level of training determines the quality of performance in their work.

4.2.4 Length of Service for the Respondent

Work experience is a critical component of being an effective early Childhood education teacher. Harris and Sass (2011) believe that the more a teacher stays at a job,

the more they are exposed to students of varying backgrounds, which in turn improves their job performance. The participants in this study were therefore asked to state how long they had taught. The results for this response are shown in Table 4.5.

Table 4.5: Length of Service as ECDE Teacher

	Frequency	Percent	Valid Percent	Cumulative Percent
1-5 years	68	16.7	16.7	16.7
6-10 years	109	26.7	26.7	43.3
Valid 11-15 years	136	33.3	33.3	76.7
16-20 years	95	23.3	23.3	100.0
Total	409	100.0	100.0	100.0

The results in Table 4.5 shows that majority of the respondents have a length of service between 11 – 15 years.

4.2.5 Status of the School

The quality of education in public and private schools is a point of concern. It is a general assumption across the world over that the children enrolled in the public school do not get access to quality education and therefore cannot compete favourably with the other children who are in private institutions. The national government seems to be indifferent as far as the quality of public education is concerned. As per the WTO provisions, education has become a commodity to be sold and buy in a market. There is a notion that the less privileged parents cannot not afford to send their children to such expensive educational institutions and therefore quality education is now becoming a preserve of few well to do people. The rest of the people are left to survive with whatever little is available in the public school. All these factors are important and therefore, in the present study, it was necessary to look into the quality of education given to the learners in both public and private institutions within Kericho County. Information relating to the status of the school is presented on Table 4.6.

Table 4.6: Status of the School

	Frequency	Percent	Valid Percent	Cumulative Percent
	Private School	155	33.3	33.3
Valid	Public School	254	66.7	100.0
	Total	409	100.0	100.0

Data on Table 4.6 indicates that out of a total of 409 participants in the study, 254(66.7%) taught in public schools while 155(33.3%) taught in the private school. The assumption of the study was that performance in the private school was better than in the public school for the sheer reason of numbers in public schools causing classroom congestion. Classroom congestion is considered as a disadvantage in improving academic performance. The main problems due to this factor experienced by the teachers are that they are unable to implement the teaching-learning processes and instructional strategies in an appropriate manner. The teachers are unable to make provision of personal attention and as a result of which, academic performance of the students may undergo detrimental effects.

According to Read et al (1993) play is at the heart of any program for young children. Child initiated, child directed, teacher supported play is an essential component of develop mentally appropriate practice (Bredekemp 1987 in Read, 1993). Play is a primary vehicle for and initiation of children's mental growth. Through it children develop skills of collaboration, cooperation, initiative, and creativity. Play prepares children socially, emotionally and intellectually and it is a way of enabling children to master their emotional intelligence. There are two types of play initiated by children: the dramatic play and self-initiated personal play.

4.2.6 Number of Teacher Assessments in the last three years (2016-2018)

Sule (2013) opined that school supervision (internal and external) has become a veritable instrument for checking teachers' job performance. It was therefore imperative to investigate how often the teachers were assessed. The respondents were required to indicate the number of times they had been assessed in the last three years. The results are presented on Table 4.7.

Table 4.7: Frequency of Assessment on Teaching Methodology

	Frequency	Percent	Valid Percent	Cumulative Percent
None	14	3.3	3.3	3.3
1-5 times	177	43.3	43.3	46.7
Valid 6-10 times	68	16.7	16.7	63.3
11 and above times	150	36.7	36.7	100.0
Total	409	100.0	100.0	100.0

Results in Table 4.7 shows that majority of the teachers 177 (43.3 %) had been assessed less than five times. On the other hand, 150 (36.7%) had been assessed more than eleven times. The remaining 68 (16.7%) had had 6-10 assessments and one 14 (3.3%) had not been assessed at all. These results were expected to have a bearing on the results of the test given to pupils. According to Nolan and Hoover (2004) the ultimate aim of educational supervision of curriculum implementation is to improve on instruction in order to provide quality and better education to the pupils. Teacher assessment is therefore a necessary process that monitors work performances of teachers and provides feedback that enables correction of weaknesses in classroom practices in order to encourage professional growth and better learning outcomes for students.

4.2.7 Remuneration

Studies have shown that quality pay attracts quality teachers. Teacher quality correlated strongly with student achievement. Loeb (2003) linked student achievement to teacher compensation. This study therefore sought to investigate how teachers are remunerated in Kericho County. The respondents were expected to respond to three questions: Who pays your salary? How much do you earn? and is the salary paid regularly? The results are presented on Table 4.8.

Table 4.8: Responsibility for Payment of Teachers' Salary

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Parents	95	23.3	23.3
	County	205	50.0	73.3
	School	109	26.7	100.0
	Total	409	100.0	100.0

Results in Table 4.8 indicates that in Kericho County, most of the teachers, 205 (50%) are paid by the county government, while 109 (26.7%) are paid by their schools and 95 (23.3%) were paid by parents of the respective schools. This means that half of the teachers are paid by stakeholders other than the county. Consequently, a disparity in payment is expected thus effecting student outcomes. It was important to study this variable because teachers' pay affects job satisfaction and motivation. This will in turn be a basis for teachers to devote to their professional obligations, leading to improved learner academic achievement.

The eighth item on the teachers' questionnaire required the respondents to mention the amount of salary they earn. Table 4.9 shows the results of the teachers' responses.

Table 4.9: The Amount of Salary

Type of school	Salary (Ksh)							
	1000-5000		5000-10000		10000+		Total	
	F	%	F	%	F	%	F	%
Private	0	0	78	50	77	50	155	100
Public	64	25	152	60	38	15	254	100
Total	64	16.7	230	56.7	115	26.7	409	100

Results in Table 4.9 indicate that all the teachers in private schools earn more than Ksh 5000 while half of them, 77(50%) earn more than Ksh. 10000. On the other hand 64(25%) teachers in public schools earned between Ksh. 1000 and 5000, 152(60%) earned between Ksh. 5000 and 10,000, while only 38(15%) earned more than 10,000. This shows how underpaid the teachers in public schools in Kericho county are and this will definitely have an effect on the learning outcomes of the pupils.

Frequency of Salary payment

Duflo, Esther, Rema and Ryan (2012) assert that Governments must pay their employees for states to function. Yet, frequent delays of salary payments can undermine government effectiveness. The respondents were required to indicate whether or not, their salaries were paid on time. The responses are presented on Figure 4.2.

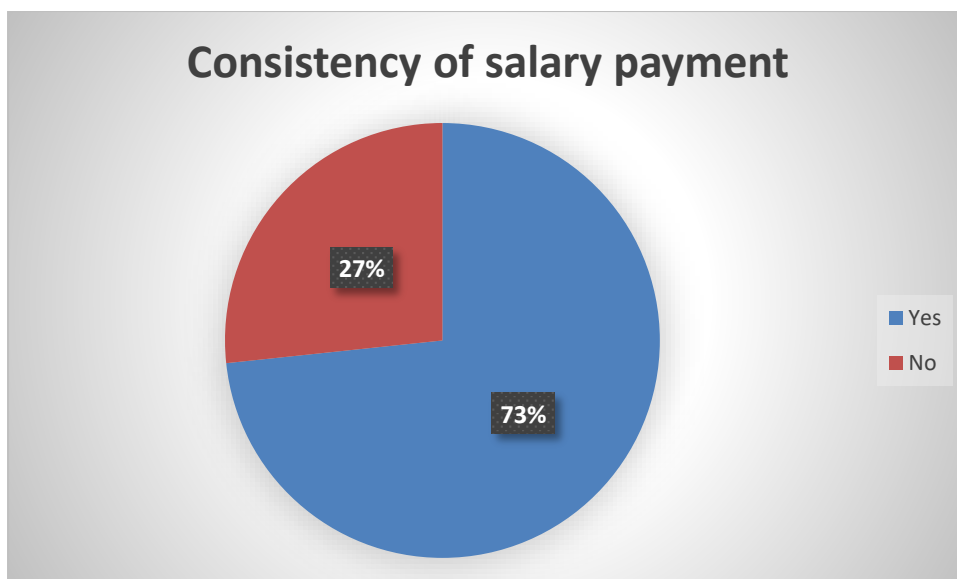


Figure 4.2: Consistency of salary payment

Drawing from Figure 4.2, Majority 185 (73%) of the respondents affirmed that their salary was paid on a regular basis while only 69(27%) said their salary was not paid regularly. Basing on Duflo et al (2012) assertion it was expected that achievement of learners in schools that teachers were paid regularly would be better than in those schools where salary was not paid regularly. Table 4.10 shows the frequency of salary.

Table 4.10: Frequency of salary

	No		Yes		Total	
	F	%	F	%	F	%
Private	15	10	140	90	155	100
Public	89	35	165	65	254	100
Total	104	26.6	295	73.3	409	100

From Table 4.10, only 15(10%) of teachers in private schools does not get salary frequently, while the rest 140(90%) get their salary frequently. Conversely in public schools 89(35%) do not get their salaries regularly, while 165(65%) get their salaries regularly. It is clear that most private schools pay salaries regularly while a sizeable number in public schools do not pay regularly. Irregular or delayed payment of

teachers' salaries can make a teacher unhappy, frustrated, uninspired and unmotivated and this will adversely affect teaching and learning whereas prompt payment of salary motivates teachers to adopt effective teaching styles in the classroom.

4.3 Teaching and Learning Facilities in Private and Public schools

School facilities mean all facilities and equipment within the school, which are used by the members of the school community (Abraham, 2003). The study sought to compare teaching and learning facilities found in public and private schools. School facilities affect teacher recruitment, retention, commitment, performance and effort. They also affect health, behavior, engagement, learning, and growth in achievement of students (Tanner, 2006, Buckley, Schneider, & Shang, (2004) and Ready, Lee, & Welner, (2004). Thus, the public ECDE centres and schools with provisions from the county government were expected to be at an equal footing with the private schools as far as learning facilities were concerned. An observation schedule was used to collect the relevant data to find out if this was so. The results are presented Table 4. 11:

Table 4. 11: Facilities found in Public and Private Schools

Type of School	Public								Private							
State of Facilities	1		2		3		4		1		2		3		4	
Availability																
of :	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Administration office	64	25	140	55	25	10	25	10	16	10	109	70	15	10	15	10
Staff room	64	25	114	45	76	30	0	0	16	10	62	40	77	50	0	0
Sitting and writing																
space	216	85	38	15	0	0	0	0	0	0	62	40	62	40	31	20
Chalk/white board	140	55	76	30	38	15	0	0	0	0	62	40	46	30	46	30
Furniture	102	40	140	55	12	5	0	0	0	0	77	50	31	20	46	30
Health																
facilities	88	35	76	30	64	25	25	10	0	0	31	20	109	70	15	10
Indoor play	254	100	0	0	0	0	0	0	0	0	155	100	0	0	0	0
Outdoor play	0	0	178	70	25	10	51	20	0	0	109	70	31	20	15	10

The information on Table 4.11 indicate that 64(25%) of the administration offices in public schools were unsatisfactory, 140(55%) were satisfactory, 25(10%) were seen to be good while 25(10%) were very good. The findings indicate that 16(10%) of the same facility in private schools was seen to be unsatisfactory, 109(70%) were satisfactory, 15(10%) were good while 15(10%) were very good. This means that more administration offices in the public schools were unsatisfactory 64(25%) compared to 15(10%) which was unsatisfactory in the private school whereas 15(10%) was good and 15(10%) was very good. However, the overall impression of the administration offices was below expectation with a total of 204(80%) scored on the lower half in the public school and 124(80%) in private school were in the unsatisfactory and satisfactory levels. This means that provision of a quality administration office is not a priority in both public and private schools.

Concerning the standard of staff rooms, 25(25%) in the public school were unsatisfactory, 114(45%) were satisfactory, 76(30%) were good while none were rated as very good. On the other hand, 15(10%) staffrooms in the private school was unsatisfactory, 62(40%) were satisfactory, 77(50%) were good while none were rated as very good. This means more staff rooms in the public schools 64(25%) were unsatisfactory in the public schools compared to 16(10%) in the private schools in the same lower cadre. However, on the positive side, 76(30%) of the staffrooms in public schools were rated as good while 77(50%) of staffrooms in private schools were rated as good.

