A CRITICAL ANALYSIS OF HEAD TEACHERS' MANAGEMENT OF TEACHING AND LEARNING MATERIALS FOR LEARNERS' PERFORMANCE IN ACTIVITY AREAS IN PUBLIC PRE-PRIMARY SCHOOLS IN NAROK COUNTY, KENYA

JOHN KIPKOECH KOSILEI

A Thesis Submitted to the Board of Graduate Studies in Partial Fulfillment of the Requirements for the Conferment of the Degree of Doctor of Philosophy in Educational Management of the University of Kabianga

UNIVERSITY OF KABIANGA

FEBRUARY, 2021

DECLARATION AND APPROVAL

Declaration

This thesis is my original work and has not been presented for the conferment of a degree or for the award of a diploma in this or any other university:

Signature……..… Date ……..……

KOSILEI JOHN KIPKOECH

Ph.D./DEM/0005/2016

Approval

This thesis has been submitted for examination with our approval as University supervisors:

Signature …… Date……

Dr. Andrew Kibet Kipkosgei

Department of Curriculum, Instructional and Educational Media

University of Kabianga

Signature…… Date…….

Dr. Syallow Cajertane Makero.

Department of Environmental Health

University of Kabianga

Signature…… Date…….

Dr. Viviline Ngeno

Department of Education, Administration, Planning, Management, Psychology & Foundations

University of Kabianga

COPYRIGHT

DEDICATION

To my mother Jane Murei, wife Susan Kosilei and our children Gideon Kipyegon, Brian Cheruiyot, Abigael Chebet, Fridah Chemutai and Debrah Cherop. Their prayers, moral support and comfort inspired me to work hard.

ACKNOWLEDGEMENTS

I wish to pay tribute to several individuals, institutions, and organizations who made it possible to finalize this thesis. I felt especially indebted to my supervisors Dr. Syallow Makero, Dr. Andrew Kipkosgei, and Dr. Viviline Ngeno, for guiding and encouraging me to move on.

My thanks also go to the University of Kabianga for offering me a chance to undertake my doctorate; my course lecturers Prof. J. Kibet, Dr. Joshua Manduku, Dr. Caroline Chemosit, Dr. Andrew Kipkosgei, and Dr. Viviline Ngeno.

My gratitude also goes to my doctorates' classmates J. K. Cheruse, J. K. Koskei, B. K. Boiyon, S. K. Kirui, C. K. Sheilla, S. K. Ruto, C. Alfred, and W. K. Chepkwony for encouraging me to move on. My heartfelt appreciation also goes to my friends, such as Rodney Cheruiyot. I forget not my research participants who voluntarily provided useful data through e research tools. Again, I thank the staff of Mountain View ECDE College for opening up opportunities for me to serve and practice management skills.

I forget not the people who assisted in typing various sections of this work, especially C. Valerie, her staff and Kennedy Toboso who did a commendable job. My other appreciation goes to the authors of the books I have widely quote in my work.

Ultimately, I thank THE ALMIGHTY GOD for giving me strength and wisdom to do this work; it is good to reverence God always.

ABSTRACT

The task of headteachers in teaching and learning materials management, although widely studied, has not been explored regarding its influence on learners' academic success in public pre-primary Schools. This study aimed to examine the influence of handling teaching and learning materials by headteachers on learners' performance in activity areas in public pre-primary schools in Narok County. The specific objectives of the study included: to examine the influence of availing of teaching and learning materials by Headteachers, to determine the influence of monitoring allocation of teaching and learning materials by Headteachers, to establish the influence of adequacy of teaching and learning materials, to assess the influence of headteachers managerial roles in the maintenance of teaching and learning materials and to determine the influence of headteachers supervisory positions in the utilization of teaching and learning materials on learners performance in activity areas. In this study, two theories were used; Education Production theory by Hanushek (1995) and Cognitive Load Theory by John Sweller (1988). Convergent Mixed Method design was used to enable the researcher to handle both qualitative and quantitative data collected. The target population was 735 pre-primary schools, 735 Headteachers, 1470 pre-school teachers, 30 ECD Coordinators, and 6 Quality Assurance Standards Officers. The sample size included 85 pre-primary schools, 85 head teachers, 85 pre-primary teachers from public pre-primary schools, 6 Quality Assurance and Standards Officers, and 9 ECD Coordinators. Purposive sampling was used to select headteachers, while the sample for teachers, ECD Coordinators, and Quality Assurance Standards Officers was chosen using a simple random sampling technique. Questionnaires, Interview schedule, Center Performance Assessment Tool, and Center Observation Checklist were the primary tools for collecting data. The study conducted both content validity and construct validity. Instruments with a correlation coefficient of <0.7 were considered reliable and adapted for the study. The researcher collected both quantitative and qualitative data. Quantitative data were analyzed for descriptive statistics and inferential statistics. Research hypotheses were tested using Regression Analysis. The findings revealed that the overall performance of learners in the majority of the pre-schools was approaching expectation. The lowest performance was reported in Language and Mathematics. The results also showed that availing of teaching and learning materials by headteachers, adequacy of teaching and learning materials, headteachers' managerial roles in the maintenance of teaching and learning materials, headteachers' supervision of teaching and learning materials utilization had a statistically significant influence on learners' performance in activity areas. However, Head Teachers' distribution of teaching and learning resources has not had a statistically meaningful influence on the performance of the learners in activity areas. Headteachers' investigation of the influence of teaching and learning materials management on pupils' performance in activity areas in public pre-schools yielded data that can help education managers and policymakers understand the causes of poor performance in activity areas and plan for courses of action to address them. This may also help instructional administrators prepare for the procurement and utilization of teaching and learning resources.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

CBC	Competency-Based Curriculum
ECD	Early Childhood Development
ECDE	Early Childhood Development and Education
ECE	Early Childhood Education
EFA	Education for All
KCPE	Kenya Certificate of Primary Education
KIE	Kenya Institute of Education
MOEVT	Ministry of education and vocation Tanzania
QASO	Quality Assurance and Standards Officer
SACMEQ	South Africa Consortium for Monitoring Education Quality
SIMSC	School Instructional Materials Selection Committee
STR	Learners- Teacher Ratio
T/L	Teaching and Learning
TLM	Teaching Learning Materials
TLR	Teaching Learning Resources
UN	United Nations
UNESCO	United Nations Education Scientific and Cultural Organization
WASCE	West Africa School Certificate Examinations

DEFINITION OF TERMS

Activity Areas: These are learning areas covered in pre-primary education, including mathematics, language, environmental, psychomotor and creative, and Christian Religious Education.

Adequacy: This refers to the number of educational / learning materials used by a pre-primary school compared to the Ministry of Education standards.

Availability: This refers to the state under which instructional content is accessible for use in pre-primary schools.

Early Childhood Development and Education: Refers to the education of children up to the age of eight who have acquired developmental experience before compulsory education, especially to meet the child's cognitive, social, moral, emotional, emotional, and physical needs

Learning activities/Activity areas: refer to all preschoolers' activities to improve their knowledge, skills, and competence.

Performance: It refers to the preschoolers' ability to perform learning tasks and gain knowledge or skills compared to some expected standard set by the pre-primary school.

Pre-school education: refers to programs designed primarily for children aged 5 to 8, introducing a school-like setting and a link between home and school.

Pre-school: refers to the educational institution of children preparing for primary education. In this study, the term is used interchangeably with nursery, pre-primary, childcare, ECD center, childcare, and kindergarten.

T/L Resources: Refers to the material that educators and preschoolers utilize during the process of teaching and learning including, books, pens, pictures, and the like.

CHAPTER ONE

INTRODUCTION.

1.1 Overview

This section comprises the study's background, the purpose of the study, objectives of the study, hypotheses, justification of the study, the significance of the research, scope and limitation of the study, and assumptions of the research work.

1.2 Background of the Study

Early Childhood Education (ECE) refers to that form of education provided to children in pre-school, and that is, before beginning primary school (Oluwafemi, Nma, Osita & Olugbenga 2014). The United Nations Educational and Cultural Organization (UNESCO) (2010) describes early childhood as a timeline from birth until eight years. This is the time when the brain develops significantly. The eight years of schooling are the foundation for later learning (Landrum & McDuffie, 2010). Hirst, Jewis, Sojo, and Cavanagh (2011) argue that ECE offered in these pre-primary schools for all children is crucial, and therefore should be made available for all. Preprimary provides a strong teaching foundation and contributes to developing abilities, understanding, private information, and trust, representing the tents of social responsibility.

The UN Convention (1989) states that each child has a constitutional right to education and reach its maximum capabilities by giving them access to decent education irrespective of gender, age, background, or social background. High-quality education is the partly effective management of teaching and learning materials. In public kindergartens, The Head Teachers are responsible for the supervision of teaching and learning resources.

Montessori (1998) concluded that the use of concrete Teaching and learning (T/L) materials helps children to build five senses. This helps lower teacher's boredom associated with just using one material to enhance instruction. Karaka (2009) pointed out that concrete materials improve the comprehension of core concepts. Whatever the instructor intends, the most important thing is for the child to learn. The teacher's task is to support learning through education/teaching resources. Learning success with the teacher's classroom is subject to the excellent supervision of teaching and learning resources. Everything the teacher prepares does not necessarily make sense if the child cannot learn. Incorrect display of materials tends to occupy the learners' minds, especially when the teacher is out of class. This should improve the learning of children when the teacher is not present. Piaget emphasizes that children learn by pretend play, creativity, problem-solving, and by trial and error. For example, a nature walk would give them a hands-on exploration of essential science concepts.

The teaching and learning process's main aim is to bring about a meaningful shift in conduct through the learner's positive participation and logical thinking. This cannot happen if the educational and learning resources are not availed in sufficient quantity (Afework & Asfaw, 2014). It is therefore essential that the administration of primary schools guarantee sufficient educational and learning resources. The question of availability and utilization of T/L materials for pre-primary schools arises because such materials are significant in teaching every subject. Preschool teachers can attest that teaching with these resources is more straightforward (Mwonga & Wanyama, 2012).

In United Kingdom (UK), Stewart (2009) suggested that Children's mathematical activities are made up of counting, weighing, measuring, estimating, and recognizing patterns in their real life, as forms exist in our modern world. Learning to identify and manipulate fundamental aspects of our culture allows a child to grasp our societies' design and nature. Classification by color, shape, size, and category enables learners to classify objects in their environment to be coherent and easy to manage. Ministry of Education and Vocational Training in Tanzania (MOEVT, 2005) stated that learning maths involves naming individuals, reading numbers, shape recognition, number arrangement, addition and reduction of numbers, and money use.

In sub-Saharan Africa, the vital role that pre-schools play in providing education for children cannot be ignored. United Nations Education Scientific and Cultural Organization (UNESCO) (2010) reported that the various African countries differ considerably in size, economic structure, development level, and learning systems. A research study by Nemes and Sharali (2015) argues that the headteacher performs a vital role in ensuring that teachers and children have the teaching and learning materials they need.

This research explored the impact of teaching and learning materials management by Headmasters on learner performance in terms of T/L materials allocation, availability, adequacy, head teacher's leadership roles in the maintenance of teaching and learning materials, and their supervisory functions in the use of these materials. This happened because early childhood education is an essential phase for the psychological and behavioral development of children.

In the absence of these teaching materials in an educational institution, the dream of reaching Vision 2030 and meeting the UN convention on children's rights becomes elusive. The term resources refer to teaching and learning materials and the current teaching time and the teachers' awareness and abilities through education and experience (Owoko, 2010).

Teaching and learning resources' management involves allocation, organizing, directing, monitoring, and evaluating the use of these materials to achieve the school's stated aims. Pre-primary teachers develop tools and sources for teaching and learning. It is the school headteachers' role to make sure that materials are availed to the teachers at the right time and in the quantity that is sufficient (Tuimur & Chemwei, 2015). A study by Likwop (2016) found that Narok County had more headteachers in the male gender compared to female headteachers. This shows the gender parity among the school heads who are charged with making sure that T/L material is accessible and distributed equitably. Moreover, the instructional materials should be routinely supervised and tracked to prevent losses (MoEST, 2009). Monitoring the allocation of T/L materials to pre-primary teachers is critical for pre-school effectiveness.

Pre-primary teachers need to have an efficient distribution of teaching and learning materials to assist them in delivering efficiently to the learners (Mascitti-Miller, 2012). The materials need to be allocated in a manner that provides equal learning opportunities for all the preschoolers. Effective service delivery ultimately translates to learner performance in the pre-primary schools.

Teaching and learning materials enhance learners' ability to experience touching, smelling, or tasting items in the teaching and learning process (Dhakal, 2017). Knowledge and skills can be applied to pre - schoolchildren with various kinds of appropriate T/L materials. Utilization of teaching and learning resources becomes much more critical in enhancing pre-school-level learning experiences. The school authority should supervise the utilization of local teaching and learning materials and avail materials unavailable in the school. (Dhakal, 2017).

Education's success is related to the availability of resources for poorly functioning schools (UNESCO, 2015). Teaching material can promote learning and enhance learner performance. Teaching materials may refer to many teacher sources. The term typically refers to specific examples such as worksheets or manipulations (learning material or games that allow learners to learn new knowledge, such as count blocks). Teaching and learning resources are vital to a productive cycle of teaching and learning around the world. This is attributed to the fact that these sources allow the teacher to successfully pass the content to a child (Karaka, 2007). The relation between managing teaching and learning materials and pupils' performance has been cited in previous studies, some of which have existed for centuries. Montessori (1870) concluded that utilization of T/L materials had a positive and negative impact on learning performance.

Mwalyego (2014), in Tanzania, found that pre-school activities included learning activities related to language, mathematical (arithmetic) learning activities, scientific learning activities, personality and sports teaching activities, and artistic activities.

For language learning activities, as provided by the Ministry of Education and Vocational Training in Tanzania, learners must engage in the following teaching operations: greeting at distinct moments of the day, presentation, naming, courtesy, answering directions, writing pictures, letters, and numbers (MoEVT, 2005). Pre-school learners frequently attend a gathering referred to "show-and-tell" this is a time when learners have an activity to do each day, which they tell other children and friends (Hildebrand, 1985).

The last learning activities in kindergarten are art activities where learners need to make a simple diagram of real objects, draw objects, paint by spraying, and color images with pencils in pre-school, (MoEVT, 2005). Kenya Institute of Education (KIE) (2008) states various types of teaching and learning resources; such resources are flashcards, tactile aids such as toys and dolls. All the highlighted types of educational/learning resources can help the learner develop new knowledge. For instance, images may help a learner to learn and recall learned concepts. The classroom must be adequately planned and spacious so that children and teachers can freely access the material and enable teachers to motivate and assess children's activities.

Participation in activity areas involves works individually, with a colleague, or in small groups and formulating ideas to develop and acquire new knowledge and concepts in the learning areas (Monda, 2012). The teaching and learning materials' function are to glue or bind information in the learner's mind because what is visible is easier to comprehend than what is taught. In the early years of education, learners develop more and more knowledge, which has already been learned through adventure.

As children grow and broaden their horizons regarding the quality of manipulated content to master the learned concepts, the diverse learning environments with different teaching materials make children obtain the skills needed for sustainable learning and development in pre-school education (Monda, 2012).

Learning materials are appealing to learners, make them aware, participate actively, make decisions and experiments that allow them to gain additional skills in the process. If a rich learning condition is unavailable; Teacher-model to collect information, skills, and competencies, learning is negatively impacted.

Effective teaching and learning depend not only on children's cognitive abilities but also on the learning environment. The learning environment is a creation of school management, which includes the availability and efficiency in utilizing sufficient materials for T/L, which are attractively organized in a working numbering (Omaiyo, 2013). Email observed that the early intervention program, such as providing teaching resources, positively impacted the number of transiting learners. Intervention by school Heads through the adequate allocation of T/L materials impacts positively on learning outcomes. Pre-school children with sufficient educational resources and trained teachers have the advantage of understanding concepts and skillsets (Omaiyo, 2013).

The management of teaching and learning resources (TLR) contributes to improving access and learning outcomes. Schools, which offer engaging, meaningful, and relevant experiences, are less likely to be affected by children's absenteeism (Momoh, 2010).

These resources must be available at school for a fair learning process, both in quantity and quality. It is the role of school management to ensure adequate teaching and learning resources within the school.

The Kenya Institute of Education (KIE, 2008) requires that permanently installed devices be placed in a location where children have access. Examples involve climbing frames, where pupils can utilize this tool to play by ascending or laddering down. It is nice that children play alternately. When kids enjoy themselves, they lose their suspense and other emotions and renew the next activity.

Kenya has signed the UN Convention as a country, and several laws have been passed to ensure all children have the right to their constitutional rights, as laid down in the 2010 Kenyan constitution. In this perspective, primary school management should provide adequate varied teaching and learning resources in pre-primary schools. Children draw their conclusion from the utilization of learning resources in the teaching and learning process; thus, they must be given the space to address their issues individually or in teams by material processing; this increases their self-esteem. In their learning environment, many ECDE centers in Kenya lack good teaching and learning resources and facilities suited to ECDE.

Mwonga and Wanyama (2012) found that children find learning enjoyable and quite impressive in the learning process when various T/L opportunities are utilized. Therefore, it is essential to mention that ECDE teachers should attest to the ease of teaching with these materials.

Teaching and learning materials enhance a child's acquisition of music and movement skills and ensure that the transition from pre-primary to primary school is smooth. This, therefore, means that all the education stakeholders should ensure that the teaching and learning materials are available in pre-school centers.

Teaching and learning materials enhance a learner's musical and mobility skills and enhance a proper transition from kindergarten to primary school. Without adequate resources, meaningful T/L cannot take place. This also refers to curriculum delivery (Ntumi, 2016). This means that the government must provide schools with sufficient resources, for example, study books, teaching material, as well as stationery, to ensure that the officially planned curriculum is implemented as scheduled so that teachers and Learners should effectively perform their function in the implementation of the teaching material appropriately.

In Kenya, children in both public and private pre-schools learn through academic drills of alphabet letters, letter-sound pronunciations, and numbers' memorization. This goes against the holistic approach, where children learn using everyday experiences. Themes in this approach include going shopping and learning numbers; this allows children to associate whatever they know to their surroundings and real-life examples. In many private academies, lower primary school textbooks are used for the young nursery and pre-unit classes (Ng'asike, 2016). This illustrates how, in an attempt to accelerate learning, babies are taught the work meant for nursery children.

The Government of Kenya has also achieved remarkable results in providing teaching and learning materials (the Republic of Kenya, 2012). These TL materials, however, were not enough given that provision of indispensable materials was the government's focus and priority, and the government, for financial reasons, has not paid attention to the development and training of infants in this system (ECDE). This research paper concentrates on headteachers' management responsibilities in acquiring and utilizing T/L materials in government-owned pre-primary schools. The focus of the research was on the school headteachers' supervisory roles because the headteachers are the school managers and that any other manager in the school would be performing a delegated function of the headteacher. The study specifically focused on public pre-primary schools in Narok County. This was informed by the fact that the Narok County Education Office (2018), Department of Quality Assurance and Standards office reported that poor academic performance in public ECD centers among preschoolers was one of the pressing concerns that require urgent attention.

1.3 Statement of the Problem

Background education research indicates a strong foundation in a child's educational process is essentially an excellent primary education and a higher secondary education. Effective management of teaching and learning materials as reviewed influences learning outcomes in a learning institution. Teaching and learning materials need to be of acceptable quality, and quantity should be adequate, available, and relevant. The headteachers' management roles are critical in assigning, maintaining, and utilizing teaching and learning materials in public pre-primary schools.

Studies focusing on the management of teaching and learning materials with learning outcomes in pre-primary education in Kenya are limited. Most studies focus on public elementary and middle schools (Orodho *et al.,* 2013). Despite inclusive education policies in developing countries, mainstream schools still lack adequate and appropriate resources to cater to learners (Wanjohi, 2019).

Moreover, research on the impact of managerial roles of Headteachers such as monitoring allocations of teaching and learning materials, availing of teaching and learning materials, ensuring that there are enough teaching and learning materials, maintenance and supervision of teaching and learning materials utilization, on learners' performance in activity areas is limited in most parts of the country, Narok County included. Furthermore, although some studies suggest that the management of teaching and learning materials by Headteachers may have a positive or a negative effect on learner performance, the impact of teaching and learning materials management on learner performance in pre-primary schools has not been explored.

Therefore, this study was critical because it unearths the underlying factors that cause dismal performance in Activity Areas in public pre-primary schools in Narok County.

1.4 Purpose of the Study

The purpose of the study was to investigate the influence of teaching and learning materials management by headteachers on learners' performance in activity areas in public pre-primary schools in Narok County.

1.5 Objectives of the Study

The specific objectives of the study were:

i. To examine the influence of availing of teaching and learning materials by headteachers on learners' performance in activity areas in public pre-primary schools in Narok County.

ii. To determine the influence of headteachers' monitoring allocations of teaching and learning materials on learners' performance in activity areas in public pre-primary schools in Narok County.

iii. To establish the influence of adequacy of teaching and learning materials on learners' performance in activity areas in public pre-primary schools in Narok County.

iv. To assess the influence of headteachers' managerial roles in maintenance of teaching and learning materials on learners' performance in activity areas in public pre-primary schools in Narok County.

v. To determine the influence of headteachers' supervision of teaching and learning materials utilization on learners' performance in activity areas in public pre-primary schools in Narok County.

1.6 Hypotheses

H_{o1}: There is no significant influence of availing of teaching and learning materials by head teachers on learners' performance in activity areas, in public pre-primary schools in Narok County.

Ho_2: There is no significant influence of monitoring of allocation of teaching and learning materials by head teachers on learners 'performance in activity areas, in public pre-primary schools in Narok County.

Ho_3 There is no significant influence of adequacy of teaching and learning materials on learners' performance in activity areas, in public pre-primary schools in Narok County.

Ho_4: There is no significant influence of head teachers' managerial roles in the maintenance of teaching and learning materials on learners' performance in activity areas, in public pre-primary schools in Narok County.

Ho_5: There is no significant influence of head teachers' supervision of teaching and learning materials utilization on learner's performance in activity areas, in public pre-primary schools in Narok County.

1.7 Justification of the Study

The results of the current study are significant for the Kenyan Education system since improving the quality of education and reducing the challenges facing various counties in Kenya will positively impact the long persisting challenges related to the attainment of Education for All and Sustainable Development Goal by 2030. The UN Sustainable Development Goal No. 4, Target 5, states that by 2030 all people, including those with disabilities, should be provided with equal quality education (UNESCO, 2017). The SDG No 4 and Kenya's Vision 2030 require that there be quality learners' performance at all levels of education. This means that issues influencing learners' performance at all levels in pre-primary schools need to be investigated.

The empirical review suggests learners' performance at the pre-primary school level is critical since it has a bearing on the subsequent academic levels in a child's life. Moreover, in pursuit of the commitment goal of Education for All (EFA), which was established in 1990 during the Dakar conference, goal number one of the forum was to expand Early Childhood Care and Education. To achieve this noble idea, pre-school education can only be transformed by the school management offering adequate teaching and learning materials for pre-primary education to achieve its goals. Teaching and Learning materials make learning real by stimulating the use of the senses in learning, thereby enhancing learning.

Young children learn better when more than one feeling is involved in teaching and learning; this is why enough varied teaching material is needed in pre-schools (Right, 2012). The percentage of learners transiting pre-primary to primary school is based on the learners' ability to acquire relevant knowledge and skills for each activity area. Attempts to achieve a 100% transition to primary school may be hampered by poor performance in work areas due to inadequate teaching and learning materials (Ratemo, 2016).

It is essential to mention that teaching and learning resources ensure adequate allocation and proper utilization. There was a need to understand the underlying factors which influence performance and also what action should be taken to boost learner performance in activity areas in public ECD centers.

Understanding the antecedents of performance of preschoolers in activity areas is crucial. This is because performance in pre-schools has a link with learners' performance in later stages of schooling. Mwaba, Kusanthan, Kepson, and Menon (2016) found a relationship between pre-schooling and the implementation of pre-schooled lower primary school pupils in literacy and numeracy.

1.8 Significance of Study

Investigating the factors that underpin poor performance in pre-primary education can help Educational managers and policymakers understand the causes of poor performance and develop action plans to address them.

This understanding will enable them to formulate or review policies related to teaching and learning materials management and the resultant influence on learners' performance in activity areas from the pre-primary schools. It can also help education managers to plan for the acquisition of educational materials by providing adequate resources.

Teachers are likely to benefit from the study in that they will understand how the management of teaching and learning materials affects learners' performance in activity areas. They will also understand which activity areas are inconvenienced and how best to contribute towards the management of requisite materials.

Learners in the pre-schools may significantly gain since this research yields increased awareness of the best management practices to educational stakeholders, consequently enabling them to make informed decisions that promote learner performance in activity areas.

The study may also provide solutions to combat poor performance in public ECD centers, thus helping to create pre-school children who can become reliable citizens and, in the future, contribute to the country's workforce and thus to the country's economy. A well-educated preschooler can learn in the subsequent levels of learning in primary, secondary, and higher education. Pre-school education is the cornerstone of a lifelong learning process. The study's results and recommendations may be useful for County governments in Kenya in that the Constitution requires them to manage ECDE programs. The results generated can be helpful to future academicians and researchers as reference materials.