On the issue of sitting and writing space, majority of the public schools, 216(85%) had unsatisfactory space, while only 38(15%) was satisfactory. Conversely in the private schools, none was found to be unsatisfactory, 62(40%) were satisfactory, 62(40%) were good while 31(20%) were very good. This means that more sitting and writing space

was provided in private schools, 93(60%) being good and very good put together, compared to none in the public schools which scored good or very good. This implies that learners in private schools have more adequate sitting and writing space compared to their counterparts in public schools.

Regarding the provision of chalk and white board, majority 140(55%) in public schools were unsatisfactory, 76(30%) were satisfactory, 38(15%) were good and none was very good. On the contrary, none in private schools was unsatisfactory, 62(40%) were satisfactory, 46(30%) were good and 46(30%) were very good. This shows that provision of chalk and white board was better in private schools; 92(60%); good and very good compared to only 38(15%) of the same quota in the public schools.

Findings from the study indicates that in 102(40%) public schools, furniture was said to be unsatisfactory, 140(55%) were satisfactory, 12(5%) was good while none was rated as very good. In private schools none was unsatisfactory, 77(50%) were satisfactory 31(20%) were good and 46(30%) were very good. On this variable, 77(50%) private schools were rated good and very good compared 12(5%) in the public schools where majority 102(40%) were either unsatisfactory.

A bulk of Health facilities in public schools 88(35%) and 76(30%) were said to be unsatisfactory and satisfactory respectively, while 64(25%) and 25(10%) were good and very good correspondingly. In the private schools, no health facility was unsatisfactory, 31(20%) were satisfactory, 109(70%) were good and 15(10%) was very good. It's clear from this result that 124(80%) health facilities were better; rated as good and very good in private schools but dismal in public schools where 89(35%) were rated in the same cadre.

The results in Table 4.11 shows that there was either very poor or no indoor play in public schools as all 254(100%) were rated unsatisfactory. Similarly, all the 155(100%) observed in the private schools were satisfactory. Though it was slightly better in private schools, this seems a common weakness in both types of schools.

Outdoor play was also sought for in the study where none was found to be unsatisfactory in the public schools, 178(70%) were satisfactory, 25(10%) were good and 51(20%) were very good. In the private schools none was unsatisfactory, 109(70%) were satisfactory, 31(20%) were good and 15(10%) was very good. This facility was provided equally poorly by both public and private schools with 70% in the lower half in both types of schools.

Buckley, et al (2004) opined that school facilities have a critical bearing on teacher and learner satisfaction. They said that facility quality is an important predictor of the decision of teachers to leave their current position. To emphasize the importance of the physical environment, Hanushek, Kain and Rivkin (2004) asserted that teachers might be willing to take lower salaries in exchange for better working conditions, considering that the quality of school buildings affects the quality of teacher life and educational outcomes. Poor learning environments reportedly lead to “sick building syndrome” which in turn increases teacher and student absenteeism, reducing student performance.

4.4 Planning for Instruction

According to Gurney (2007), teaching is effective when teachers deliver the right content and have enough learning materials on the teaching activity. Studies by Mtitu (2014) and Gurney (2007) identified teacher preparedness as a crucial dimension that could help improve learner’s performance in Mathematics. Arnold (2010) affirms that the planning aspect of teaching is so important that it alone can determine the failure or

success of a teacher in curriculum implementation. According to Arnold, it is the planning of lessons that take into account the interaction between student and teacher that determines the success of learning experiences. He therefore suggests that a general outline of the year's work should be prepared before the beginning of the school year and a detailed schedule for each week and a specific schedule for each day should be prepared well in advance of the time they will be needed. It is on this basis that the study sought to find out facts about how teachers planned for instruction in ECDE centres in Kericho County. The results are presented on Table 4.12.

Table 4.12: Planning for Instruction

	Public								Private							
Availability of:	1		2		3		4		1		2		3		4	
Planning	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Schemes of Work	0	0	127	50	51	20	76	30	0	0	77	50	31	20	47	30
Lesson Plan	13	5	114	45	127	50	0	0	15	10	109	70	31	20	0	0
Clarity of Objectives	152	60	64	25	25	10	13	5	15	10	62	40	47	30	31	20
Use of Learning materials	165	65	76	30	13	5	0	0	15	10	62	40	31	20	47	30

Results in Table 4.12 shows that Schemes of Work in 127(50%) out of the 254 public ECDE centres investigated were satisfactory, 51(20%) were good, and 76(30%) were very good. Contrariwise, in the private 77(50%) were satisfactory, 31(20%) were good, while 47(30%) were very good. This means the Schemes of Work was adequately done both in public schools, where 127(50%) were on the upper half representing good and very good and 77(50%) in private schools represented the same upper half of the rating scale.

Results in the table indicate that lesson planning in public schools is unsatisfactory in 13(5%) centres, 114(45%) satisfactory, 127(50%) rated as good while none was rated as very good. On the other hand 15(10%) was unsatisfactory, 109(70%) satisfactory, 31(20%) rated as good, while none was rated as very good in private schools.

Regarding clarity of objectives, 125(60%) were rated as unsatisfactory while 62(40%) were rated as good for private schools. The use of learning materials was unsatisfactory 165(65%) in public schools while a greater percentage 62(40%) were satisfactory.

The results from this study indicate that most teachers prepare for instruction. Teachers in private schools are more prepared for curriculum delivery compared to their counterparts in public schools. The planning aspect of teaching is so important that it alone can determine the failure or success of a teacher. It is the planning of lessons that takes into account the interactions between student and teacher and consequently the success of the learning experience. According to Arnold (2010), teachers who spend more time in preparation will spend less time in trying to keep their students on the learning process.

4.5 Teaching Approaches

According to Ayeni (2011), teaching is a process that involves bringing about desirable changes in learners so as to achieve specific outcomes. For an approach used for teaching to be effective, Adunola (2011) maintains that teachers need to be cognizant of the numerous teaching strategies that take recognition of the magnitude of complexity of the concepts to be covered. Cassel (2009) describes a teaching approach as any maneuver that can be used to facilitate student's learning and satisfaction. Different teaching methods may elicit different types of changes in learning outcomes. Different types of approaches applied in ECDE are listed on Table 4.13.

Table 4.13: Teaching Approaches

Type of School	Public								Private									
	Usage		1		2		3		4		1		2		3		4	
Approach	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Role Model	114	45	114	45	25	10	0	0	0	0	93	60	31	20	31	20		
Pretend	140	55	89	35	13	5	13	5	15	10	77	50	31	20	31	20		
Music	127	50	89	35	25	10	13	5	0	0	0	0	93	60	62	40		
Art/Craft	152	60	64	25	13	5	25	10	0	0	0	0	93	60	62	40		
Play	203	80	51	20	0	0	0	0	0	0	16	10	93	60	46	30		
Group work	178	70	76	30	0	0	0	0	15	10	77	50	46	30	15	10		
Word Puzzles	0	0	114	45	127	50	13	10	0	0	0	0	93	60	62	40		

Janis (2012) defined role modelling as teaching by example and influencing people in an oftentimes unintentional, unaware, informal and episodic manner. Thus teachers serve as role models for learners through their routine actions. In 114(45%) of the public schools Role modeling was rated as unsatisfactory 114(45%) as a teaching approach, in 45(25%) it was satisfactory, 25(10%) was good and none was very good. In private schools, none was unsatisfactory, 93(60%) was satisfactory, 31(20%) were regarded good and 31(20%) were very good. As shown on Table 4.13, teachers in private schools were better role models to their pupils as 62(40%) were either good or very good compared to public schools where only 13(5%) was good at role modeling. Maina (2005) observes that with increasing teaching workloads, practitioners need to consider alternative approaches to teaching and learning and he recommends role modeling as the most appropriate approach as it enables students to work alongside practitioners. This implies that the use of these learner centred approaches by teachers in private schools involved and engaged learners in meaningful learning. As such the good performance is attributed to effective use of these methods.

Pretend play was another method checked for in the learning centres. 140(55%) in public schools observed were unsatisfactory, 89(35%) were satisfactory, 13(5%) was good and 13(5%) was very good. In private schools, on the other hand, only 15(10%) was unsatisfactory, 77(50%) were satisfactory, 31(20%) was good and 31(20%) were very good. On the whole public schools were badly off in the use of pretend play as 229(90%) were rated on the lower half of unsatisfactory and satisfactory combined while it was 93(60%) in the private schools.

Regarding the use of music as a teaching approach in public schools, 127(50%) were unsatisfactory while a total of 38(15%) were rated as good and very good. On the other hand the use of music in private schools was observed that none was unsatisfactory and

none was satisfactory. However, 93(60%) were good while 62(40%) was very good. Conversely in private schools, 62(40%) were unsatisfactory, 93(60%) were satisfactory and none was either good or very good. This is a clear indication that music is popular among teachers in private schools who had 93(60%) rated as good or 62(40%) rated as very good compared to public schools where 38(15%) were either good or very good.

It is instructive to note that play as a method of instruction was unsatisfactory in 203(80%) of the public schools, satisfactory in 51(20%) and none being either good or very good. Likewise, 46(30%) in private schools were unsatisfactory, 93(60%) were satisfactory and only 15(10%) was good. This results show that all (100%) in the public schools were below average in the use of play while 90% were of the same caliber in the private schools. This contrary to research from many studies that play is used in ECDE centres.

Group work as a method of teaching scored 178(70%) for unsatisfactory in public schools, 76(30%) were satisfactory and none was either good or very good. In private schools only 15(10%) were ranked as unsatisfactory, 77(50%) were satisfactory, 46(30%) were good and 15(10%) was very good. Generally, group work was poorly utilized in public schools. However, for private schools results indicate that a total of 115(100%) were r. This means group work was unpopular in public and private schools had 62(40%) good and very good.

The use of puzzles as a teaching approach was popular among teachers in private schools is popular with a total of 155(100%) rated as good and very good. For public schools, 114(4545%) rated as satisfactory and 127(50%) rated as good.

Among the teaching approaches, music, art & craft and play method were popular among teachers in private schools. Research has continually shown that active learning

improves student's learning outcomes. Flowers et al (2015) advocate for Interactive methods in early childhood which promote students' engagement. Students' engagement in turn positively impact students' ability to retain and understand new material. Interactive methods were generally poor in public schools as compared to private schools and a possible reason for disparity in learners' achievement in ECDE centres in Kericho County despite support from the county Government.

4.6 Use and Quality of Experiences

The study checked on the use and quality of experiences utilized in teaching. The outcomes are shown on Table 4.14.

Table 4.14: Quality of Learning Experiences

	Public								Private							
	1		2		3		4		1		2		3		4	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Allocation of Time	114	45	127	50	13	5	0	0	0	0	0	50	77	50	77	50
Involvement of learners	127	50	101	40	13	5	0	0	0	0	0	0	93	60	62	40
Ability of Learners to carry out activities	102	40	114	45	25	10	13	5	0	0	15	10	62	40	77	50
Free Movement of learners	102	40	64	25	0	0	90	35	0	0	46	30	31	20	77	50
Range of teaching and Learning Activities	114	45	64	25	25	10	51	20	93	60	15	10	15	10	31	20
Assessment of Activities	102	40	76	30	25	10	51	20	0	0	31	20	31	20	93	60

As shown on Table 4.14. Allocation of time was unsatisfactory in 114(45%) of the observed lessons in public schools, 127(50%) were satisfactory, 13(5%) was good and none was very good. In the private schools' category none was assigned unsatisfactory time to the learning experiences. None of the schools' time was also rated as satisfactory. A total of 77(50%) schools were rated good. Similarly, a total of 77(50%) was rated as very good. This is a strong indication that learning experiences in public of school were deprived of sufficient time. However learning experiences in private schools were allocated enough time for learning.

The study further showed that involvement of learners was unsatisfactory in 127(50%) of the public schools, 102(40%) was satisfactory and 13(5%) was good. In private schools 101(40%) and 93(60%) ranged at good and very good respectively. This means that allocation of time in private schools was slightly better off unlike in public schools with at least one where time was allocated well.

It is instructive to note that 102(40%) of learners in public schools displayed unsatisfactory ability to carry out activities, for 114(45%) it was satisfactory, 25(10%) and 13(5%) were good and very good respectively. In private schools 77(50%), 62(40%) and 15(10%) were very good, good and satisfactory. This shows that a total of 139(90%) schools rated as good and very good while 38(15%) in public schools displayed ability to carry out activities.