1.9 Scope of the Study

The scope defines the investigation parameter, such as the variable considered, population and sample, the setting, period covered, instrumentation, limitation on the other handset forth reservations, qualifications, or weakness inherent in the design. Generally, the study reflected anticipated inadequacies regarding the internal validity of results (Khorsan, 2014).

The study assessed the factors that influence pre-primary school learners' performance in activity areas in public pre-primary schools in Narok County.

Data were obtained from the primary school Headteachers, pre-primary teachers, Quality Assurance and Standards Officers, and ECD Ward Coordinators. This was due to their strategic advantage to provide information which was sought.

The confine of the study was an examination of the influence of availing teaching and learning materials, monitoring allocations of teaching and learning materials, adequacy of teaching and learning materials, maintenance of teaching and learning materials, and

supervision of teaching and learning materials utilization by headteachers on learners' performance in activity areas in public pre-primary schools in Narok County. The study lasted for 18 months, starting from June 2020.

1.10 Limitations of the Study

The study had the following limitations**.**

i. The research focused on the influence of availing teaching and learning materials, monitoring allocations of teaching and learning materials, adequacy of teaching and learning materials, maintenance of teaching and learning materials, and supervision of teaching and learning materials utilization by headteachers on learners' performance in activity areas in public pre-primary schools in Narok County, so generalization of outcomes in private pre-schools in the County and other kindergartens outside the County may not be possible.

It is so because; they do not have the same geographical, institutional characteristics. However, a generalization is feasible, but with caution.

ii. The study was likely to identify the shortcomings of using questionnaires, including the fact that it is not easy to know when or not respondents are true. To overcome this, triangulation was used. The investigator used both open and closed questions to detect possible biasness in the answers.

1.11 Assumptions of the Study

The research respondents were believed to be able to engage in the research and provide useful information relevant to the study.

The study also assumed that availability, allocation of teaching and learning materials by headteachers, adequacy of teaching and learning materials, Headteachers' managerial and supervisory roles affect public pre-primary schools under study.

The other assumption was that data was to be collected objectively to allow for valid observation and recommendations to be made from the study results.

The study assumed that records on learners' performance were available in the pre-primary schools.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examines the literature on teaching and learning materials management by headteachers on learner's performance in public ECDE centers. The literature study for this research comes from books, journals, government publications, and documents and reports that relate, in whole or in part, to the management and monitoring functions of educational institutions. Topics covered include the availing of teaching-learning materials by Headteachers and the performance of learners in fields of activity; monitoring allocation of Teaching and Learning (T/L) materials by Headteachers and learner performance activity areas; availability of enough T/L materials and learner performance activity areas; Headteachers managerial roles in the maintenance of T/L materials and learner performance in activity areas; and headteachers Supervisory roles in the use of teaching and learning material and learner performance in activity areas, as well as challenges in using teaching and learning materials on learner performance in activity areas. It also deals with the theoretical framework, the conceptual framework, and the identification of knowledge gaps.

2.2 Early Childhood Education

Eddy (2016) describes Early Childhood Education (ECE); also known as pre-school education, as an area of educational theory that focuses on the education of young children (formal and informal) between birth to around eight years of age. A child's brain develops rapidly during the first five years of life.

In this time, the child is exposed to countless stimuli in a variety of environments. Research has demonstrated that participating in early childhood programmes leads to higher academic achievement levels and better adjustment during later schooling years. Early childhood education's significance is attested to by its positioning as the first goal in the World Declaration on Education for All, aiming to expand and improve comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.

The education of children and babies, a subset of pre-school learning, denotes the education of children from birth to 8 years. It developed into a research area in the Enlightenment era, especially in countries with a high literacy level such those in Europe.

According to UNICEF (2019), "investing in early childhood education can be a powerful way to reduce gaps that often-put children with low social and economic status at a disadvantage." Globally, however, early childhood education is just another advantage that the rich have over the poor. Children from the wealthiest 20 per cent of the population are the most likely to attend pre-school. Africa has one of the lowest early childhood education rates globally, with only 27 per cent of children in sub-Saharan, West and Central Africa attending pre-school. Only the Middle East and North Africa have a lower rate at 26 percent. In contrast, 37 percent of children in East Asia and the Pacific and 61 percent of children in Latin America and the Caribbean attend pre-school (Olk, 2019).

Early childhood Education requires the challenge and encouragement of children to grow into inspired learners and thinkers, full of interest in the world surrounding them.

Developmental psychologists like Piaget, Frobel, Montessori, Mc Milan and Isaacs held that the child is a whole human with emotions, creativity, and experiences to be cared for and valued. They reasoned that children were intrinsically inspired and enjoyed learning (Curtis, 1986). Pre-primary education, better known as early childhood education or child care education, is education provided at school to Children aged 3 to 5 years and even above, before entering primary school. Therefore, all children need a good foundation of life. Early years are the period associated with the learners' rapid physical, emotional and intellectual development, and that is the cornerstone for a safe, stable and alert adult.

Hirst, Jewis, Sojo, and Cavagh (2011) suggest that modern children's learning is essential to every child, and everyone should get it. The authors posit that kindergarten offers a solid foundation for education and supports the development of knowledge, skills, self-confidence, personal competence, and social responsibility. That is why each child should get an excellent pre-school education.

The researchers noted a great range of successful changes and interactions in different nations, increasing teacher participation and career development to increase enrollment and transition. It was reported in their comment that the growth to the next level of learning depends on the T/L materials management in kindergartens. This study investigated the Influence of T/L resources management on learners' performance in activity areas in public pre-primary schools.

Dhungana (2008) explained that young children are inventive in using materials they find around them as tools for play and learning. A rubber band, a stick, a strip of cloth, materials frequently discarded by others as waste or junk, provoke children's thinking, play and learning.

For one child, a box may become a phone; for another, it may be a car. Similarly, a lid may be used for ice cream, a container to be filled, or a building tool, whilst a bag may be for transporting, covering, filling. People working with children must be inventive and need to plan and create an environment for children's learning. A range of junk and low-cost resources can be used to support children as they learn, develop mathematical concepts, explore scientific ideas and extend their understanding of the world around them. People need to encourage and observe the imaginative play.

Muithungu (2003) suggests that instructors should utilize different teaching and learning resources that are easy to find in the environment. Stakeholders, including the headteacher, have an obligation of ensuring that the necessary materials are made available to improve children's learning in ECDE centers. The researcher noted that the teacher is the originator and chief decision-maker concerning teaching materials because he/she starts providing them in the learning institutions by engaging the learners in the materials collection; however, the teacher has a role in availing the materials. ECD teachers liaise with the headteacher in the selection and ordering of T/L materials. In this paper, the author focused on the Heads management and oversight role in acquiring and utilizing T/L materials in pre-school education.

According to Kitsao-Wekulo and Hungi (2016), in Kenya, pre-school education is not compulsory. A child must not attend a pre-primary or early childhood development and education (ECDE) class before joining primary school. Nonetheless, many public primary schools have pre-primary schools linked to them. Out of the more than 40,000 ECDE centers in Kenya, nearly 70% are attached to a primary school. There are 114,831 teachers with less than half of them professionally trained.

The Republic of Kenya (2012) pointed out that Kenya's primary schooling serves the critical goal of preparing young children for primary education. Despite the associated benefits for the whole society, the Kenyan government is only minimally involved. Parents are responsible for planning, developing, and managing various programs for young children. This leads to problems such as financing and program consistency. This situation increases the development and appropriateness of pre-school education and learning materials.

As children's programs have always been crucial, The Government will actively engage in growth and implementation, primarily to ensure that pre-schools have the necessary T/L materials. The researcher explains that the role of T/L materials management is significant for its effectiveness. Regarding this argument, this study evaluated the status of T/L materials as the observation checklist evaluates the availability and adequacy of T/L resources in public ECD centers.

Language learning activities involve learners' engagement in several activities such as; greetings at various times of a day, introducing oneself, naming things, expressing politeness, responding to orders, describing images, letter and number naming; (MoEVT, 2005). Pre-primary teachers also schedule a session of "show- and- tell." It is a time in each day when kids prepare to say or avail something to demonstrate other kids and friends (Hildebrand, 1985).

Activities in mathematics education involve counting, weighing, measuring, calculating and pattern recognition in their daily environment as shapes are all over our physical world.

Learning to identify and recognize the basic forms that exist in our society, and then to be able to control those forms, enables us to comprehend nature and the essence of our environment. Sorting items by type, size, texture and color, encourages the children to arrange things in their environment in a way that makes sense and is easy to manage (Stewart, 2009).

Bietenbeck (2019) reported that children in this region learn remarkably little at school. For example, only one in five third-grade students in Kenya, Tanzania, and Uganda have second-grade literacy and numeracy skills. Less than one-third of sixth-grade students in Southern and Eastern Africa can solve a simple subtraction problem. This "learning crisis" means that sub-Saharan Africa is currently a long way from achieving quality education for all, which is one of the United Nations' Sustainable Development Goals for 2030. The low levels of skills also reduce students' labour market prospects and dampen countries' economic growth. Preschool education is on the rise in sub-Saharan Africa, with enrolment doubling from 15% to 32% between 2000 and 2017.

Ensuring quality education during a child's formative years is the responsibility of every government. Devolution of Early Childhood to the county government was a well-thought plan, but challenges in early childhood development education (ECDE) persist. Some counties have employed ECDE teachers, while others have not. Majority of these teachers are used on a contract basis, and parents pay others. Deficiencies exist in facilitating the involvement of all stakeholders. The study is informed by the challenges experienced in policy implementation and inconsistency in pre-school education by various county governments.

2.3 Teaching and Learning Materials in Preprimary Schools

Teaching and learning are part of requisite educational resources. Resources are the material, staff and finance available to realize the goal of early childhood education. For any academic programme to achieve its goals, it must be supported with adequate resources. Adediji in Ukala (2012) defined educational resources as the sum of everything that goes into the educational system. This includes human, infrastructure and finance. Early childhood education is capital intensive. It is required to be adequately equipped with vital input to achieve its goal.

According to Happonen (2010), the purpose of utilizing teaching and learning resources in class is to assist the teacher with the presentation and transmission of educational content and the achievement of educational objectives, whilst aiding the students in acquiring knowledge and profiling different abilities and values. Common goals include Learner motivation; Developing creativity; Evoking prior experience; Encouraging the process of understanding, decoding, organizing and synthesizing the educational content, logical thinking and reasoning, communication and interaction; and Contributing to the development of different skills and the acquisition of values of students, as well as the retention of desirable knowledge, skills and attitudes. Whether or not these teaching and learning resources will achieve their purpose, role and numerous duties, it all depends, first and foremost, on their correct use within the educational process, which is why it is so important to define the basic principles of the method mentioned above.

Bušljeta (2013) explains that in the context of classes as an institutionalized form of teaching and learning, teaching and learning resources could be defined as the instruments of presentation and transmission of the prescribed educational material. These include, amongst others: images, maps, photographs, sketches, diagrams, films, written material such as newspaper clippings or articles from scientific and technical literature. Pictorial teaching and learning resources include various representations that can be effectively used in teachings, such as paintings, caricatures, graphic novels, photographs, maps, drawings, timelines, schematics, tables, charts and diagrams. Taking into account the well-known saying that a picture is worth a thousand words and the fact that students are more motivated and stimulated if their curriculum is presented graphically, it is not surprising that pictorial resources are considered very important in the process of teaching and learning, the fact made most evident in textbooks.

Ogunyemi and Ragpot (2015) explained that teaching and learning materials were not taken seriously in some countries. For instance, the Nigerian Educational Research and Development Council and United Nations Children's Fund have neither developed nor provided support materials for pre-primary education centers; and, although Nigerian Educational Research and Development Council had organized workshops and enlightenment programmes as well as micro-teaching practice for parents and caregivers in some locations, several Nigerian communities were yet uncovered.

Mahindu (2011) asserts that imaginative arts and creative play experiences play a cardinal role in preschoolers' learning and development. Simple materials such as play dough, drawing materials, wooden blocks, CDs, Books and sound makers can stimulate a child's imagination and encourage unstructured play.

In addition, a child can be encouraged to practice finger painting in order to develop sense of touch. The utilization of resources in education brings about fruitful learning outcomes since resources stimulate students learning as well as motivating them. A common way to examine the utilization of education resources is to analyze school expenditure. This is because school expenditures constitute the bulk of all resources devoted to schooling and they are tractable instruments of education policy. Since the inception of FDSE policy, access to secondary education has gone up with the number of students enrolling in secondary education rising from 1.3 million in 2009 and 2.1 million students this year, raising the transition rate from 64% to 77% over the period (FDSE, 2014) led to overcrowded classrooms and overutilization on existing TLR. (KESSP, 2010)

Azikiwe (1998) in Doublegist (2013) defines teaching materials as "all five senses of seeing, listening, hearing, touch , smell and taste" when teaching his / her lesson and are relevant in pre-school teaching since they facilitate the direct relationship between sound and pictures, as well as the words and objects they reflect. Teaching and learning resources, when properly used, will provide a practical foundation for logical thought and decrease the lack of word comments of pupils and this makes learning more enduring, give a great interest for children, create continuity of language as in images, contribute to the understanding of words and thus to vocabulary development, give experiences that are not readily accessible from different resources and further lead to effective learning, in-depth and widely.

According to Lyons (2012), learning is a complicated activity involving the interaction of learners' inspiration, teaching resources, physical facilities, and teaching and curriculum skills. The accessibility of T/L services thus contributes favorably towards schools' effectiveness, given that they are the necessary tools for the excellent academic performance of learners. Essential tools for T/L, therefore need to be made available.

In the Jomtien and Dakar conferences, Muiji and Reynolds (2011) underscored the importance of instructional resources in ECE to improve children's learning. Availability of instructional resources enhances schools' effectiveness as these are basic things that can bring about good academic performance in the learners. The successful learning of a pre-school depends on how the teacher plans, organizes and manages her class, particularly in the productions, use and storage of materials. The teacher should create a rich learning environment, appreciate what children learn by doing and bring children's environment closer to the classroom environment by using local resources.

Isola (2010) identified teaching materials as items or tools to help the teacher make the learner's lesson much clearer. The terms Instructional resources and teaching materials, as used by copyright authors such as Bishop (1985) states that teaching and learning material as that which teachers think is useful for T/L. It can be a collection of books, reference material, maps, charts, newspaper clippings, and anything of value to teachers.

Ministry of Education (2012) states that educational resources enable children to explore their creativity and foresight. To ensure that the children open their minds, the teacher should ask questions concerning the availability of the T/L materials.

The researcher in this study assesses management concerning availing, allocation, adequacy, maintenance, and supervision of T/L materials in public pre-school activity areas. Activity areas include; language, creative, social environment, music and movement, physical activities, and outdoor activities.

The study by Brown, Oke and Brown (2010) indicated that Instructional materials vary from simple and inexpensive ones, such as the chalkboard, flat pictures, textbooks, flashcards, counters, diagrams, worksheets, illustrations, and maps, to more complicated and expensive ones like the television, computers, movie projectors, slides and filmstrip projectors. Instructional materials are broadly grouped into two categories printed and non-printed materials.

Early Childhood Development Education handbook by KIE (2008), organizing children on childcare, the curriculum and learning resources are divided into four groups. They include: audiovisual; these audiovisual teaching materials are acoustic and visual. An excellent example of these audiovisual media is television. The second type is visible representation cells. Diagrams and images are an example of graphic material. The third category of teaching material is audio. An example is the radio. The fourth category is tactile T/L materials, which are resources that can be manipulated, such as toys or oranges (KIE, 2008).

Ogbandah (2008) in his study for A summary of the teaching materials utilized in River State, Nigeria to educate migrant children; discovered that teaching materials enhance the learner's experience. He found that they supplemented the teacher's verbal statement and enriched the learning experience.

Ogbandah also pointed out that teaching materials motivate learners to learn more, expand their knowledge, and increase their understanding. The investigation by Ogbandah took place at different administrative and geographical locations. It is not clear whether schools in Kenya and Narok County would cover the same research results.

The Ogbandah study focuses on the influence of teaching and learning materials on teacher performance and not on the management of T/L resources and the learner performance. That is why this study tried to close this knowledge gap.

Okori & Jerry (2017) noted that teaching and learning resources could be implemented as follows: printed resources (examples: manuals, magazines, posters) and projected flowers such as; Plate, flannel plates, models, 16 mm films/projectors. Teaching and learning materials take place in different forms. They can be an auditory, visual or audiovisual auditorium, Audio-educational material for radio frequency equipment, radio communication, Artwork only on the blackboard, such as blackboard, flashcard, slides, and film strip. An audiovisual teaching material comes from a combination of devices related to seeing and hearing, including TVs, movies, and computers. The availability and appropriateness of these materials in pre-schools in Kenya would be a good education for the learners.

The Ministry of Education (MOE, 2012) recognizes the importance of these resources for learners' academic performance. This report (MOE, 2012) showed that overcrowded classrooms have inadequate resources because of the increasing number of enrolments that influence education quality. However, crowded classes do not necessarily lead to inadequacy or unavailability of T/L materials.

MOE (2011) gives examples of various teaching materials such as blackboards, books, magazines, Tables, diagrams, maps and globes, media like patterns - living and preserved objects, models and puzzles.

Kenya Institute of Education (KIE) (2010) highlights that T/L materials promote children's overall growth and development. It further states that materials are used in the following areas: manipulation skills, visual perception, motor skills, auditory perception, language development, emotion research, and socio-emotional needs. Educational resources include physical facilities and their surroundings, material possessions, individuals, and actions that result from a shift in a specific section. The availability of learning tools and the successful use of them represent the subject's pedagogical quality. This is because most tools play a significant role in learners' comprehension of their concepts and pedagogical skills. While this is true, the reality is that learning performance depends on how each school is managed as an administrative unit.

Right (2012) claims that teaching and learning materials are essential, as they can significantly improve learners' performance by rendering requisite learning support. Teaching and learning materials should provide children with specific experiences and opportunities to develop their learning process with full senses (touching, seeing, smelling, hearing, and feeling). However, the Rights study does not link educational/learning materials with management in learning activities.

Njoroge (2011) carried out a study on the determinant pre-school children's registration in pre-schools in Thogoto and Karai Zones in the Division of Kikuyu, Kiambu County, Kenya.

The research demonstrates that opportunities for T/L are critical factors in enrolling children in pre-school. However, the study did not address the Management of T/L materials influence on learner success in areas activity areas.

That is why this study tried to close this gap. The review was on the general teaching methods for young children and the development of materials in Kiambu.

The study revealed that teaching aids help stimulate children's physical, mental, social, emotional, moral, and cognitive development. The scholar also noted that when children are actively manipulating materials in-game activities, they use most of the senses when learning. This makes it easier for preschoolers to understand concepts that are otherwise difficult to understand. Although the study was conducted in Kiambu, the results are consistent with the conceptualization of this study.

Wambura (2015) studied the influence of educational resources on the growth and education of early childhood learners in the Kiine, Ndia division in Kirinyaga County. The research conducted uses a sample of 15 pre-schools and 45 pre-primary teachers. The method used for the study involves basic sampling, and purposeful sampling was used as a research method. The data were manually obtained, processed, and then presented in statistical values. The study found that most pre-primary schools lacked requisite teaching materials, which led to low learning performance in pre-schools. The Wambura study is consistent with the arguments in this study. However, the research's scope did not concentrate on learner performance in areas of activity.

Moreover, the learner's position in the Wambura study is general, while this study's focus was specific.

Sitati, Kennedy and Ndirangu (2017) investigated the provision of teaching/learning resources in ECE in Kenya. The study adopted a descriptive survey design to explore this in Kakamega County, Kenya. Purposive sampling was used to select three sub-counties (30 % of the population). Proportionate stratified random sampling was used to determine 30 % of the public and private ECEs to participate. The study's findings revealed that stakeholders had made reasonable efforts to buy instructional materials in both the public and private ECE centers. However, it was also observed that the government has not streamlined ECE within the policy of free primary education and expand the school equipment production unit (SEPU) to institute ECE equipment and materials.

Muiruri (2014) investigated the impact of instructional materials on number writing among pre-school children in the Kamukunji District.

The 5 pre-schools head teachers and 15 pre-school teachers completed questionnaires, which were analyzed using qualitative and quantitative methods. Children in the experimental groups who used instructional materials in activities performed better than the other two groups. Their skills in writing numbers, number sequence, number shaping, number sizing and number alignment performance improved tremendously due to active involvement in activities that used instructional materials. Their level of number reflection errors, number omission, number sizing, number spacing significantly reduced.

The use of instructional materials helped the children use their senses and develop children with motor muscles and eye-hand coordination. This explains why the management of teaching and learning materials is essential in pre-schools.

As pointed out by the ECDE policy framework (2006), efficiency in allocating resources should be improved to enhance teaching and learning quality provided to the preschoolers. Therefore, the headteachers have an obligation of monitoring the distribution of pre-school teachers' T/L materials. The function of the headteachers in fostering and maintaining primary school maintenance culture should not be overlooked. Maintenance of teaching and learning materials involves ensuring that the materials are in good condition and right situations. School managers must ensure that school T/L materials are properly maintained to enhance effective teaching and learning (Adeoye & Tayo, 2012). Some common maintenance types for T/L materials in pre-primary schools include corrective maintenance, preventive maintenance, and predictive maintenance.

Mwalyego (2014) noted that pre-school scientific learning activities include the purity of the body, the designation of living and non-living organisms within the environment, the fruits naming, and the use of aquatic and plant projects. Preschoolers like the cultivation of plants, such as beans or flowers (Hildebrand, 1985). Pre-school personal and sporting activities include good demo behaviour, cleaning clothes, maintaining cutlery, taking care of belongings, and playing football games.

In Kenya, teaching and learning materials in early childhood education (ECD) and indeed, any other level cannot be overemphasized. In 1948, the government established a teachers' advisory centre (Resource centre) to serve a cluster of schools.

A major goal of clusters and resource centre was to provide pupils and teachers with access to learning materials including teacher made materials, supplementary texts, teacher guides, curriculum guides, science equipment, maps and charts and other audio-visual aids for the classroom to improve early childhood learners' achievement (UNESCO, 2014).

According to Taylor and Vlastos (2009), the Montessori materials are tools to stimulate the child into logical thought and discovery, beautifully handcrafted and displayed on low shelves within every learner reach whereby each piece of material has a specific purpose and is presented to the children in a manner that will enable them to direct their learning.

2.4 Availing of Teaching and Learning Materials for Learners' Performance

A study by transparency international (2010) shows that around one in every five pupils does not have all the basic learning materials needed for effective participation in classrooms activities. Southern Africa Consortium for Monitoring Education Quality (SACMEQ, 2011) reveals that in 2007, only 78% of the standard six (6) pupils had at least one exercise books a pencil or pen and ruler. In other words, around one in every five (5) pupils do not have all the basic learning items necessary for effective participation in classroom activities.

Gogoi (2015) investigated the importance of teaching-learning materials for young children. Material and methods: For the present study, 100 numbers of Government Lower Primary School and Senior Basic School, where there is provision for early childhood care and education were selected. The Schools were from both the urban areas and the rural areas of Golaghat District Assam.

The study established that most schools do not have sufficient teaching-learning materials for early childhood care and education. The teacher has not received any special training regarding the preparation and use of teaching-learning materials to make the learning environment more e joyful. The teachers strongly felt that using teaching-learning materials in the classroom interaction makes the environment more joyful.

Okongo, Ngao, Rop and Nyongesa (2015) found that teaching and learning resources were inadequate in all the ECDE centers in pre-school Centers in Nyamira North Sub-county. This negatively affects the implementation of inclusive education in Nyamira North Sub County. Teaching and learning materials are essential for enrolment and maintenance of learners with special needs in pre-school centers. The study revealed that schools faced many challenges when acquiring learning resources for the Special needs education pupils. However, the survey by Okongo et al. did not focus on whether such inadequacies affected other learners' performance in activity areas.

Puri and Abraham (2004) underline the need for classrooms to be vibrant and exciting to excite learners about coming to pre-school centers. Ramps (for children with disabilities), handrails (for visually disabled children), braille are required for reading and writing, and wheelchairs for easy access. To make sure that the children preserve good hygiene, after playing outdoors, by washing their hands, you can also hold a mug and a bucket of water outside the classroom. Trawick-Smith, Wolff, Koschel and Vallarelli (2014), emphasized the use of playthings such as toys to be crucial for T/L, and their availability in a pre-school contributes favorably towards learner achievement.

A study by Adwale (2011) done in Nigeria, noted that instructional materials help teachers to hold students' attention in the class.

This is because it makes students believe in their teacher who teaches objectively as it will help students understand the mechanism of learning. This means that school managers need to ensure that teaching and learning materials are availed in schools. Relevant and appropriate textbooks, visual materials like globes, charts, slides, maps and tapes are paramount materials that supplement and consolidate what is read in books and journals.

Research done by Mwonga and Wanyama (2012) revealed that teaching and learning materials not only enhances a child's acquisition of music and movement skills but also ensures that the transition from pre-primary to primary school is smooth. This therefore means that all the education stakeholders should ensure that the teaching and learning materials are available in pre-school centers. Research done by Mwong and Wanyama (2012) revealed that teaching and learning materials not only enhances a child's acquisition of music and movement skills but also ensures that the transition from pre-primary to primary school is smooth. This therefore means that all the education stakeholders should ensure that the teaching and learning materials are available in pre-school centers.