Free movement of learners in the lesson was also observed. It was noted that in public schools, free movement of 102(40%) and 64(25%) was unsatisfactory and satisfactory respectively. None was good but 90(35%) was very good. In private schools on the other hand 77(50%) exhibited very good movement, 31(20%) were good while

46(30%) were satisfactory. The results in Table 4.14 show that a bigger proportion of private schools 108(70%) allowed more free movement of learners in the classroom.

The range of learning activities was also a concern for this study. As observed in public schools, 114(45%), 64(25) were unsatisfactory and satisfactory respectively, 25(10%) and 51(20%) varied teaching and learning activities well (Good) and very good respectively. In private schools, the same was replicated and the results showed that Majority, 93(60%) range of teaching and learning activities was unsatisfactory, 15(10%) was satisfactory, 15(10%) was good and 31(20%) were very good. The results further indicate that more in both types of schools did not vary their teaching and learning activities 178(70%) and 108(70%) in public and private schools respectively.

An observation on the assessment of learning activities revealed that assessment in 102(40%) and 76(30%) was unsatisfactory and satisfactory respectively, 25(10%) and 51(20%) were good and very good in public schools as compared to 93(60%), and 31(20%) in private schools which were rated as very good and good while 31(20%) were satisfactory. This means that a bigger proportion 124(80%) in private schools compared to 76(30%) in public school were up to the standards in assessment of activities.

Workman and Ullrich (2017) assert that teachers tailor their interactions to fit age and skill-appropriate activities, engaging all children in classroom activities that fit their needs, and fostering independence in children. As such, these results show that private schools faired on better in the quality of learning activities because the scores for their participants were higher in all items presented as compared to public schools. This is an indicator that pupils in private schools were likely to receive better quality learning activities in terms of time allocated, involving learners, the ability to carry out activists,

free movement during activities, the range of learning activities and in the assessment of learners, and therefore would score higher in the achievement test.

4.7 Learning Areas

Learning areas or centers capitalize on children's natural need to explore because they are given the chance to gain experience by trying out their own ideas in a hands-on way. The study sought to investigate status of learning areas in the schools of focus. The results are presented on Table 4.15.

Table 4.15: Status of Learning Areas

Type of School	Public								Private							
	1		2		3		4		1		2		3		4	
Learning Areas	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Learning corners	76	30	127	50	25	10	25	10	15	10	15	10	93	60	31	20
Availability of																
Learning Materials	127	50	102	40	13	5	13	5	0	0	15	10	62	40	77	50
Space available	25	10	178	70	25	10	25	10	15	10	15	10	93	60	31	20
Relevance of																
materials	102	40	51	20	102	40	0	0	0	0	62	40	15	10	77	50
Display of Materials	140	55	38	15	25	10	51	20	46	30	15	10	31	20	62	40
Display of Children's																
work	114	45	64	25	13	5	64	25	0	0	31	20	36	30	77	50

As can be noticed on Table 4.15 learning corners in 76(30%) of the concerned public schools were unsatisfactory, 127(50%) were satisfactory, only 25(10%) were good and another 25(10%) were very good. In Private Schools, learning corners in 31(20%) were ranked as unsatisfactory, 93(60%) as satisfactory, only 15(10%) was good and additional 15(10%) was very good. On the whole, majority 203(80%) of learning corners in public schools were below average and a similar proportion 124(80%) in private schools.

Regarding availability of learning materials, 127(50%) of the public study schools were unsatisfactory, 102(40%) were satisfactory, merely 13(5%) was good and another 13(5%) was very good. On the contrary, availability of learning materials in private ECDE Centres was rated as follows; 15(10%) were satisfactory, 62(40%) were good while 77(50%) were rated as very good. Generally, these results indicate that private ECDE Centres are better placed compared to public ECDE Centres as far as availability of learning materials was concerned.

In the public ECDE Centres, the 25(10%) of the space available was unsatisfactory, 178(70%) was satisfactory, 25(10%) was good and 25(10%) was very good. However, 15(10%) of the space available in private schools was unsatisfactory, 15(10%) was satisfactory, only 93(60%) was good and 31(20%) was very good. This shows that a cumulative percentage of ECDE Centres with available space rated as good and very good was 50(20%) while in private ECDE Centres a cumulative percentage 124(80%) were rated good and very good on the space available. This shows that the space available for teaching and learning was much better in Private ECDE Centres.

Relevance of materials was also of interest to the researcher. The results makes it known that the relevance of materials in 102(40%) public schools were unsatisfactory,

51(20%) were satisfactory, 102(40%) were good and none was very good. On the other hand, none of the private schools were rated unsatisfactory, 62(40%) were satisfactory, 15(10%) were rated as good while 77(50%) were rated as very good with regard to relevance of teaching /learning materials. These results gave a general impression on the relevance of learning materials in majority of the private ECDE Centres. Private ECDE Centres had more relevant learning compared to public ECDE Centres.

The study also observed the situation of the displayed materials in the classrooms. What was realized was that 114(55%) of displays in the public schools were unsatisfactory, 38(15%) were satisfactory, 25(10%) were good and 51(20%) were very good. In private schools, 15(10%) 62(40%) of the displays were unsatisfactory, 51(20%) were satisfactory, 15(10%) was good while 46(30%) were very good. Overall, a bigger proportion of displays in both public and private schools was below expectation of being good with 204(70%) in public and 93(60%) in private schools.

As far as display of Children's work was concerned, the study found out in public schools 140(45%) were unsatisfactory, 64(25%) were satisfactory, 13(5%) was good and 64(25%) were very good. In private schools, 77(50%) were unsatisfactory, 46(30%) were satisfactory, 31(20%) were good and none was very good. This implies that display of children's work in a bigger proportion of private schools 123(80%) was below average as compared to 204(70%) in public schools. On the same note, a higher percentage 77(30%) of displays in public schools were highly rated as likened to 31(20%) in private schools that were on the upper half.

Learning centers are areas within the classroom where students learn about specific subjects by playing and engaging in activities. Apart from allowing children to use up excess energy and to relax, Magnuson (2010) opines that learning centers allow

children to investigate, explore, and discover things that are new to them and make connections with things that they already know. From the study, it is clear that private schools outweigh the public schools in as far as the learning areas are concerned. Except for public schools scoring better in relevance and display of materials, Learning corners, Availability of Learning Materials, Space available and Display of Children's work were better in the private schools. This implies that children in private schools were exposed to better opportunities for self-learning and by extension, higher chances of attaining better results in achievement tests.

4.8 Capacities of the Teacher

The study sought to examine the skills of the teachers handling early childhood education in Kericho County. The Irish National Teachers Organization (2007) emphasizes that the teacher's mood and energy levels can be factors that may alter significantly the suitability and efficiency of any particular style. Effective teachers are enthusiastic, flexible and well organized. They teach children how to learn, have clarity of purpose and of explanation and good subject knowledge. They also have high expectations and a sense of fun and humour. A good work life balance will help maintain energy levels, and will assist the teacher in remaining focused, maintaining a sense of humour and retaining high expectations. The impressions about the teachers' characteristics are recorded on Table 4.16.

Table 4.16: Characteristics of the teacher

Type of School	Public								Private							
	1		2		3		4		1		2		3		4	
Characteristics of the teacher	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Introduction of the lesson	177	70	64	25	13	5	0	0	0	0	0	0	47	30	108	70
Lesson development	215	85	25	10	13	5	0	0	0	0	0	0	47	30	108	70
Conclusion	64	25	165	65	13	5	13	5	0	0	0	0	15	10	139	90
Knowledge of content	102	40	76	30	76	30	0	0	0	0	0	0	108	70	47	30
Confidence	13	5	114	45	38	15	89	35	0	0	15	10	62	40	77	50
Good grooming	76	30	51	20	76	30	0	0	47	30	15	10	47	30	47	30
communication	0	0	216	85	25	10	13	5	0	0	15	10	139	90	0	0
Rapport with Learners	165	65	89	35	0	0	0	0	0	0	15	10	15	10	124	80

From the results in Table 4.16 it is important to note that a big number 177(70%) of the teachers in public schools introduced their lessons in an unsatisfactory manner, 64(25%) were satisfactory while only 13(5%) was good and none was seen to be very good. In the contrary, majority 108(70%) of teachers in private ECDE Centres made very good introduction of their lessons, 47(30%) made good introduction to the lessons, none was either satisfactory or unsatisfactory. This shows that introduction of lessons was not adequately done in public ECDE Centres. However, it was effectively done in private ECDE Centres making their introductions in a manner that they were ranked very good.

Development of the lesson of 215(85%) of teachers in public ECDE Centres were unsatisfactory, 25(10%) was satisfactory, 13(5%) was good and none was very good. In private ECDE Centres, 108(70%) of teachers developed their lessons in a very good manner, 47(30%) were good, and none was either good or very good. This again is a revelation that a number of the teachers 241(95%) in public ECDE Centres were below expected good development of the lessons while in private ECDE Centres lesson development was done adequately.

It was further observed that conclusion of the lesson for 64(25%) teachers in public ECDE Centres was unsatisfactory, for 165(65%), it was satisfactory, 13(5%) was good and 13(5%) was very good. 139(90%) of the teachers in the private ECDE Centres on the other had very good conclusion of the lesson, the remaining 15(10%) had good conclusion of the lesson. This shows that majority of the teachers in the private school 139(90%) concluded their lessons very well while only 13(10%) of their counterparts in the public ECDE Centres were ranked above average with regard to lesson conclusion.

According to Morrison, Bachman, & Connor (2005) how much is learnt is largely determined by the teacher's pedagogy, classroom management strategies, and interactions with the students at classroom level. From the foregoing, it is clear that public schools were ranked higher in teacher factors than private schools in all aspects including lesson introduction and lesson development. Considering learner centred instruction as best practice, it means that learners in public ECDE Centres are at a risk of being under the teacher's control. If the teacher is dominant in the teaching and learning process, chances of student losing sight of their goals become higher as compared to when they are constructing their own knowledge and therefore more likely to underperform in achievement tests

4.9 Pupil's Learning Outcomes

In the lesson observation, the study checked for observable characteristics of the learner that showed what they were able to do as a result of a learning action. This is based on Diamond's (2008) definition that a student's learning outcome is a detailed description of what a student must be able to do at a conclusion of a lesson. Table 4.17 presents specific skills, competencies and knowledge exhibited by the learners.

Table 4.17: Skills, Competencies and Knowledge Displayed by Learners

Type of School	Public								Private							
	1		2		3		4		1		2		3		4	
Learner Outcomes	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Concentration of activities	165	65	89	35	0	0	0	0	0	0	0	0	62	40	93	60
Engagement of learners	140	55	102	40	13	5	0	0	0	0	15	10	47	30	93	60
Sustenance of interest on activity	165	65	64	25	25	10	0	0	0	0	0	0	15	10	139	90
Ability to identify sounds	140	55	114	45	0	0	0	0	15	10	15	10	93	60	31	20
Ability to join words	152	60	64	25	38	15	0	0	15	10	47	30	31	20	62	40
Confidence	190	75	64	25	0	0	0	0	15	10	62	40	62	40	15	10
Attention span	177	70	64	25	38	15	0	0	15	10	77	50	31	20	31	20

It is clear from Table 4.17 that majority of the learners in public ECDE Centres 165(65%) displayed unsatisfactory concentration on activities. The remaining 89(35%) concentrated on activities in a satisfactory manner. None was either good or very good. The scenario was different in private ECDE Centres where none was either rated as unsatisfactory nor satisfactory. In addition to this 62(40%) was rated as good while 93(60%) concentration on activities was rated as very good. This clearly indicates that in all the 254 lessons observed in the public schools, concentration on activities was below expectation of good or very good. However, in 155 lessons observed in the private schools, a cumulative percent of 100% rated as good and very good in terms of concentration of the pupils on learning activities. The general impression was that teachers were not able to impress the learners to concentrate on the activities in the lesson in Public ECDE Centres while teachers in private ECDE Centres were able to impress their learners and sustain their attention during learning.