Headteachers need to ensure that teaching and learning materials are availed in pre-primary schools for use. Fernandez (2014) argues that textbooks' availability appears to be the most consistent factor in predicting teacher effectiveness towards teaching in primary schools. This then implies that if a school lacks adequate instructional materials such as textbooks and revision books, it is leading to a disaster. A study by Ramani, Siegler and Hitti (2012) established that learners who played the number board game reported a high classroom improvement in their children's knowledge of numerical skills.

Their use by teachings in scaffolding and assisting preschoolers learning about numbers was also observed. The researchers, uses the example where paraprofessionals adapt the feedback from children in respect to their numerical knowledge of numeric through the use of the linear number board. Therefore, it emerges that use of the linear number board game contributes favorably towards the acquisition of the learners' mathematical skills.

According to Sussman (2012), pre-school managers should ensure that age-appropriate play materials such as toys and materials are accessible to children in all areas, both in and out of class. The scholar recommended that the use of the chart in guiding toy, equipment and material choices. According to National Association for the Education of Young Children (2011), the effectiveness of play in problem solving depends on the availability of play materials such puzzles (with 4-12 pieces); blocks that snap together; objects to sort (by size, color, shape, smell); materials with hooks, buckles, buttons, and snaps. For ages 3 to 6-year-olds, puzzles (with 12-20 pieces); collections of small objects to sort by length, blocks that snap together; width, height, shape, color, smell, quantity, and other features; collections of plastic bottle caps; plastic bowls and lids; keys; shells; counting bears; and small colored blocks.

Adalikwu and Iorkpilgh (2013) studied the influence of instructional materials (teaching aids) on students' academic performance in schools in Cross River State. Learners were selected from five (5) Schools in Yakuur Local Government Area of Cross River State through simple random sampling and stratified random sampling techniques.

The study revealed that learners taught with instructional materials performed significantly better than those taught without instructional materials and also that the use of instructional materials generally improved students' understanding of concepts and led to high academic achievements. The study results suggest that availing these materials to schools by the school managers was critical for academic performance. However, Adalikwu and Iorkpilgh's study's focus did not focus on pre-schools but junior secondary schools.

Abdelrahim (2008) found out that the accessibility of educational resources is crucial in promoting and supporting education. The scholar noted that learning without teaching materials is impossible. The classroom material is collected and prepared in advance as pre-school teachers cannot expect the children to wait to organize and manage materials for classroom activities. The availability of educational resources depends on how they are stored and used. Abdelrahim pointed out that education quality and teachings in form like the involvement of infants rely on the availability and adequacy of teaching material for teaching. This conclusion is similar to this study's theoretical and conceptual context as the pre-primary school's performance is influenced by the availability and adequacy of learning materials, which is a management role.

Lyons (2012) notes that learning is a dynamic process that combines learner inspiration, physical facilities, learning materials, educational skills, and curriculum requirements. Resource management and organization process is referred to as resource usage. The use of materials in learning leads results in positive education outcomes, as materials stimulate and motivate learners to learn. One of the most common ways to investigate the use of educational resources is to analyze school costs.

School spending should be considered as it usually covers most educational resources and is a manageable instrument of education policy (Meghir, 2005). Meghir's (2005) findings do not relate the use of resources to performance in pre-schools. Therefore, this study showed the connection between resources and performance in pre-primary education.

UNESCO (2015) states that resources' availability influences positive outcomes of education and learning and supports poorly functioning schools. Educational institutions need to improve learner skills through the use of academic / teaching resources to stay there ready for assessments. This finding from UNESCO clearly shows the relationship between teaching materials management and achievements. UNESCO's research assumed that school performance automatically means that learning performance is dependent on the delivery of teaching materials. In Kenya's pre-school system, learners do not sit for standardized national exams, so it is difficult to discuss or assess school performance.

Okune, Gudo and Odongo (2016) studied the implications of instructional materials on early childhood learners' oral skills. The target population comprised 42 headteachers, 126 teachers and 3180 leaners. It was found that teaching using instructional materials improved learners' performance in various learning activities such as repetition of letters, repetition of words, and the ability to write dictated words. The improved performance was in a range of 11% to 18%.

Momoh (2010) carried out an impact analysis on the teaching and learning materials on learner performance in West African school exams (WASCE). The researcher correlated material resources with the academic performance of learners in ten subjects. The researcher collected data about the resources used in education. The performance of the learners in WASCE was based on the available resources for the relevant class subjects.

The researcher concluded that material resources management significantly affects the learner's performance in the ten subjects.

In a learning process, didactic material facilitates the learning of abstract ideas and concepts; keeps learners active and increases their engagement in lessons, save the teachers the energy to talk too much. Momoh's research supports the fact that poor or good performance at every school depends on sufficient or insufficient T/L materials. Another remarkable element is that Momoh's research focused on learner performance in specific areas of activity, which is in line with this study. According to Kris (2018), maps support critical reasoning by helping kids see where objects, places, cities, and countries relate to each other. She explains that critical reasoning allows children to develop as they grow.

A study by Moyo, Wadesango and Kurebwa (2012) on the determinants the execution of the development programs for young children in Zimbabwe noted that early childhood development centers did not have critical T/L resources. The researchers discovered that both school Headteachers and teachers recognized the lack of basic resources in their respective ECD centers. This research intends to examine the role of primary school Headteachers in acquiring and utilizing T/L materials. The lack of accessibility of resources was linked to the parents of farmers' poor economic situation and the absence of government support. Researchers demonstrated that the unavailability of pre-school education and learning materials in Zimbabwe influences classroom teachers' effectiveness.

However, the study did not assess the correlation between learning resources management and learning performance in activity areas. This study determined the relationship between these variables.

A study by Ochanda (2015) on the influence of play equipment on the partaking of pre-school learners in out of class activities in the division of Suba East, Migori County established that play equipment's availability influenced children's participation in outdoor activities. The study further noted schools, which had a more significant number of play equipment, had many outdoor participants. There was a relationship between the teacher's part in the provision of play equipment and children's participation in outdoor activities.

Livumbaze and Achoka (2017) investigated the impact of learning materials on high school students' academic performance in Hamisi District, Kenya. The research found that learners academically withdrew from secondary education because of factors linked to teaching and learning opportunities (TLR). The study recommended that the state facilitate teaching and learning resources production facilitation fund, except for innovating teachers in the development of these resources, and that secondary schools set performance goals in terms of learner behaviour and work. The study by Livumbaze and Ashoka is linked to this study because it reveals the relationship between learning materials and implementation of the learning curriculum. The acquisition of T/L materials and supervision of curriculum implementation is a function of school management.

Kariuki (2009) investigated the factors that influence science education in Kiambu Municipality in Kiambu County. The study showed that school management's failure to avail T/L resources in the public schools of Kiambu Municipals adversely impact the effectiveness of teachers in the teaching of realistic subjects such as science. Although the research was not focused on pre-primary education, the emphasis was placed on the crucial role that T/L resources management occupied in the learner's performance.

Karanja (2015) conducted a study on managing of teaching and learning resources at primary schools in the Kandara Division, Muranga County in Kenya. The study showed that the purchasing of T/L resources did not comply with the latter's MoE guidelines. Teachers reported that school headteachers do most purchasing processes against the MoE guidelines for buying Instructional Resources. The MoE guidelines outline that the selection committee for teaching materials (SIMSC) is the designated commission for selecting T/L materials in primary school. The MOE report questions the managerial and oversight responsibilities of school Headteachers. This study examined school headteachers' leadership and oversight role in the acquisition and utilization of T/L resources in pre-schools concerning performance.

Wambui (2013) conducted a study on the influence of using training materials on learners' participation in pre-school science education in Kiine Zone, Kirinyaga County, Kenya. The study included a descriptive research design that collected qualitative data. The design consisted of non-experimental information from teachers about the Instructional Materials (I.M.) they use to teach pre-school children. The study discovered that T/L materials are not utilized effectively in due to overcrowded classes.

The Wambui study emphasizes the importance of using educational material in pre-schools. Therefore, the research further investigated the influence of T/L materials management on learners' performance in public pre-schools.

Karanja (2015) conducted a study about teaching and learning resources at primary schools in Kandara division in the Kandara sub-county in Muranga County in Kenya. The study showed that the purchase of learning materials in primary schools took place in four phases: selection, appointment, receipt, and payment. The Headteachers of most schools were unable to ensure that obtaining materials were carried out correctly. The general principles of the educational process and learning policy are accountability, transparency, and textbooks sustainability. However, compliance with these guidelines varies from institution to institution and is often determined by the school heads' characteristics and roles. Karanja's research is fundamental because it gives the impression that obtaining the required T/L materials is the roadmap for learning effectiveness and, consequently, for higher learning performance in work areas. Therefore, it is necessary to conduct such an investigation to determine whether such a conceptualization applies to kindergartens in Narok County.

Ayaga (2010) conducted a study on managing physical and material resources in high schools in the Kenyenya Division in Gucha sub-county of Kenya. The researcher noted that selecting the most effective T/L materials from several options was among the most worrying educational practice challenges. Ayana discusses how many digital variables hinder the selection process in every learning or academic situation.

Headteachers in primary schools take a crucial responsibility in the selection of T/L materials for pre-primary schools. This research explored school heads' managerial roles in the acquisition of T/L resources concerning learners' performance in activity areas. However, Ayaga's arguments showed how the addition could influence learner performance. It is essential to know that the researcher focused on high schools and not pre-schools. This study showed whether the revelation by Ayaga is the same as in pre-primary schools.

Moriasi (2015) noted that selecting and purchasing teaching materials is a problem for several school headteachers in Kenya. It is the school managers' responsibility to acquire the necessary and relevant T/L materials. School managers must determine which tools are needed and how they can be purchased. The burden of selecting T/L materials is delegated to the school Instructional Materials Selection Committee (SIMSC). The headteacher ensures that the procurement takes place following established procedures, including approvals and procurement financing. There must be prompt delivery of T/L resources to prevent excessive delays, and the required data must be appropriately kept. Although the process of planning and sourcing materials, as described by Moriasi, is well-coordinated, the researcher does not mention that the acquired material also includes ECDE school resources.

Onyango (2014) investigated the impact of teaching and learning resources on the transition from kindergarten to primary school in the Rachuonyo South Sub-county. The research showed that when adequately purchased, used, and stored, T/L materials raise pre-school children's transition rate. Thus, the researchers indicated the necessity of using the T/L resources in the pre-school teaching and learning process.

The researcher linked the transition from pre-school to primary school with effective management in the purchase and the use of educational and learning resources. It is worth noting that the study's findings are in line with the conceptualization of this study.

Mucheru (2015) studied teaching and learning resources in primary schools in Kandara Division, Kandara County, Muranga County, Kenya. The researcher reported that although headteachers carried out the purchase of T/L materials, the procurement of educational and learning materials did not follow the Ministry of Education guidelines. This compromised the quality and quantity of T/L materials purchased. The process affected learner performance negatively. Mucheru's perception challenges the role of Heads, which had negatively influenced learning performance. The findings by Mucheru are closely related to this study. This study's main objective was to identify the underlying factors in the management of T/L resources, which lead to poor performance in pre-schools in Narok County.

Tety (2016) established that the quality of the academic performance was influenced by, among others, desks, books, teaching equipment, and textbooks. However, these former researchers did not address the role of the headteacher in the management of these materials. Therefore, the School managers need to consider collecting all sorts of resources from the Ministry of Education (MOE), the community, and other organizations. They are also obliged to make sure that the materials are thoroughly and efficiently used.

Mariga (2017) investigated the teacher challenges on acquiring and using visual teaching-learning materials in public pre-primary schools in Kasarani Sub-County in Nairobi. The study was guided by the Dales (1954) theory of instruction.

The researcher targeted 54 teachers in all 18 pre-primary schools, out of which simple random sampling technique was used to obtain a sample size of 15 teachers. The findings of the study revealed that many teachers in Kasarani are overwhelmed in improvising the materials. The results have also shown that the schools do not have action plans to acquire and use teaching and learning materials. Other challenges encountered include high costs, lack of storage space, low knowledge and experience among teachers.

Kangethe (2011) explored the teaching and learning material challenges in public high schools. The researcher reported that school management's poor management of the procurement process led to defective material in most schools.

The study showed that insufficient T/L resources led to an ineffective teaching and learning process. The board of primary schools faces such problems if the tendering procedures are not followed correctly. Kangethe (2011) was involved in secondary education, so there is a need for such study in pre-primary schools. The Institute of Policy Research (IPAR, 2006), reported a situation where school boards do not have requisite procurement competencies, leading to incompetence and waste of teaching and learning resources (TLR). The study further reported that some headteachers abused their authority for personal interest and lacked technical procurement knowledge. This, therefore, influences the learner's access to quality education and its performance.

Jeptanui (2011) investigated the efficiency of the use of teaching materials in primary schools. The researcher noted that the government was not vigilant when monitoring and evaluate the introduction of free primary education, and in particular, when purchasing and using educational materials. The researcher opined that the first authority in ensuring that teachers and learners correctly use the teaching materials is headteacher.

This ensures maximum material and staff utilization. Jeptanui's work (2011) was about free primary education, although it was linked to this research, this research's emphasis was on pre-school education.

According to Wambui (2013), state that the accessibility and adequacy of T/L materials help in enhancing the ability of pupils to participate as this introduces learners to the real world of learning and promotes comprehension and retention, as they are recognized more when events are observed than when they are merely heard. Ngussa et al. (2012) also argued that teaching tools relating to a class session's basic material allows the learner to grasp a specific lesson. Using various educational media makes learning more effective as it increases comprehension, strengthens and preserves the subject matter (Ngussa, 2015).

Atieno (2014) examined the influence of teaching and learning resources on learners' performance in Embakasi district. The study found out that teaching and learning materials are available, and are utilized in schools, especially those used in classroom instruction, like chalks, dusters and charts except physical facilities are lacking, and there is gross inadequacy of human resources. This resulted in overstretched resources with an annual increase in enrolment rates, thus compromising the quality of education. The study also observed that more funds for teaching and learning resources provision were required to improve the status and condition of more teachers' physical facilities and employment for the FDSE to be effective. The focus of the study was, however, in secondary schools and not in pre-schools.

Ndirangu (2015) discovered in a study in Muranga County, Kenya that effective teaching and learning process is a function of the availability of sustainable, adequate and suitable T/L materials such as study books, laboratories and laboratory equipment, workshops, libraries, visual and digital media Audio education tools such as radio, television, playground, and agriculture, and classroom. The study concurs with a study by Mwangi (2016) in Meru, which the researcher reported a relationship between learner achievement and the type of instructional method used. The availability of T/L materials increases interaction and learning effectiveness, which leads to a good achievement by learners in the national examination.

Were (2014) explored the relationship between teaching and learning resources on pre-school learners in the transition to class in Rachuonyo South Sub County using case study research design. The study was anchored on Piaget's theory of cognitive development that appreciates the critical role of education resource provisions in developing a Child's schema. Questionnaires were used to collect data from the targeted 118 pre-schools with a sample size of 259 participants using Yamane (1967) sample selection Formula. The research found out that teaching and learning materials when appropriately acquired, used and stored increases the pre-school learners' transition rate. The study, therefore, concluded that teaching and learning materials should be used in teaching pre-school children.

Melly and Mwangi (2018) investigated the influence of selected factors on implementing pre-school creative activities curriculum in Njoro Sub- County in Nakuru County, Kenya. Structured questionnaires and unstructured interview guides were used to collect data from 80 pre-school teachers and 12 headteachers, respectively.

Findings indicated that headteachers were nonchalant towards how teachers integrated creative activities in teaching and learning. Most teachers showed that the headteachers relegate the provision of essential materials for creative activities to the periphery.

Andiema (2013) studied the effects of play activities' implementation on learner's academic performance in Pokot County. A descriptive survey design was adopted. The study was guided by the social interaction theory of Vygotsky (1978), as cited by Christie & Roskos, (2009). The target population was derived from all the 417 public ECDE centers in Pokot County. The respondents were sampled using stratified, simple random and purposive sampling, and a sample size of 90 teachers and 16 head teachers was obtained. The study findings indicated that 68.7 percent of ECDE Centers had inadequate playgrounds, and 62.5 percent ECDE centers are not provided with instructional materials required. Similarly, ECDE Centers use PE time for other activities. Notwithstanding, teachers do not engage and participate with the children in the playfields. Teachers faced several challenges, such as lack of adequate play facilitate in schools.

2.5 Monitoring allocations of Teaching and Learning Materials

According to Kusek and Rist (2010) in Vitiello and Kools (2010), monitoring is the continuous process of collecting information related to policies and programmes. Further, they assert that it is the constant oversight of implementing an activity that seeks to establish the extent to which input deliveries work schedules, other required actions and targeted outputs are proceeding according to plan. It calls for action to be taken to correct any deficiencies that are detected, UNICEF, (2010).

According to the Performance Management and Delivery Unit, also known as PEMANDU (2013), an astonishing percentage as high as 93% of pre-school teachers have not undergone any formal training. These pre-school teachers are mainly from the private sector that lacks monitoring and control in terms of teacher employment. Without adequate training, their competence in implementing developmentally appropriate practice for children's optimal development is questionable. Although every Malaysian pre-school should adhere to the national pre-school curriculum, each private pre-school setting has its philosophy. The extent to which each pre-school adheres to and implements the National Preschool Curriculum Standard (NPCS) is also uncertain.

In Bangladesh government's primary education system, monitoring occurs in a top-down approach. In the current monitoring structure, staffs from all the levels such as District director, Thana education officers etc. has the task of classroom observation. However, in reality, things are different from what is written in policy documents. Ferdaus (2016) found that monitoring occurs in a top-down approach in the Bangladesh government primary education system. In the current monitoring structure, staffs from all the levels such as District director, Thana education officers etc. has the task of classroom observation. However, in reality, things are different from what is written in policy. Observation ensures that the correct teaching and learning materials are utilized.

Heckman (2011) established that provision of good quality ECEC affects children's cognitive, physical and socio-emotional development. There is increasing evidence that these positive outcomes hinge on the quality of ECEC (Melhuish et al. 2015; Sylva et al. 2014).

Issues related to the availability, affordability and quality of ECEC are essential to policymakers at EU and member-state level because they provide how to reduce the transmission of inequalities, promote work-life balance and female labour participation, and invest in child development (European Commission 2013).

Mascitti-Miller (2012) observed that local resource provision gives learners the ability to make the right choices to meet their school community's needs, thereby improving learner performance. The researcher also reported that it was important that teaching and learning resources be monitored closely in schools. Mascitti-Miller study was, however, centred on community needs. Mascitti-Miller explains that monitoring the use of teaching and learning materials ensures effective use. Effective use of teaching and learning materials during teaching enhances classroom interaction and promotes learning and favorable education outcomes.

Ampofo, Onyango, and Ogolla (2019) assessed the influence of school heads' direct supervision on teacher role performance in public schools. The study adopted the embedded mixed methods design. Slovin's formula, the proportional allocation method, and simple random and purposive sampling were used to select a sample of 617 respondents comprising 295 teachers, 222 class prefects, 86 Heads of Department, 13 school heads and 1 Regional Director for the Inspectorate Division of the Ghana Education Service.

The study found that school heads allocated very little time to supervise lesson planning and delivery of teachers. The results show that the school heads were not keen on their supervision role. However, their study focused on secondary schools and not in pre-primary schools.

Gupta (2001) observed that internal efficiency is ultimately linked to the issue of allocating and using resources. It's essential to understand how resources are distributed in schools for two reasons. First, schools create education, and the level and quality of the resources they receive are crucial in determining learners' performance. Resource allocation and utilization is a management function in schools, therefore, this study looked at the link between T/L materials, and learners' performance.

Lynch (2011) said that targeted and practical delivery of materials to promote fair access to quality education is an integral part of federal, state and local education policies. It is the responsibility of leaders at all levels of education to decide how resources can be disseminated effectively and used to promote teaching and learning. Providing equal learning opportunities for each child was a significant challenge in public education. Public education in the US was initially seen as a "big balance". Some scholars considered education to be a means by which individuals could enter beyond social and economic conditions, creating long-term barriers to achieving their potential and citizen involvement. The study by Lynch emphasizes the crucial role of school managers in resource allocation, which relates to this study's conceptualization.

In a study on mobilizing and managing financial resources for education, Plecki et al. (2006) state that the optimal use of learning resources requires a perfect understanding of the funding system and resources themselves in terms of size, nature, and availability, as well as a clear definition of educational goals and priorities.

Usman (2016), from a Nigerian context, stated that it is the responsibility of the administration of a school institution to bring together and effectively allocate different resources to attain the overall goals of the institution (National Teachers Institute, 2006).

However, the researcher noted that this was not good in most Nigerian schools, resulting in open conflict over available resources.

Panigrahi's (2012) study on the implementation of instructional supervision in secondary schools in Ethiopia found that classroom visits enable headteachers to interact with teachers, determine whether teachers are issuing sound instruction with the recommended teaching and learning materials and provide feedback to help teachers correct highlighted issues. However, Panigrahi's is in the context of secondary schools and not in pre-primary schools.

Ndungu, Gathu and Bonnett (2015) explain that the headteacher's monitoring and evaluation are done at the school level. Monitoring is a means by which information is gathered while assessment is the judgment on the effectiveness of action taken based on the impact on children's learning quality. In schools with a large population, there are heads of departments and leaders of subjects who also have a role in monitoring and evaluating the teaching and learning process. They report their findings every fortnight. Various activities are monitored and assessed in the day-to-day teaching and learning process. These include teacher's preparation documents the physical attendance of classes by teachers and students, students and teachers reporting time.

Wangila (2016) assessed the factors influencing the implementation of ECDE policy in Bungoma County. The study used a mixed research design, combining qualitative and quantitative approaches, grounded within the pragmatism philosophical paradigm. The study sample comprised 9 QUASOs, 27 head teachers, 81 teachers of ECDE and 27 non-teaching staff from selected public primary schools. The study utilized simple random sampling, stratified sampling and purposive sampling in choosing its study sample.

The research established that headteachers monitored the activities at the ECDCs closely leading to improved teaching and enrolment. QUASOs had increased their visits to the centers, although they did not cover all the required supervision areas.

Kayode and Ayodele (2015) indicate that headteachers have a supervisory role in coordinating and controlling the schools' teaching outcome. Headteachers as planners have to ensure there is a better working linkage between the teachers and pupils. They should also ensure teachers have necessary professional records, schemes of work and lesson plan as per the syllabus having specific, measurable, achievable, reliable, and timely objectives to be achieved within a specified time frame. The study also opined that adequately prepared lesson makes it simple for the teacher to deliver the content.

Kinyua (2013) investigated the influence of the monitoring and evaluation process on teaching and learning in primary schools in Gatanga Sub County Muranga County. A total of 16 head teachers, 106 teachers, two zonal TAC officers and two DQASO participated in the study. This ensured that 126 respondents were used in the study giving out an instrument return rate of 95.5%. The research instruments' validity was ensured by undertaking a pre-test in four schools from the nearby Kandara Sub County, which did not form part of the sample.

Monitoring and evaluation lead to effective teaching and learning in all schools. It helps improve and diagnose weak areas in the curriculum; it enhances curriculum delivery, enhances performance and teaching techniques adopted by teachers. Karagu (2010) in his study on perceptions of teachers on headteachers supervision of instruction; discovered that teachers saw successful headteachers as those who are dedicated, have consistent information on school programmes and were keen on teachers as people.

They were likewise receptive, kind, obliging and willing to exploit teacher's exceptional abilities and give them an offer in choice-making in the schools.

Okendu (2012) claims that not enough emphasis was placed on collecting human and material resources collectively from education administration within the school system of effective teaching and learning. On this basis, it was suggested that the headteacher take on administrators and caretakers' role in public kindergartens, including trainers and, if necessary, participate in educational activities. To live up to their responsibility for improving and developing teaching in the school system, all staff, trained and non-education must be available. This can be done with the available resources provided to schools to achieve educational goals. Okendu asserted that regular instructional supervision has a significant bearing on students' academic performance. He also, affirmed that an adequate supply of instructional resources has a substantial effect on students' academic performance. This therefore means that supervision of teaching and learning resources has a great influence on learners' academic performance. However, Okendu's study was focused on secondary schools and not in pre-primary schools. Okendu's suggestions showed the crucial roles of headteachers in resource allocation.

Willis and Hymon-Parker, (2010) posit that for effective creative activities curriculum implementation, schools' administrators in collaboration with parents need to avail most of the vital materials. The pre-school teacher should also endeavor to improvise and create other materials using cheap, locally available materials. According to (Whitebread, 2010), teachers cannot engage pre-scholars in play activities due to lack of, play facilities, lack of leisure facilities, play materials and physical infrastructure.

They further postulate that a good plan of equipment, materials and experiences should allow for various kinds of movement to develop motor skills. Natural features including rope structures, horizontal tree trunks and temporary arrangement for physical challenges broaden the possibilities for play activities.

The headteachers need to monitor teaching and learning materials to ensure they are of good quality. Chingos and West (2010) argue that the quality of learning materials such as textbooks is essential in improving instructions. It is not the buildings themselves that are critical for effective teaching and learning, but the quality of the processes that take place within the buildings (Butts, 2010). Physical infrastructures will have an impact if they prevent work from being done.