Another outcome sought for by the study was the level of engagement of learners in the lesson. Argumentatively the most important aspect of teaching today is keeping the learners engaged. Meier (2018) contends that children thrive in an interactive learning environment. An interactive environment promotes engagement in the classroom. The results on Table 15 confirm that engagement of learners in 140(55%) classrooms in the public schools was unsatisfactory, 102(40%) were satisfactory, yet only 13(5%) was good. There was none that was seen to be very good. Conversely, a higher proportion 93(60%) in the private schools were rated as very good, 47(30%) were good, 15(10%) was satisfactory while none was unsatisfactory.

On the whole, it means that engagement of learners in classroom activities was majorly below mid-way, though the public ECDE Centres were worse off with 241(95%) below the mid-point as compared private ECDE Centres in which sustenance of interest on

activities was rated good 15(10%) and very good 139(90%). The study further established the extent learners' sustained interest on activity. Concerning this, Meier (2018) opined that Kindergarteners typically have a short attention span and need to move around on a regular basis. Teachers need to keep pupils' focus, eager, and on the task otherwise their minds will drift off, making them lose valuable learning time. The output of the item on sustenance of interest on activity is included on Table 4.17. The results show that sustenance of interest on activity in public schools was depressing with bulk 165(65%) being unsatisfactory, 64(25%) were satisfactory, only 25(10%) were good and not a single one was very good. On the contrary, 139(90%) in private schools were very good and only 15(10%) was good. No classroom in any private school was either unsatisfactory or satisfactory in sustaining the interest of learners in activities. This means that on this item public ECDE Centres were on the lower half while the private ECDE Centres were on the upper half. Adding movements into academic lessons reenergizes the learning environment and adds fun to the pre-school lesson.

Further, the ability of the learners to identify sounds was look out for. It is instructive to note from Table 4.17 that in public ECDE Centres 140(55%) learners' ability to identify sounds was unsatisfactory, 114(45%) were satisfactory. However, in private ECDE Centres 15(10%) were unsatisfactory, 15(10%) were satisfactory, 96(60%) was good and 31(20%) was very good. This shows better ability of learners in private schools than in public schools to identify sounds with 0% good and very good combined for public schools compared to cumulative 124(80%) for good and very good in private schools.

Concerning the ability to join words, 152(60%) in public ECDE Centres were unsatisfactory, 64(25%) were satisfactory, 38(15%) were good and none was rated very

well. However, in private ECDE Centres, 15(10%) were unsatisfactory, 47(30%) were satisfactory, 31(20%) were good and 62(40%) was very good. From this results it is apparent that private schools fared on much better with 93(60%) in the upper half rated good and very good compared to 38(15%) on the same upper half rated as good and very good in the public ECDE Centres.

The study also examined the confidence of learners in carrying out classroom tasks. From Table 4.17 it can be noted that confidence in 190(75%) of the learners was unsatisfactory and satisfactory in 64(25%) of the public schools. In private schools it was unsatisfactory 15(10%), satisfactory in 62(40%), good in 62(40%) and very good in 15(10%). It is evident from this results that children in private schools exuded better confidence with 77(50%) above the mean as compared to 0% in the public schools in the same quota.

Finally, attention span was also looked for in the observed lessons. Meier (2018) asserted that preschoolers naturally have a short attention span. Out of the 254 observed in public schools, attention span of 177(70%) was rated as unsatisfactory, 64(25%) was said to be satisfactory, 38(15%) was good. In private schools, attention span for only 15(10%) was said to be unsatisfactory, 77(50%) were satisfactory, 31(20%) were good and 31(20%) were very good. Equated, good and very good put together were a bigger portion 62(40%) among learners in private schools to only 38(15%) placed in the upper quota in public schools.

The results from the study shows that learner outcomes in six out of seven items presented; concentration of activities, sustenance of interest on activity, ability to identify sounds, ability to join words, confidence and Attention span were higher in private ECDE Centres than in public ECDE Centres. These are indicators of

achievement that can predict better achievement for learners. This explains why private ECDE Centres outshined their counterparts in terms of academic performance in public ECDE Centres.

4.10 Performance in Achievement Test

A test was administered to 351 pupils in private schools and 375 pupils in public. Marks scored were categorized and assigned codes as follows: 1=40 marks and below, 2=41-60 marks, 3=61-80 marks and 4= 81-100 marks. Pupils from 254 public schools were given a written literacy test. The output of their general performance is given with their respective frequencies and percentages on Table 4.18 and Figure 4.3.

Table 4.18: Marks for Public schools

	Frequency	Percent	Valid Percent	Cumulative Percent
40 marks and below	29	7.8	7.8	7.8
41 -60 marks	242	64.5	64.5	72.3
61-80 marks	104	27.8	27.8	100.0
Valid Total	375	100.0	100.0	100.0

4.10.1 Performance of Public Schools

The output on Table 4.18 shows that in the public schools, 29(7.8%) scored below 40%, 242(64%) scored 41-60% and 104(27.8%) scored above 60 marks. Unfortunately, no pupil scored above 80%. This shows that majority of the pupil's marks lay between 41 and 60%. Considering that public school did better in only two aspects, in the number of graduates and the characteristics of the teacher, it is logical to conclude that personal attributes of the teacher does not contribute much to the achievement of the learner.

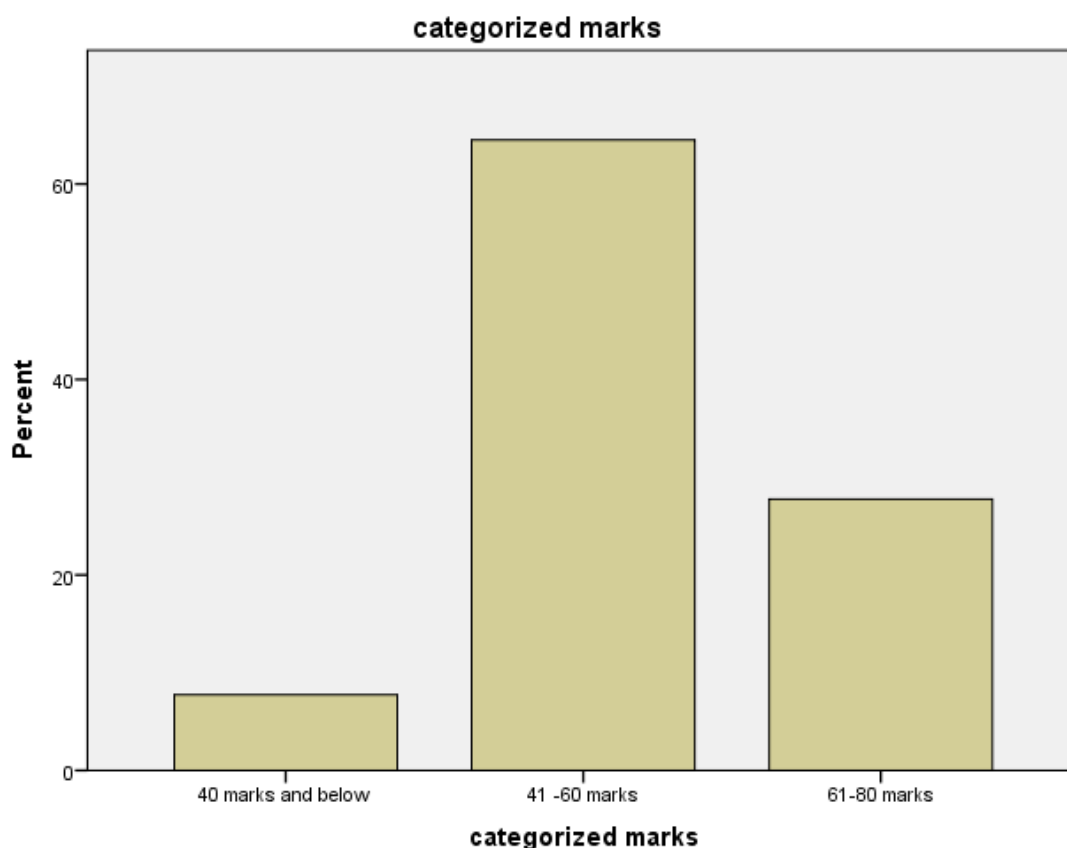


Figure 4. 3: Achievement test marks of public schools

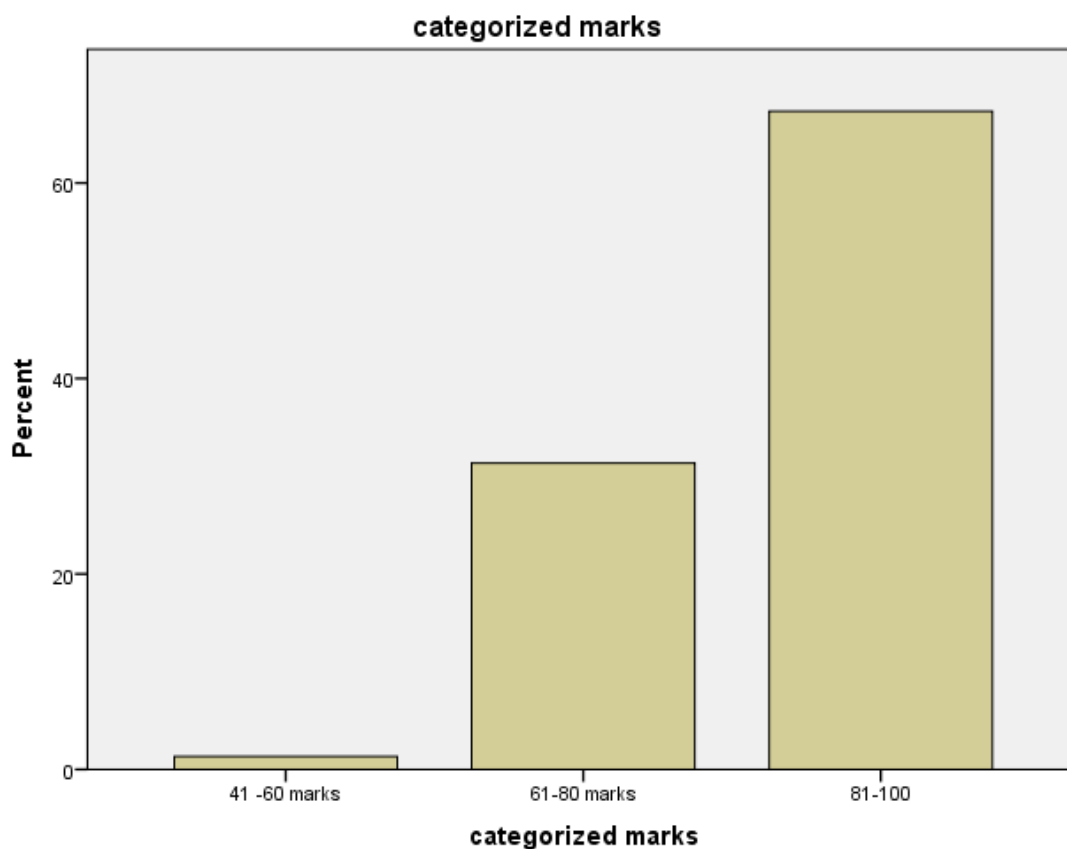
4.10.2 Performance of Private Schools

The study went ahead to test pupils in private schools. The results are presented on Table 4.19 and Figure 4.4. It is instructive to note that in the test given, none of the pupils in private schools scored below 40%, 5(1.3%) scored between 41 and 60%, 109(31.3%) scored between 61 and 80%, while the rest 236(67.3%) scored between 81 and 100%. From the results, the private schools out-did the public schools in the number of assessments for the teacher, remuneration, teaching learning facilities, teaching approaches, quality of experiences given to the learners and the preparation of learning areas. It no wonders then that learner outcomes and achievement test marks were higher than in public schools. Table 4.19 and Figure 4.4 shows the academic performance of pupils in Private schools.

Table 4.19: Marks for Private Schools

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 41 -60 marks	5	1.3	1.3	1.3
61-80 marks	109	31.3	31.3	32.7
81-100	236	67.3	67.3	100.0
Total	351	100.0	100.0	100.0

The results are further reflected on Figure 4.4, which clearly illustrates that majority of the private school pupils' marks lay between 81 and 100%.