A study conducted by Ganira, Odundo and Muriithi (2016) on the impact of Head Teacher Management of Pre-school curriculum and learner performance in Mombasa County, Kenya, found that 60 per cent of private pre-school learners were trained for instruction in terms of job structures, lesson plans and student records. This, they noted, recommended that the private and community schools had adequate supervision of the curricula. This helps explain why private schools have performed well in their pre-schools overall.

In a study by Mbaka (2012), in the district of Gucha Sub-county in Kenya, it was concluded that school headteachers need a focus and vision for school management to avoid imbalances in resource allocation and use. The study found that good results are related to the resources allocated to them during the examination. If this parameter was not recognized, it became challenging to understand why a school continued to perform poorly during national tests.

The study by Mbaka agrees with this study since it examined Headteachers' responsibility in the allocation and use of resources concerning performance.

Wambua (2015) found out in a study in the County of Makueni in Kenya that the class size of learners or their enrollment by subject and in schools is the most significant factor deciding the distribution of teaching material and learning materials. Wambua argued that if the teaching materials were not correctly assigned, it demotivated both the teacher and the learner and resulted in poor performance in related topics and activities. The study by Wambua is associated with this study in that it highlights the relationship between resources and performance.

Were (2014) explored the relationship between teaching and learning resources on pre-school learners in the transition to class in Rachuonyo South Sub County using case study research design. The study was anchored on Piaget's theory of cognitive development that appreciates the critical role of education resource provisions in developing a Child's schema. Questionnaires were used to collect data from the targeted 118 pre-schools with a sample size of 259 participants using Yamane (1967) sample selection Formula. Data collected was presented in pie charts and analyzed by use of descriptive statistics. The research found out that teaching and learning materials when appropriately acquired, used and stored increases the pre-school learners' transition rate. The study, therefore, concluded that teaching and learning materials should be used in teaching pre-school children.

According to Wangila, Kafu, & Nyandusi (2012), many Education officers do not effectively monitor and evaluate monitoring and evaluation. Many QSOs only go to schools to cover up for the faults that are committed in schools.

In schools, headteachers and other teachers are never accountable for what happens in their institutions. The results in other related studies also reveal that monitoring in Kenya's pre-schools has not been done in the right way.

In the developed countries of Europe, Unified M&E systems should be implemented, and child data systems using unique codes, case management, referrals, tracking, and interagency coordination should be developed. Indicators for M and E with respect to inputs, outputs and outcomes should be included and indicators related to establishing and managing child registration and tracking systems.

Vargas-Barón and Schipper (2012), state that in most countries, the two main ECD sectors of education and health (often including nutrition and sanitation) have developed statistical management information systems (MIS). All countries have some form of the statistical bureau, agency or 73 institutes assigned to collect, manage and analyze such information. Alternatively, some countries place this work in the ministry of planning. Many of each nation's best-trained planners work in these statistical agencies and departments, and they often help with ECD statistical issues. The statistical units for education and health, nutrition and sanitation usually are placed in their respective ministries. These sectoral MIS are always rich sources of indicators and data for ECD. However, many additional ECD indicators will be needed in each country to monitor and evaluate progress in achieving ECD inputs, outputs and outcome.

2.6 Adequacy of Teaching and Learning Materials and Learner Performance

Research by Seth (2009) in Ghana indicates that the missing wall charts, diagrams and other mainstream media complementing the utilization of crayons and textbooks in schools has made it increasingly challenging for instructors to deliver quality teaching and learning to advocate high academic success for junior high school students. Teaching materials' adequacy refers to sufficient or appropriate standard and the sum of material resources, physical resources, and human capital. DFID (2007), explains that the most cost-effective input affecting learner output is the appropriateness of teaching materials such as textbooks, the essential learning material. As a rule, at least one textbook per three learners and sufficient reading books in the main subjects is accepted as enough, so that each child can read at least one new book per week. Transparency International (2010) reported that about one-fifth of learners lack all the basic materials to participate in classroom activities effectively.

The researcher believes that poor management of teaching and learning materials in Kandara Division, Muranga County over the past five years has been linked to the poor performance at Kenya Certificate of Primary Education (KCPE). The researcher wanted to check whether the management of T/L resources was done according to the Ministry of Education guidelines. Inefficient use of these resources can lead to underperformance in national examinations. Transparency International's results have shown that the correct management of learning resources determines effective participation in the classroom. This research examines the relationship between the management and head teacher's supervisory role in the management and performance of T/L materials in public ECD centers.

A study by Offenheiser and Holcombe (2008) has shown that inadequate Teaching and Learning resources, lack of well-ventilated classrooms, adequate furniture, safe and clean water, playgrounds, toilets, and toys negatively influence the implementation of the ECDE programs in preprimary schools. Consequently, teachers have insufficient T/L resources for implementing the ECDE curriculum successfully. Therefore, school managers are charged with ensuring effective management and use of T/L materials; this is important in enhancing learners' performance in all the activity areas. The researcher argued that inadequate teaching and learning materials, a lack of well-ventilated classrooms, kitchens, clean drinking water, playgrounds, toilets, and game materials harmed the implementation of ECDE programs. The researcher compared the poor performance reported in primary schools with the inadequacy of T/L resources. However, Offenheiser and Holcombe have not studied how the management of educational material affects learners' performance in activity areas, and that was the focus of this study.

Momoh (2010) investigated the impact of learning materials on learner performance in West African school examinations (WASCE). The performance of the learners in WASCE has been linked to the available teaching resources. He avers that material resources significantly impact learner success by promoting abstract concepts and ideas learning and preventing abstinence. If the teaching/ learning material is insufficient, the training will be influenced. This is inevitable, reflected in low academic performance, high dropout rates, behaviour problems, lack of motivation among teachers and unmet educational goals. Momoh's study was more for lower secondary than for preschool children, and research used WASCE's performance as a benchmark for learner performance. There are no national exams in Kenyan preschools.

Oluwafemi, Nma, Osita & Olugbenga (2014) assessed the level of ECE implementation in Chanchaga local government area, a local government in one of the north-central states in Nigeria. The sample size was 32 teachers, selected from 10 schools (out of 31 in the local government area). The study revealed that basic teaching/learning and other basic resources are sparsely available.

Bukoye (2018) investigated the utilization of instructional materials as tools for students' effective academic performance. A questionnaire constructed by the researcher and re-structured by two experts was used for data collection. The reliability was confirmed with the use of split-half method with 0.63 alpha level of significance got. The questionnaire was presented to the respondents with the assistance of the school heads. The findings revealed inadequate use of instructional materials in most schools and majority of the teachers did not take cognizance of the importance derived from the use of instructional materials while teaching. Those that adopted the utilization, did not use them appropriately. No wonder the high rate of students' failure in external examinations. Though relevant to the current study on preschools, Bukoye's research was carried out in secondary schools.

Kioko (2014) investigated the influence of headteachers' management of resources on pupils' performance in KCPE in public primary schools in Kangundo Division. The study employed a descriptive survey design. The sample consisted of 30 headteachers, 178 teachers and 1180 standard eight pupils in all the primary schools in Kangundo Division. The study established that performance is based on both administrative and resource-based.

Teachers are responsible and work hard, are motivated and attend seminars, time is well managed, teaching and learning resources are inadequate in most schools, and the physical facilities are adequate. The factors contributed to average performance in Kangundo Division.

Makokha (2017) examined the preprimary school teachers' use of improvised materials in science instruction in Bungoma East Sub County, Bungoma County. Purposive and random samplings were used to select the study location. Stratified sampling was used to select the preprimary schools from the 58 targeted schools (34 public and 24 private). Questionnaires and observation checklist were used to generate data where content validity and test-retest techniques were used to determine validity as well as reliability of the instruments respectively. Results from the data analysis revealed that there were a variety of improvised science instructional materials in preprimary schools although they were not adequately used. There was no significant relationship between teachers training level and the use of improvised materials in science instruction. The difficulty was that while T/L resources were accessible, the resources are not adequately used, suggesting teachers' incompetence. The question that remains unanswered in the case of Bungoma is the question of what influence these teachers' abilities had on the utilization of teaching materials on learners' performance in activity areas.

This study tries to close this gap. The researcher recommended that teachers with many years of experience and adequate support from their Heads can use teaching materials frequently and effectively. To encourage utilization innovative teaching resources in classrooms, students, teachers, and other stakeholders need to work together and organize conferences, workshops and capacity building gates to gain more control at the county and regional level.

Mupa and Chinooneka (2015) investigated the factors that contribute to effective teaching and learning in primary schools. Mixed methods were used to collect data. The study established that preschool teachers do not employ a variety of teaching methods, and they do not prepare a variety of media for use in teaching and learning. Teachers' instructional materials are limited to textbooks and syllabuses and do not go beyond that. Pupils learn in harsh and unconducive teaching and learning environments, and there is low morale among teachers. Schools lack adequate textbooks, revision books and resource books to extend children's knowledge.

Leslie (2014), in his article "Early Childhood for all; the Economic Impacts of Child Care and Early Education", says that in the time of scarce resources, the care and education of young children will continue to fall to the bottom of the priority list until there is a shift in the public about the economics of raising the next generation. He asserts that early childhood education is too vital to be brushed aside as a social service, too expensive to consider in tight budgetary times. Investments in quality childcare and early childhood education do more than pay significant returns to our future citizens, and they benefit the taxpayer and enhance economic vitality.

Mwalyego (2014) studied the utilization of teaching materials in preschools in Morogoro, Tanzania. The research was conducted among school Heads, university teachers, trainers, and 28 preschoolers. The study found out that the use of teaching and learning materials was influenced by the teacher-learner ratio, with minimal benefit in schools with a high teacher-learner ratio. Teaching and training were also low, so the class teacher's effective facilitation of classroom use was limited to a few learners. Further, the lesson time was not enough to use the course material effectively.

Najumba (2013) in his studies of school achievement discovered that schools which are well equipped with relevant educational facilities which comprise instructional materials such as textbooks, libraries and even laboratories do much better in a standardized exam such as grade seven than those which do not have resources. The major factor that ignites teacher effectiveness towards teaching in primary schools is the availability of instructional materials such as charts, textbooks and syllabi. However, pupils still fail if teachers lack didactical and pedagogical skills and if these resources are underutilized.

A study by Likoko, Mutsotso and Nasongo (2013) on the adequacy of materials for teaching and learning in schools revealed that adequate materials positively contributed to pupils' academic performance. The study emphasized that it was important for teachers to be well informed / trained on how and when to use materials for teaching, since it was clear that materials adequacy was an important determinant of higher pupils' academic performance in subjects such as mathematics. The use of play materials thus should not be taken lightly by educationists in preschools.

Lyimo, Too and Kipng'etich (2017) examined teachers' perceptions of the adequacy of educational materials and physical facilities at public schools in the Arusha district of Tanzania. The researchers designed the case study's lively design and collected the data using a questionnaire, interview plans, and documents. The study found that most schools had insufficient educational resources. However, the study did not address the impact of such inefficiencies on learner performance. That is why this study tried to fill this gap.

Although children enjoy learning with educational materials, most of them have not effectively used existing learning materials and a vast range of teaching materials described in the curriculum. The research shows that insufficient resources for T/L hamper teachers and learners' ability to use the resources available to improve their learners' performance. The findings of Mwalyego showed that the appropriateness and inadequacy of teaching materials affect performance in ECD centers. However, the study found no link between inadequacy and management. The purpose of this study is to establish the relationship between school management roles in the acquisition and the use of T/L materials on performance in public ECD centers.

The influence of play on children's developing cognitive capacities, including the skills, has been emphasized by both Piaget, (1962) and Vygotsky, (1978) as cited in (Christie, 2010). Guantlett et al., (2010) state that, children need expansive play environments that are spacious and enabling the interaction that takes place during playing traditional games in limited space mostly develop into another form of play and emotional encounters such as pinching and pushing each other.

Guantlett et al., (2010) Regarding stimulation, within indoor, environments, this is mostly related to the provision of play materials and toys that support play. It has been established for some time, through several studies that access to a variety of materials and toys related to children's cognitive development. Well established materials and toys support play most effectively when they are open and flexible and provide children with a wealth of opportunities for creativity for social interaction with their peers and adults, for authorship and deep engagement. Resources in the form of play objects, space and time, are significant in preprimary classrooms because the level and type of children's play depend mostly on these resources' availability.

Kipkosgei and Kabwos (2016) investigated factors that influence the implementation of the science curriculum in kindergartens. The researchers examined the extent to which scientific equipment and materials' suitability affected the science curriculum's performance in kindergartens. The results showed that the inadequacy of science teaching materials and equipment, inadequate storage facilities for T/L materials, and insufficient scientific study books negatively affected the science curriculum's implementation in kindergartens. The findings of Kipkosgei and Kabwos, the inadequacy of resources, showed that it influenced learners' performance though it was not linked to school management. These researchers investigated headteachers' role as school managers in providing teaching and learning materials and its influence on learner performance in public kindergartens.