**Figure 4.4: Performance of private schools**

4.10.3 Comparison of Performance in Public and Private Schools

The study went further to compare performance of pupils in public and private schools. Table 4.20 and Figure 4.5 contain a distinction of performance of both public and private.

Table 4.20: Comparison of performance in Public and Private Schools

		Categorized Marks				Total
		40 marks and below	41 -60 marks	61-80 marks	81-100	
	Count	0	5	110	236	351
Private School	% within school type	0.0%	1.3%	31.3%	67.3%	100.0%
	% within categorized marks	0.0%	0.8%	29.7%	100.0%	27.3%
	Count	29	242	104	0	375
Public School	% within school type	7.8%	64.5%	27.8%	0.0%	100.0%
	% within categorized marks	100.0%	99.2%	70.3%	0.0%	72.7%
	Count	41	343	208	134	726
Total	% within school type	5.6%	47.3%	28.7%	18.4%	100.0%
	% within categorized marks	100.0%	100.0%	100.0%	100.0%	100.0%

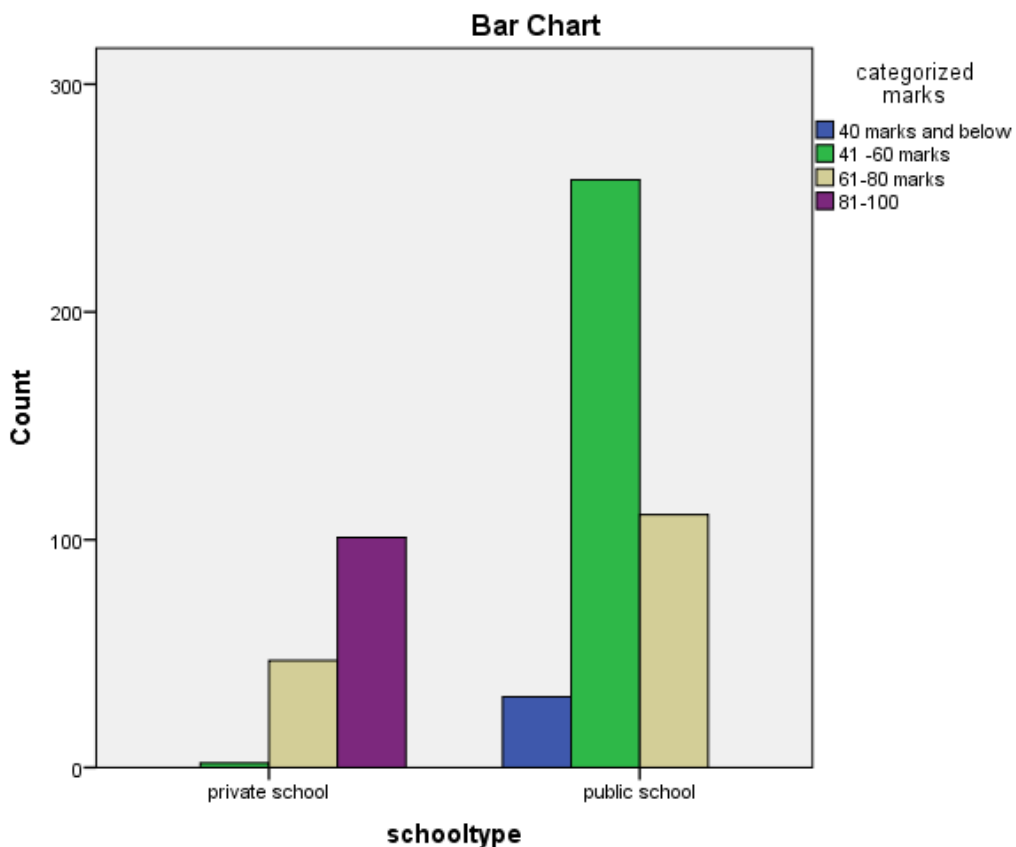


Figure 4.5: Performance of Public and Private Schools

The histogram on Figure 4.5 shows that symmetrically, the public schools depict positive kurtosis distribution curve meaning that the distribution has heavier tails and sharper peak, that is increasingly less pupils scored high marks, while the private schools' distribution kurtosis is positive meaning that its distribution has lighter tails and a flatter peak that is failure rate is increasingly lower in private schools.

Figure 4.5 shows Comparison of pupils' academic performance in Public and Private schools.

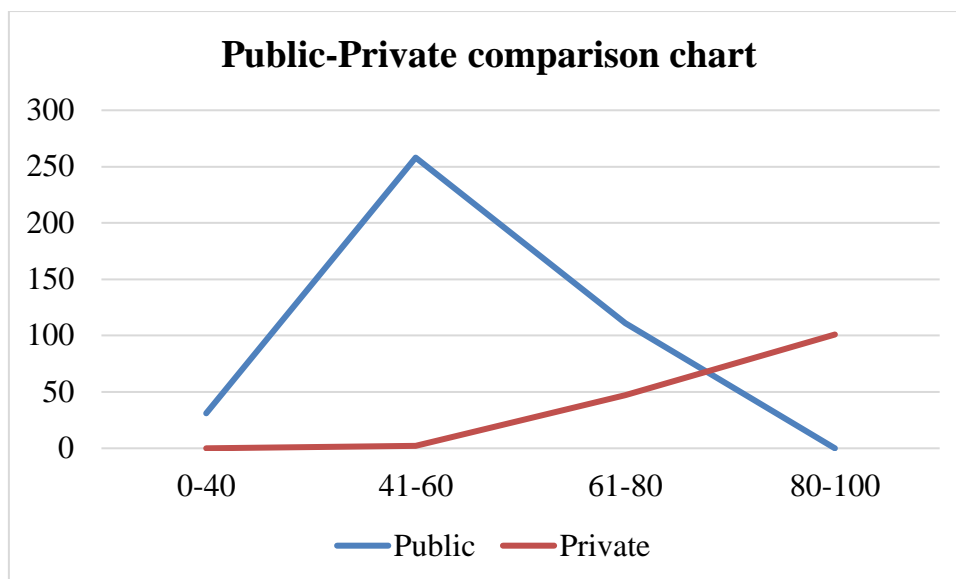


Figure 4.6: Comparison of performance of Public and Private Schools

The results in figure 4.5 and 4.6 shows that the academic performance of pupils in private ECDE Centres is higher than that of pupils in public private ECDE Centres. The relatively higher performance by pupils in private schools is attributed to better lesson preparation observed among teachers in private ECDE Centres. In addition to this, the methods used in teaching were child-centred.

4.11 Regression analysis on Factors Affecting Performance in Private and Public Schools

The fourth objective of the study was to perform regression analysis to determine the factor with the highest affinity with achievement in ECDE centres. Regression analysis is described by Creswell (2002) as a set of statistical processes for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between dependent variable and one or more independent variables (or 'predictors'). More specifically, regression analysis helps one understand how the typical value of the dependent variable (or 'criterion variable') changes when any one of the independent variables is varied, while

the other independent variables are held fixed. The fifth objective of this study was to analyze the factors affecting performance in public and private ECDE centres; and, to use regression analysis to determine the factor with the highest affinity with achievement in ECDE centres.

4.11.1 Regression Analysis of Length of Service and Performance in Public and Private ECDE Centres

Regression analysis generates an equation to describe the statistical relationship between one or more predictor variables and the response variable Creswell (2002). In the regression output on Table 4.21 the regression equation is $(-1.85 \text{ marks} + 0.21 \times X \text{ years})$. The intercept of -1.85 indicates that the mean mark will be less by 1.8% if teachers had no experience at all in teaching or for teachers who are only beginning to teach. The coefficient 0.21 indicates that for every one-year increase in service the mean mark will decrease by 0.21%. Conversely, for every one year less in service, the mean mark will increase by 0.21%. What this regression model shows is that performance is dependent on the length of service of teachers. For instance, if teachers have been teaching for one year, we can expect to get mean marks of -1.85 ($\text{mark} = -1.85 + 0.21 \times 1 \text{ year} = -1.64$). This means that the average marks for students would be 1.64 below the mean mark. Then if the average teaching experience is two years we can expect pupils to get a mean mark of $(-1.85 + 0.21 \times 2 \text{ years}) = 1.64$, meaning that the mean mark would be 1.64 below the mean mark. If the average teaching experience is six (6) years, the equation would be $-1.85 + 0.21 \times 6 = 1.26$. This indicates that the mean mark will be 1.26 above the general class mean when teachers have taught for an average of 6 years and so on. The Multiple R of 0.99 means there is a strong positive correlation between the length of service of the teacher and the performance of the pupils.

Table 4. 21: Summary Output for Regression Analysis for Length of Service and Academic Performance

<i>Regression Statistics</i>	
Multiple R	0.9939
R Square	0.9878
Adjusted R Square	0.9817
Standard Error	0.8730
Observations	4

ANOVA

	df	SS	MS	F	Significance F
Regression	1	123.4759	123.4759	162.0325	0.0061
Residual	2	1.5240	0.7620		
Total	3	125			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-1.8475	1.0637	-1.7370	0.2245	-6.4243	2.7291
X Variable 1	0.2133	0.0168	12.7292	0.0061	0.1412	0.2855

To provide a visual picture of the form of the scores, a scatter plot was plotted. According to Creswell (2002), scatter plots help to identify the type of association among variables and to check whether the association is linear (follow a straight line) or curvilinear (follow a U-shaped form). The association between the number of years the teachers had taught and the amount of marks obtained by pupils is presented on Figure 4.7.

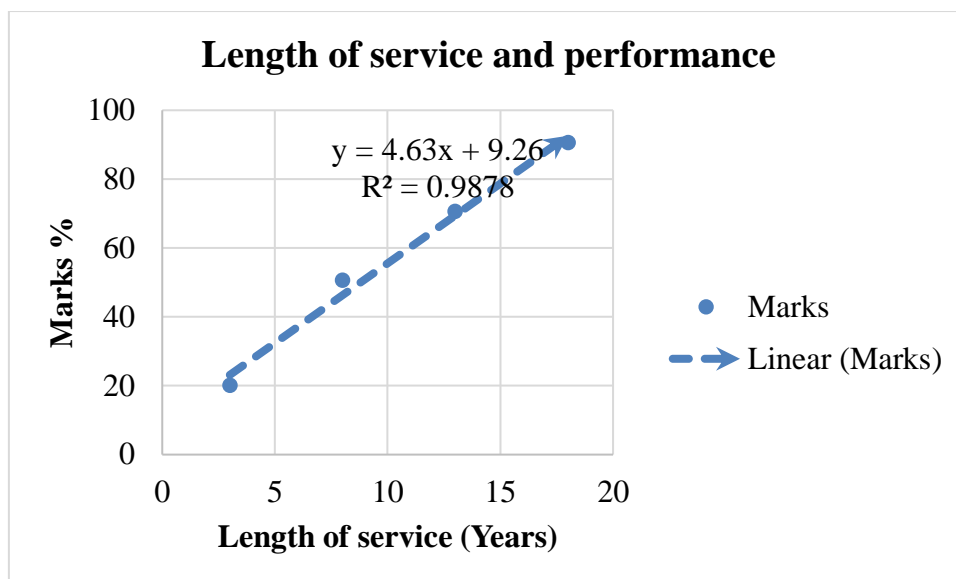


Figure 4.7: Scatter Plot for Length of Service and Performance in Public ECDE Centres

As shown on Figure 4.7 the blue fitted line graphically shows that if you move left or right along the x-axis by an amount that represents a one year change in teaching experience, the fitted line rises or falls by 0.21 marks. However, these marks are from pupils in schools where teachers had been teaching for an average range of 3 and 18 years. The relationship is only valid within this data range. Results in Figure 4.7 shows that the length of service and teaching experience of a teacher has a strong relationship with the academic performance of the pupils.

4.11.2 Regression Analysis of Number of Assessments and Performance in Public Schools

The study went ahead to find out the relationship between number of assessments that had been done in the public schools three years preceding the study and the performance of the pupils. The results of the regression analysis are presented on Table 4.22.

Table 4. 1: Regression analysis of number of assessments and performance

<i>Regression Statistics</i>	
Multiple R	0.952347
R Square	0.906965
Adjusted R Square	0.860447
Standard Error	2.61275
Observations	4

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance</i>
					<i>F</i>
Regression	1	133.0971	133.0971	19.49722	0.047653
Residual	2	13.65293	6.826464		
Total	3	146.75			

	<i>Standard</i>			<i>P-value</i>	<i>Lower</i>	<i>Upper</i>
	<i>Coefficients</i>	<i>Error</i>	<i>t Stat</i>		<i>95%</i>	<i>95%</i>
Intercept	-6.06963	3.183654	-1.9065	0.196845	-19.7678	7.628532
X Variable 1	0.221505	0.050165	4.415566	0.047653	0.005664	0.437347

The results on Table 4.22 reveal the regression equation as $-6.07 + 0.22 \times X$ (number of assessments). This regression equation indicates that if there was no teacher assessment done at all the mean marks would be $-6.07 + 0.22 \times 0$ assessments = -6.07 . This means that with no assessments the marks would be 6.07 below the expected mean in performance and for every additional assessment you can expect increase in marks by 0.22%. Similarly, if there had been one assessment done the mean marks would be $-6.07 + 0.22 \times 1$ assessment = -5.85 , meaning the mean mark would fall 5.85 below the expected mean mark. If the total assessments are 10, the mean marks would be $-6.07 + 0.22 \times 10$ assessments = -3.87 , meaning the mean mark would be 3.87 below the

expected mean and so on. The Multiple R of 0.96 shows that there is a strong positive correlation between the number of assessments done and the marks obtained by pupils. This is further presented geographically on Figure 4.8.

The more the teacher is exposed to assessments, the more he/she prepares the required professional documents. A teacher who prepares professional documents is more prepared to meet the learning needs of the pupils hence the positive relationship of the number of assessments with the academic performance of the pupils.

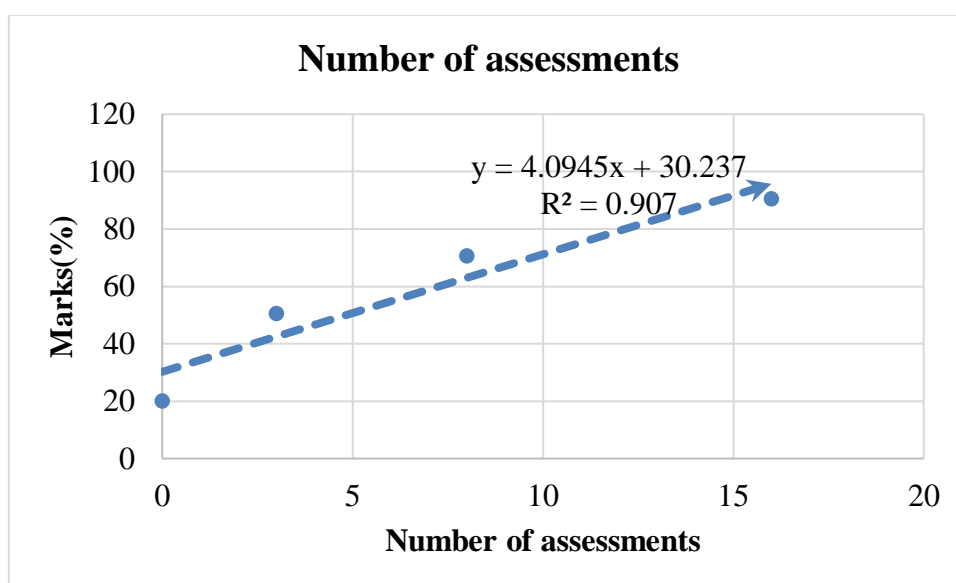


Figure 4.8: Regression analysis of number of assessments and the marks obtained by pupils in public schools

As seen in Figure 4.8, the blue fitted shows that If you move left or right along the x-axis by an amount that represents a change by one assessment, the fitted line rises or falls by 0.22 marks.

4.11.3 Regression Analysis of Amount of Salary and Performance in Public Schools

The study was also interested in the relationship between the amount of salary earned by the teachers and the marks. The results are presented on the output on Table 4.23.

Table 4.23: Regression analysis of salary and performance

<i>Regression Statistics</i>	
Multiple R	0.990781
R Square	0.981646
Adjusted R Square	0.97247
Standard Error	4.989367
Observations	4

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	2662.9	2662.9	106.9705	0.009219
Residual	2	49.78757	24.89379		
Total	3	2712.688			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	9.7127	5.2828	1.8385	0.2073	-13.0174	32.4427
X Variable 1	0.0048	0.0004	10.3426	0.0092	0.0027	0.0067

From Table 4.23 the regression equation is $9.71 + 0.0048 \times X$ shillings. It is instructive to note from the revelation on the equation that if there was no salary increase the marks would remain at 9.7% above the mean. If there is an increase by Ksh 1000 the equation would be $9.71 + 0.0048 \times 1000$ shillings = 14.51, if the salary increased by 3000, then the equation would be $9.71 + 0.0048 \times 3000 = 24.11$. The Multiple R of 0.99 means that there is a strong positive correlation between salary and performance. This clearly indicates that the results would improve tremendously if salary increased. The regression is presented graphically on Figure 4.9.

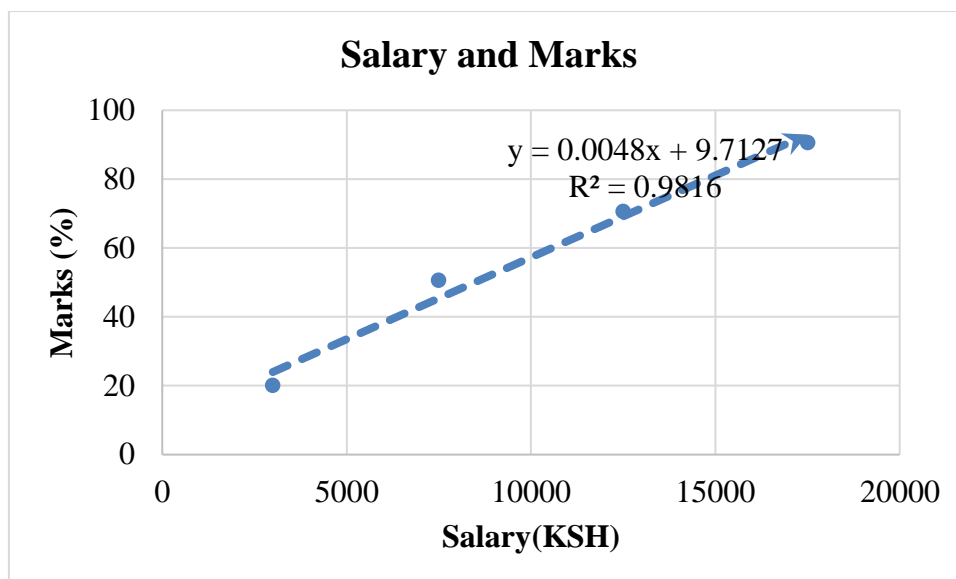


Figure 4.9: Regression Analysis of amount of Salary and Performance

Figure 4.9 shows that the relationship between salary and performance is linear, performance improved every time there was increase in salary and the reverse if the salary decreased.

4.11.4 The factor with the Highest Affinity with Achievement in ECDE Centres

The Merriam-Webster dictionary defines affinity as likeness based on relationship or causal connection. The computations of the quantifiable variables on 4.10.2, 4.10.3 and 4.10.4; relationship between performance and three independent explanatory variables touching on the teacher; length of service, number of assessments and amount of salary, the study sought to pin-point which of them influenced performance most. The Regression Analysis test for length of service against performance in public schools obtained a regression equation of $(-1.85 \text{ marks} + 0.21 \times X \text{ years})$. This signifies that performance is dependent on the length of service of teachers. The implication is that, for instance, if teachers have been teaching for one year, we can expect to get mean marks of -1.85 ($\text{mark} = -1.85 + 0.21 \times 1 \text{ year} = -1.64$). This means that the average marks for students would be 1.64 below the mean mark. The Multiple R of 0.99 means there

is a strong positive correlation between the length of service of the teacher and the performance of the pupils.

Similarly, a regression analysis of number of assessments and performance in public schools got a regression equation of $-6.07 + 0.22 \times X$ (number of assessments). This means that with no teacher assessments the marks would be 6.07 below the expected mean in performance and for every additional assessment you can expect increase in marks by 0.22%. If there had been one assessment done the mean marks would be $-6.07 + 0.22 \times 1$ assessment = -5.85, meaning the mean mark would fall 5.85 below the expected mean mark. The Multiple R of 0.96 shows that there is a strong positive correlation between the number of teacher assessments done and the marks obtained by pupils.

The regression analysis of amount of salary and performance in public schools obtained a regression equation of $9.71 + 0.0048 \times X$ shillings. This equation denotes that if there was no salary increase the marks would remain at 9.7% above the mean. If there is an increase by Ksh 1000 the equation would be $9.71 + 0.0048 \times 1000$ shillings = 14.51, if the salary increased by 3000, then the equation would be $9.71 + 0.0048 \times 3000 = 24.11$ and so on. The Multiple R of 0.99 means that there is a strong positive correlation between salary and performance of pupils.

From the above regressions, it is evident that there is a strong positive correlation between length of service of the teacher and the performance of the pupils, the number of teacher assessments done and the marks obtained by pupils and between salary and the marks scored by pupils. However, the computations of the quantifiable shows that the longer the teacher had served, the less productive he/she became, that even as the number of teacher assessments increased the mean mark would continue to fall below

the expected mean. Finally, the mean marks of pupils would still be way above the expected mean by a whopping 9.7 and would continue to increase when salary increased. In this case the amount of salary paid to teachers was a good predictor of good results, the more the salary was, the higher the pupils mean marks. Therefore, teacher's salary was the factor with the highest affinity with achievement in ECDE centres.

4.12 Development of a Model

Model: County Structure for Management and Implementation of Early Years Education (EYE)

The Kenya constitution 2010 schedule 4 part 2 section 9 empower the county government to manage EYE programs. County authorities should put in place mechanism to ensure that children receive comprehensive. EYE services at all levels this includes the county, Sub County, wards and facility level. EYE management should be in place to deal with issues of EYE comprehensively. Figure shows the Model county structure for management and Implementation of EYE programme.

Model county structure for management and Implementation of EYE programmes:

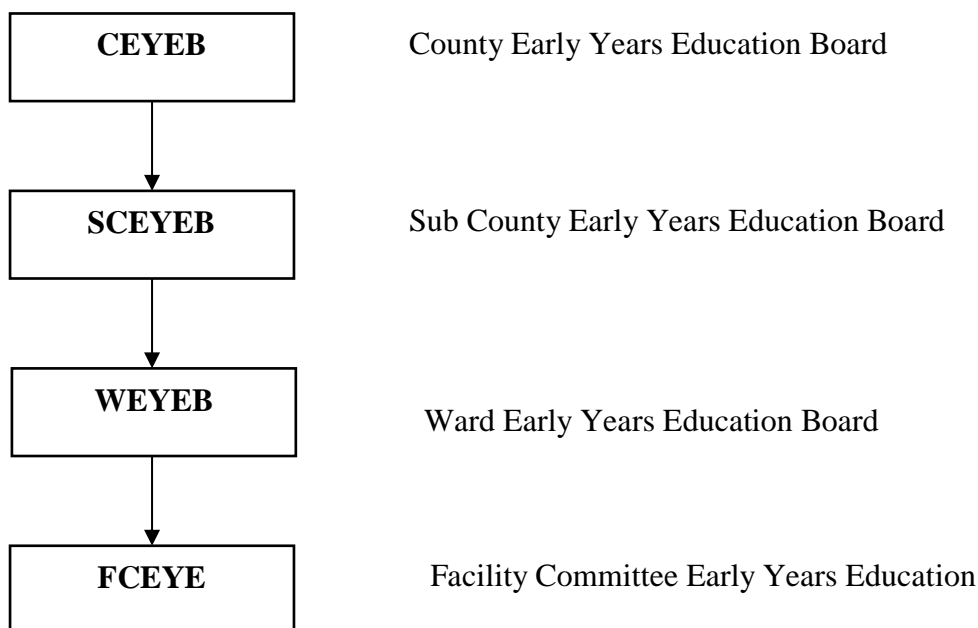


Figure 4.10: Model county structure for management and Implementation of EYE programmes

The composition of the county EYE Management Board comprise of:

- Senator
- County Administrator
- CEC-Education
- Director of Education EYE
- County Director of Teacher Management TSC
- Curriculum Support Officers (CSO)

Program Delivery Model

There are various partners working in partnership with GOK in provision of EYE services who are expected to be guided by a uniform structure and guidelines for county governments as a foundation for improved services delivery for children in public and

private EYE centres. Management of EYE should be done in an integrated approach through various ministries at the county level:

The Model for service delivery:

0-8 Years	Services	Service Delivery	Work Force	Lead Institution
	Curriculum Implementation	EYE facilities	County Director of early Years Education Officers EYE Teachers, QASO	Ministry of Education KICD TSC Public and Private Sector
	Training at all levels	EYE facilities Teachers Short Courses Pedagogy	Trainers in EYE -College -University -Pedagogy	Ministry of Education KICD KNEC Universities
	Infrastructure	EYE facilities	CEC-Education CO-Education Director Education Private Sector	County Government Private Sector Donors Private Sector
	Learning resources	EYE facilities	Teachers Care givers	County Government Community Private Sector
	Quality assurance	Relevant County Offices and Institutions	QASO EYES Office CSO	Ministry of Education KICD TSC

4.13 Chapter Summary

This chapter has described the outcome of the study on early childhood education in the context of management by County Government. It emerged from the study that there were more female teachers in ECDE than their male counterparts, that the majority of teachers in both private and public schools were of diploma level of training and below, and that most teachers had been assessed less than five times in three years preceding the study. The study also found out that the majority of teachers in Kericho county were paid by the county government, although the minority private school teachers earned better pay than those in public schools.

Regarding facilities, private schools had better staff rooms, more sitting and writing space for pupils, better supply of chalk and white board, accessed better health facilities and also had better indoor and outdoor play spaces. The results also show that the teachers found in private schools were better off in terms of planning for instruction, in utilizing teaching approaches presented by the study and in learning experiences observed by the study as compared to public schools. The same trend went for capacities of teachers and the pupils' learning outcomes. In the achievement test given to learners, private schools had better scores than public ones. A regression analysis test run on quantifiable variables in public schools revealed that the amount of salary remunerated to teachers had the highest affinity on the performance of pupils.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction to the Chapter

This chapter presents the summary of the findings and conclusions. Recommendations from the study and suggestions for further research are also included in this chapter. This chapter is divided into four sections. The first section presents summary of the major findings, the second part presents conclusions, and the third contains recommendations while the fourth presents suggestions for further research.

5.2 Summary of Major findings

The Kenya 2010 Constitution placed management and financing of early years' education (ECDE) under custody of county governments. Before this, management of ECDE was under the community, church organizations and individuals. Management of early childhood education was therefore expected to be more effective than it was before 2010 where public early education centres suffered quality because of budgetary constraints. This is expected to have changed over the period that ECDE was devolved as a result of change in management and funding.

This study emerges from the theoretical perspective that increased inputs should lead to increased outputs. The findings of this study are presented according to the five objectives of the study thus: To compare qualifications and experience of teaching staff in public and private ECDE centres, to compare teaching and learning facilities found in public and private ECDE centres, to compare teaching and learning methods used by teachers in public and private ECDE centres, to compare performance on achievement test between pupils in public and private ECDE centres after one term of instruction and to analyze factors affecting performance in public and private ECDE centres.

5.2.1 Comparison of Teachers' Qualifications and Experience of in Public and Private ECDE Centres

The first objective of the study sought to compare qualifications and experience of teaching staff in public and private ECDE centres. Results from the study indicates that a higher percentage of teachers in public schools were of lower level of training 169 (66.7%) in certificate and diploma as compared to 67(43.3%) teachers in private schools. This implies that the higher portion of teachers in private schools with higher qualifications would have a positive influence on pupils' performance.

5.2.2 Comparison of Teaching and Learning Facilities found in Public and Private ECDE Centres

The second objective of the study sought to compare teaching and learning facilities found in public and private ECDE centres. Results from the study shows that both private and public ECDE centres have adequate teaching and learning facilities. A great improvement in the physical facilities in public ECDE Centres was noted. This could be due to the funding from County Government. Hanushek, Kain & Rivkin (2004) asserted that poor learning environments reportedly lead to "sick building syndrome" which in turn increases teacher and student absenteeism, reducing student performance.

5.2.3 Comparison of Teaching and Learning Methods used by Teachers in Public and Private ECDE Centres

Objective three of the study sought to compare teaching and learning methods used by teachers in public and private ECDE centres. The results of the study indicate that teachers in private schools were better role models to their pupils than those in public schools. The findings indicate that 62(40%) were either good or very good compared to public schools where only 13(5%) was good at role modeling. Flowers et al (2015) advocate for Interactive methods in early childhood which promote students'

engagement. Students' engagement in turn positively impact students' ability to retain and understand new material. Interactive methods were generally poor in public schools as compared to private schools and a possible reason for disparity in learners' achievement in ECDE centres in Kericho County despite support from the county Government.

5.2.4 Comparison of Performance on Achievement Test between pupils in Public and Private ECDE Centres after one term of instruction

The fourth objective of the study sought to compare performance results on achievement test between pupils in public and private ECDE centres after one term of instruction. The results on this section shows that majority of the pupil's in private ECDE centres continue to outshine their counterparts in public ECDE centres with regard to their academic performance.

5.2.5 Factor with Highest Affinity with Achievement in ECDE Centres

Objective five of the study sought to analyze factors affecting performance in public and private ECDE centres. Regression analysis was further used to determine the factor with the highest affinity with achievement in ECDE centres was sought. From the results of the study, it is evident that there is a strong positive correlation between length of service of the teacher and the academic performance of the pupils, the number of teacher assessments done, salary of the teacher and the marks scored by pupils. However, the computations of these quantifiable variables shows that the longer the teacher had served, the less productive he/she became, that even as the number of teacher assessments increased the mean mark would continue to fall below the expected mean. Finally, the mean marks of pupils would still be way above the expected mean by a whopping 9.7 and would continue to increase when salary increased. In this case the amount of salary paid to teachers was a good predictor of good results, the more the

salary was, the higher the pupils mean marks. Therefore, teacher's salary was the factor with the highest affinity with achievement in ECDE centres.

5.3 Conclusions

Based on the findings of the study, a number of conclusions were arrived at. High teacher qualification has a positive effect on pupils' performance. Moreover, availability of good teaching and learning facilities found in ECDE centres provides conducive learning environments for both the learners and the teachers. This in turn increases teacher and student punctuality and availability, thus enhancing student performance. The use of appropriate teaching and learning methods that engages the learners during the teaching learning process positively impact students' ability to retain and understand new material. The performance of pupils in private ECDE centres was higher compared to their counterparts in public ECDE centres. In addition to the factors affecting performance in public and private ECDE centres considered in this study, teacher's salary was found to be the factor with the highest affinity with pupils' academic achievement in ECDE centres. Finally, regression analysis results from the study indicate that the academic performance of PP 2 pupils would improve tremendously if teacher's salary is increased

5.4 Implications of the Study

The findings from this study lead to the following implications with regard to management of ECDE centres:

- i) when recruiting teacher's to teach in ECDE centres teacher qualification must be considered since it as effect on pupils' academic performance.

- ii) provision of good teaching and learning facilities is important since it provides conducive learning environments for both the learners and the teachers.
- iii) learner-centred teaching and learning methods that engages the learners should be encouraged since it helps pupils to understand and retain new material.
- iv) good pupils' performance in private ECDE centres is attributed to availability of qualified teachers, good teaching and learning facilities and use of learner-centred teaching and learning methods
- v) teacher's salary should be enhanced in all ECDE centres so as to motivate them.
- vi) pupils' academic performance would improve tremendously if teacher's salary is increased

5.5 Suggestions for Improvement of ECDE Management

The findings of this study show that good management of ECDE centres leads to good performance of pupils. Based on these findings the researcher made recommendations for managers of both public and private ECDE centres. This includes recommendations for further research.

Early Years' Education is the cradle of future learning. Research shows that provision of good quality ECDE affects cognitive, physical and socio-economic development of children. Given massive investment in ECDE centres, it is expected that performance should be commensurate with the investment. To maximize on the management of ECDE by the county government, the following recommendations are made:

- i) The county QASO and EYE officers should ensure implementation and supervision of National curriculum for EYE personnel and children through regular visits and capacity building for the personnel.
- ii) It is important to note that much has been done by the county regarding improvement of infrastructure in Public ECDE Centres due to adequate funding. However, much has to be done on equipping the classrooms already constructed with furniture and teaching/learning resources.
- iii) The county government should see to that there is a clear policy of recruitment of ECDE teachers without necessarily retaining the same teachers in the school with or without qualifications.
- iv) ECDE Ward Coordinators should be employed to help in assessment of teachers during curriculum implementation to ensure quality, effectiveness and efficiency. From the study there are many ECDE graduates who have the qualifications but have not been employed.
- v) The County QASO and EYE officers shall ensure the EYE children are assessed using the Kenya School Readiness Assessment Tool (KSRAT).
- vi) Methodology to be used in EYE centres shall be child centred, emphasizing on play, participatory, competency based, use of concrete manipulative materials, early stimulation, holistic learning adapted for Children with Special Needs (CWSN) and integrated with ICT (Information Communication Technology).

5.6 Suggestions for Further Research

The researcher identified some areas, which requires further investigation in order to gain more insight into the effective management of ECDE centres. Viable areas of research, which requires further investigation includes:

- i) challenges faced by teachers on implementation of CBC
- ii) teacher preparedness to handle the Early Years Education curriculum
- iii) impact of teachers' level of education and training on EYE curriculum
- iv) challenges faced by learners with special needs on academic performance

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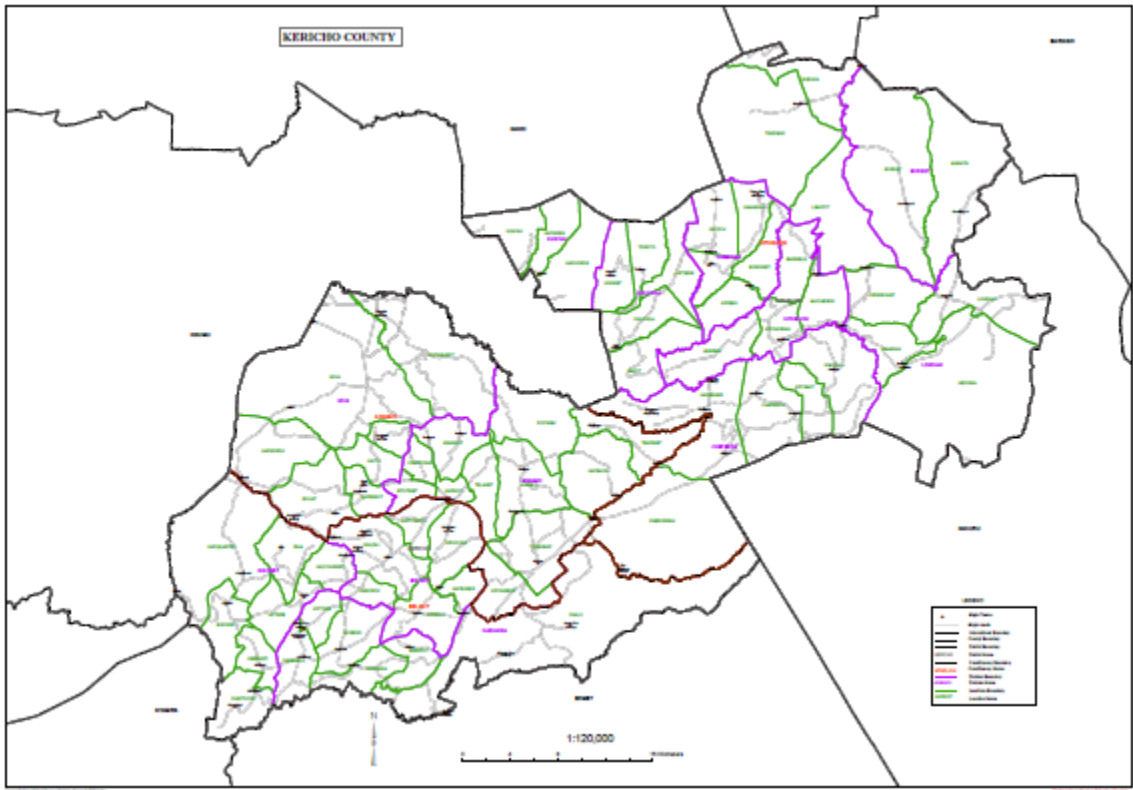
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APPENDICES

Appendix A: Kericho County Administrative Boundaries



Appendix B: Questionnaire for Teachers

The choice of teaching technique influences academic achievements. The objective of this study is to identify measures, opportunities and challenges for teacher in improving academic achievement in ECDE centres in Kericho County. You have been selected as one of the participants in the study.

Please respond to each of the items in this questionnaire as truthfully as possible. The answers you give are only for research purposes and will be treated with utmost confidentiality.

Instructions

- a) Do not write your name anywhere on this paper**
- b) Please respond by ticking in the brackets provided or by writing your response on the spaces provided as appropriate.**

Thank you in advance for your cooperation.

Section A

Background information

1. Your age _____
2. Gender Male () Female ()
3. highest professional qualification short course () certificate ()
Diploma () BED () Master () PHD ()
4. How long have you been an ECDE teacher
1-5 years () 6-10 yrs () 11-15 yrs () 16-20 yrs () more than 20 yrs ()
5. Status of your school Public Day () Private Day ()
Public Boarding () private boarding ()

6. How many times have you been assessed on teaching methodology in the last three years

None () 1-5 times () 6-10 times ()

11 and above times ()

7. Who pays your salary

Parents () County () school ()

8. How much do you earn per month?

Ksh.1000-5000 () Ksh. 5000-10000 () Ksh. 10000 and above ()

9. Is the salary paid regularly

No () Yes ()

Appendix C: Observation Checklist

1-Unsatisfactory 2-Satisfactory 3-Good 4-Very Good

1. LEARNING FACILITIES

Availability of

Administration office 1 2 3 4

Staff room 1 2 3 4

Sitting and writing space in class 1 2 3 4

Chalk /white board 1 2 3 4

Furniture 1 2 3 4

Health facilities 1 2 3 4

Indoor play 1 2 3 4

Outdoor play 1 2 3 4

2. PLANNING

1. Availability of scheme of work 1 2 3 4

2. Preparation of lesson plan 1 2 3 4

3. Clarity of objectives 1 2 3 4

4. Use of learning materials 1 2 3 4

3. TEACHING APPROACHES

Role model 1 2 3 4

Pretend play 1 2 3 4

Music 1 2 3 4

Art and craft 1 2 3 4

Play 1 2 3 4

Group work 1 2 3 4

Word puzzles 1 2 3 4

4. USE AND QUALITY OF LEARNING EXPERIENCE

Allocation of time	1 2 3 4
Involvement of learners	1 2 3 4
Ability of learners to carry activities	1 2 3 4
Free movement of learners	1 2 3 4
Range of teaching and learning activities	1 2 3 4
Assessment of activities	1 2 3 4

5. LEARNING AREAS

Learning corners	1 2 3 4
Availability of teaching/learning materials	1 2 3 4
Space available	1 2 3 4
Relevance and suitability of materials	1 2 3 4
Display of materials	1 2 3 4
Display of children's work	1 2 3 4

6. CHARACTERISTICS OF THE TEACHER

Introduction of the lesson	1 2 3 4
Lesson development	1 2 3 4
Conclusion	1 2 3 4
Knowledge of content	1 2 3 4
Confidence	1 2 3 4
Good grooming	1 2 3 4
Communication	1 2 3 4
Rapport with learners	1 2 3 4

7. LEARNERS DEMONSTRATES

Concentration on activities	1 2 3 4
Engagement of learners	1 2 3 4
Sustenance of interest on activity	1 2 3 4
Ability to identify sounds	1 2 3 4
Ability to join words	1 2 3 4
Confidence	1 2 3 4
Attention span	1 2 3 4

Language

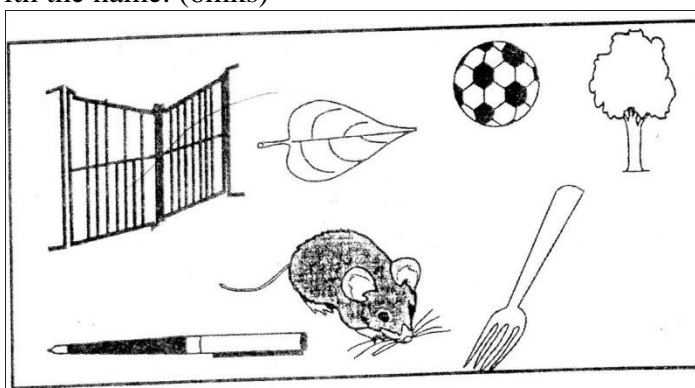
1. My name is _____ (1mk)
2. Match with the name. (6mks)

Fork

Tree

Rat

Ball



Pen

Gate

Leaf

3. Write capital letter only. (9mks)

A B C _____ _____ _____ _____
 _____ _____ _____ _____ _____ _____ M

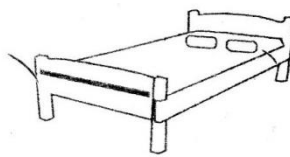
4. Write in words e.g. 7-seven (4mks)

2 - _____ 9 - _____
 6 - _____ 5 - _____

5. Put a, e, i, o (5mks)



S_cks



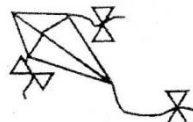
b_d



t_p



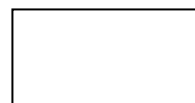
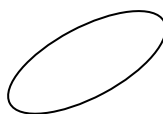
P_n



k_t_

Number work

1. Name these shapes. (5mks)



(circle, oval, triangle, square, star)

2. Take away:

$$5 - 4 = \underline{\quad}$$

$$9 - 0 = \underline{\quad}$$

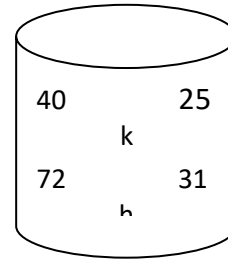
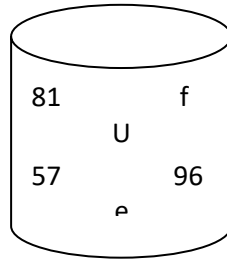
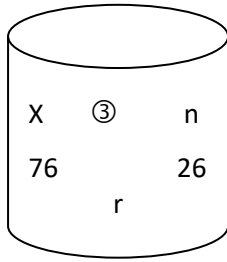
$$6 - 3 - 2 = \underline{\quad}$$

$$\begin{array}{r} 3 \\ -1 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 12 \\ -4 \\ \hline 5 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 8 \\ -0 \\ \hline \hline \end{array}$$

3. Circle numbers only in the tin. (10mks)



4. Add (3mks)

$$3 + 3 = \underline{\quad}$$

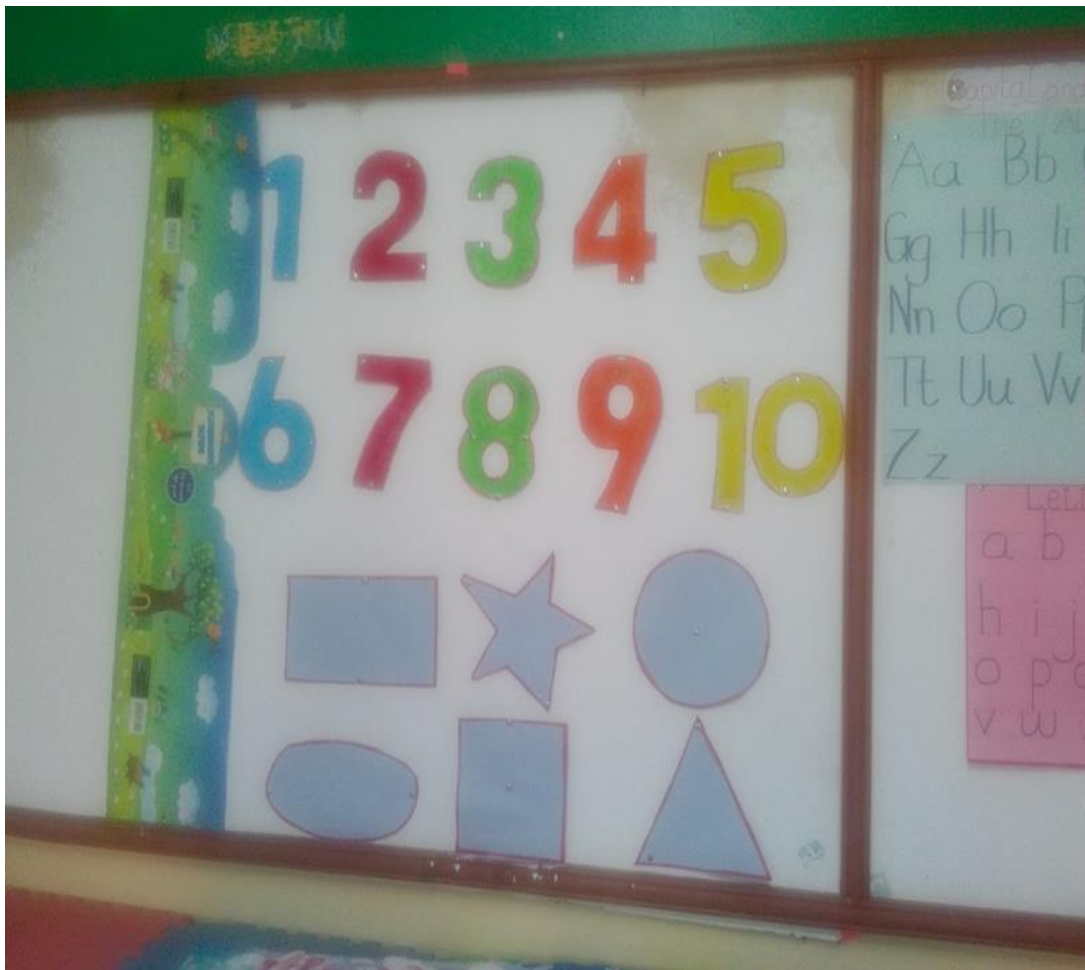
$$7 + 2 + 5 = \underline{\quad}$$

$$0 + 8 = \underline{\quad}$$

5. Fill in missing number. (1mk)

$$4 - \underline{\quad} = 3$$

Appendix D: Teaching/Learning Resources


















Appendix E: NACOSTI Research Authorization



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

Telephone +254-20-2211471.
2241149,3310571,2319420
Fax +254-20-318245,318249
Email: dj@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Wanyaki Way
P.O. Box 20623-00100
NAIROBI-KENYA

Ref No: **NACOSTI/P/18/78651/25915** Date: **8th October, 2018**

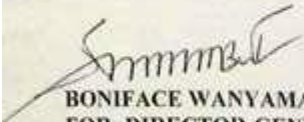
Chepkoech Beatrice Chepkwony
Moi University
P.O Box 3900-30100
ELDORET

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Early Childhood Education in the context of County Government Management: A comparison of performance between public and private schools”* I am pleased to inform you that you have been authorized to undertake research in **Kericho County** for the period ending **8th October, 2019**.

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

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a **copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kericho County.

The County Director of Education
Kericho County.

Scanned with

Appendix F: NACOSTI Research Permit


THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

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


CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

National Commission for Science, Technology and Innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke



REPUBLIC OF KENYA



**National Commission for Science,
Technology and Innovation**

RESEARCH LICENSE

Serial No.A 20973

CONDITIONS: see back page


THIS IS TO CERTIFY THAT:


MS. CHEPKOECH BEATRICE CHEPKWONY
of MOI UNIVERSITY, 1-20204 RORET, has
been permitted to conduct research in
Kericho County

**on the topic: EARLY CHILDHOOD
EDUCATION IN THE CONTEXT OF
COUNTY GOVERNMENT MANAGEMENT: A
COMPARISON OF PERFORMANCE
BETWEEN PUBLIC AND PRIVATE
SCHOOLS.**

**for the period ending:
8th October, 2019**

Permit No : NACOSTI/P/18/78651/25915
Date Of Issue : 8th October, 2018
Fee Received :Ksh 2000


.....
**Applicant's
Signature**


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