Okongo, Ngao, Rop, and Nyongesa (2015) studied the impact of the accessibility of teaching and learning resources on the implementation of inclusive education at Nyamira North Sub-County preschool centers. The target population consisted of 134 headteachers in 134 preschool centers, 402 preschool teachers, 12 education officers and 938 preschool parents in the Nyamira North Sub-county. The study showed insufficient funding for T/L at the Nyamira North sub-county preschool centers. However, the study did not examine how this state affected learners' performance in the areas of activity.

Jeptanui (2011) conducted a study about the efficiency of using teaching and learning materials at public primary schools in the Kapseret area in the Wareng sub-county of Kenya. The research was based on Dale's theory of learning, which recognizes the use of resources in the process of learning. The study used descriptive research design. The target group consisted of 18 public primary schools, 213 teachers, 7138 learners, and 18 Headteachers. The research showed that teachers and learners in public primary schools did not have all the necessary learning resources. The ratio of learner books corresponded to the current ratio of 1: 1 per subject. Blackboard and textbooks were often used. Other educational resources were not used. Insufficient learning resources at some schools impeded learners' performance. The findings of Jeptanui challenged the supervisory role of Heads in the use of educational material in schools. That is why this study focused on the influence of management functions of school Head teachers on the use of T/L materials on learners' performance.

Monda (2012) conducted a study on the impact of teaching and learning resources on children's performance in kindergartens in Borabu district, Nyamira County, Kenya. The researcher used a sample of 97 teachers and 52 school leaders. It turned out that the learners had minimal means to learn continuously at the school age. However, the research by Monda does not explain whether this inadequate teaching material affected learners' performance in nursery learning activities in Borabu. This study tried to close that gap. A study by Mwaniki (2015) revealed that there is a significant relationship between effective teaching and the use of T/L materials. Mwaniki argued that some teachers were intrigued by the potential of teaching resources to improve teaching and learning.

Consequently, teachers in schools with inadequate teaching and learning materials lagged when using teaching material during teaching and learning. Teaching materials are an essential part of teaching in learning situations. It then appears that the use of teaching materials is necessary to teach correctly numerical work. Therefore, this research investigated Headteachers' supervisory roles in the use of T/L materials on learners' performance in public ECD Centers. The findings of Mwaniki study showed a good relationship between teaching material management and effective education. The focus of that study was on the number works. However, this study covers all activities in preprimary.

In the study done by Ndirangu (2015), it was observed that good performance is directly linked to the adequacy of teaching material. The role of the school manager is to procure resources and ensures its adequacy. This study determined the role of school management in the purchase and use of teaching materials and their influence on learners' performance.

Kabwos and Omwenga (2020) investigated the influence of availability and the adequacy of learning resources on implementing inclusive education in public preschools in Belgut Sub-County. The study adopted the Social Model Disability Theory (1975). The study used a descriptive survey research design. The study population comprised of 160 preschool teachers and 65 primary headteachers. The sample size for the study was 113 preschool teachers and 56 headteachers. The study findings revealed that most preschools in Belgut Sub-County lacked adequate essential learning resources such as large print books braille machines, and hearing aids. The study concluded that unavailability and inadequacy of teaching and learning materials hamper proper implementation of inclusive education in public preschools in Belgut Sub-County.

Ganira, Odundo and Muriithi (2016) investigated the influence of Head Teacher Management of Preschool Programs and Learning Achievement in Mombasa County, Kenya. The study adopted a descriptive survey design where samples included 11 preschools, 11 head teachers, 11 teachers, 11 Parents and 106 preschool children. Instruments of this study were questionnaires and interviews scheduled. Samples surveyed were public, private, faith-based and community preschools. About 45.5% of all preschools have adequate playing and instructional resources. Private schools had an overwhelming 80% of parents who showed a direct interest in children's' learning.

Public primary headteachers manage preschools attached to their schools and therefore have no direct impact on preschool progress.

Tuimuri and Chemwei (2015) studied the availability and use of instructional resources necessary for teaching Conflict and Conflict Resolution as a Social Studies subject in primary schools in Nandi North District in Kenya. The study was carried out through a descriptive survey. The study population included Social Studies teachers in Kosirai Division of Nandi North District. From this population, a sample of 45 standard seven Social Studies teachers was drawn using purposive sampling. The instruments used for data collection were: a questionnaire, document analysis and classroom observation checklist. The conclusion drawn from the study was that teachers' current preparation to teach Conflict and Conflict Resolution is inadequate with regards to their ability to design relevant teaching and learning resources and effectively use them in the teaching and learning process. Also, the available instructional materials in the sampled schools were insufficient.

2.7 Head Teachers' Managerial Roles in Maintenance of Teaching and Learning materials, and Learners' Performance in Activity Areas

Bhatta, Raghavendra, Kumar, and Clarice (2012) posit that school management is a process of leading the school towards development through not only the optimum use of the school resources, physical sources, principles and concepts that help in achieving all the objectives of the school, but also the proper coordination and adjustment among all of them. School resources include teaching and learning resources, and this has to be maintained by the school managers.

According to a standard set by the Government of Manitoba (2018), high quality early learning and childcare programs provide safe, stimulating environments that are warm, comfortable and aesthetically pleasing. Children are active learners who use the physical environment in a direct, hands-on manner. The physical environment and all the materials and equipment are part of a child's learning experience. The schedule, space, interaction with others and daily routines all provide learning opportunities. The learning environment should provide a rich assortment of materials and equipment for children to develop socially, cognitively and physically.

Maintenance of instructional material is the process of keeping and preserving instructional materials to avoid loss, damage, or deterioration. This involves expertise among the teachers who are technically trained in maintaining instructional materials. Experts' opinion indicates that lack of technical personnel is militating against the effective preservation and maintenance of these instructional materials.

Proper storage and upkeep of teaching materials are very significant in achieving the sustainability goals as laid down in the procurement policy for textbooks.

The teaching materials have to be placed over the ground level in a safe, protected spot. The store should have plenty of ventilation, a strong racking device, locks and doors should be clean (MoEST 2009). Daily tracking and analysis of the instructional materials should be to prevent losses. Forest management is a bother to community leaders, students, teachers, school administrators, and parents (MoEST, 2009).

Mwanasiti (2019) investigated the influence of headteachers' management roles on learners' academic performance in public primary schools. The study targeted 25 headteachers, 35 deputy headteachers and 25 public primary schools while the sample size was 20 head teachers and 20 deputy headteachers. The 20 head teachers and ten deputy headteachers were sampled through purposive sampling. The other ten deputies were from schools with two deputies hence sampled through convenience sampling. The study concluded that the headteacher's management role positively influences learner's academic performance in public primary schools in Kisauni Sub County.

Karanja (2015) investigated the availability, procurement, and maintenance of Teaching/learning resources and their effects on the teaching/ learning process in public primary schools in Kandara division.

The study used production function theory to relate the utilization of instructional resources to the KCPE performance. The study adopted a descriptive survey design targeting 65 public primary schools, 65 head teachers, 5750 pupils and five TAC tutors in the division.

Twenty-three primary schools, 23 headteachers, and 46 teachers were sampled for the targeted population study. The study also established that many challenges are facing the maintenance of T-L materials in primary schools.

These include theft, lack of proper storage facilities, delayed disbursement of T/L materials fund, inadequate funding from the Ministry and lack of corporation from the parents who refuses to replace the damaged and lost learning materials. However, the focus was in primary schools and not preprimary schools.

Asogwa (2010) studied the management of teaching material at schools in the Obollo-Afor Education Zone in Enugu State, Nigeria. The researcher established that the maintenance of T/L materials was critical for enhancing learners' performance in the Obollo-Afor education zone. However, its effectiveness as a strategy was limited by factors such as the absence of government policy, inadequate funds, workshops, storage facilities, maintenance culture, security device and personnel, and staff's non-cooperative attitude.

The study recommended, among other things, that school managers should make sure that teachers are trained / re-trained on the maintenance of instructional materials. In a survey by Beyene and Bezera (2017) in Benishangul Gumuz Regional State Metekel Zone, Ethiopia observed that lack of budget and maintenance personnel affected the school management ability to maintain T/L resources. The researcher noted that maintenance had a consequence of influencing materials adequacy and availability. However, the study did not look at the effects of the maintenance of teaching and learning materials on learners' performance in activity areas.

Birimana and Orodho (2014) conducted a study in the Republic of Rwanda on instructional material resource availability and teachers' successful management of classroom and content delivery in schools in Huye District. The research established that management of teaching and learning (instructional) material resources, has a positive and significant influence on learner's performance in public schools in Huye District. Birimana and Orodho's study, however, was carried out in secondary schools and not preprimary schools.

Olugbenga (2019) investigated the role of school managers in the effective utilization of instructional materials. The research subjects were 100 educational officers drawn from 10 public secondary schools, randomly selected from 10 local government areas of Kaduna State. Two instruments were designed by the researcher and used for this study. The reliability of the tools was done using the split-half method; this is a method of estimating test scores' reliability by means of a single form of a test. Data were analyzed using simple percentage. The analysis revealed that the principals' busy schedule, lack of fund, lack of maintenance culture, and lack of storage facilities were some of the factors that interfered with principals' role in ensuring effective utilization of instructional materials. Therefore, it is imperative that all principals monitor teachers' activities regularly, regularly organize staff development programmes, and principals should delegate authority due to a busy schedule. However, Olugbenga's study was carried out in secondary schools and not in primary schools.

Waweru and Orodho (2014) performed a study on management practices and students' academic achievement in schools in Kiambu District, Kenya revealed that operative managing of resources is a requirement in enhancing students' academic success.

The study suggests the competent and operative distribution of resources when required through competent resource management strategies essential to improving educational excellence in schools. The resources are inclusive of both financial and material resources. The headteacher should provide these in an institution. In 2015, Ndirangu indicated that there is inadequate provision of Akyeampong, Lussier, Pryor and Westbrook (2013), emphasized that headteachers should manage teaching and learning within the school in accordance with curriculum documents and policies. Given that adequate facilities such as classrooms, libraries, halls and playing fields are prerequisite for successful curriculum implementation. The school manager is expected to be in full charge of the preschool's teaching, and learning materials are appropriately managed.

Kangethe (2011) in a study on the Teaching and Learning Materials in public secondary schools in Tana River District, Kenya, established that teaching and learning materials available are not adequately maintained. The study found that there was no set date or time of replacement of spoilt and lost materials by students in some cases. However, the research did not focus on the influence on T/L Materials maintenance on learners' performance.

According to Manoj (2011), despite the great importance that ECDE has on the child, there have been challenges that have crippled this kind of education. This could be negatively affecting the child. The significant challenges identified in this study are human resource capacity, resource support monitoring and evaluation (M&E) and other challenges of the policy's implementation.

2.8 Kenya's policy on ECDE

In 2006, Kenya government introduced the Early Childhood Development (ECD) policy to be implemented by the Ministry of Education. A mixed-method approach is applied to study the implementation. Data were collected through interviews, questionnaires and observations at ECD centers. Findings indicate that the ECD policy has achieved gains, including teacher employment and enhanced quality education standards. Comparatively, learning outcomes suggest that the teacher-student ratio impact education outcomes significantly. Results indicated that the government should consider prioritization of teacher employment and training them on ECD policy standards. Parents and communities should improve ECD class infrastructure, especially in rural areas where ECD is mainly provided in public facilities.

Before 1980 preprimary education, which caters to children between one and six years of age, was exclusively the responsibility of local communities and non-governmental organizations such as churches, voluntary organizations, local authorities, and individual investors. At that time, there were only six preschool training centers. The government assumed responsibility for preschool education in 1980 and has since streamlined the program.

The government now has undertaken the training of preschool teachers, the preparation and development of the curriculum, and teaching materials. The development of preschool units and the cost of teachers' services has, on the other hand, continued to be met by the communities and other non-governmental agencies.

Kang'ethe, Wakahiu, and Karanja (2015) established that parents have primarily taken this responsibility due to inadequate funding for ECD at the Ministry level.

Parents primarily view education of children as a responsibility of the government (especially after the implementation of free primary education policy), and few will take the initiative to pay the agreed amount of fees, and on time, to pay the teacher. This has resulted in irregular and poorly remuneration for ECD teachers.

At the regional level, district education staff asserted that they had difficulties with headteachers who are not fully cooperating or complying with the policy requirements. On the other hand, the headteachers reported that implementation of the policy is expensive and will require a longer time to accomplish. The policy will need ample resources in terms of land, equipment, materials, and teacher wages before it comes to fruition. Thus in the absence of adequate funding, headteachers would find it challenging to implement the policy. Despite the difficulties fronting Early Childhood sub-sector in many parts of the world, the early years are internationally recognized as the greatest critical years for the lifetime development of a person.

2.9 Utilization of Teaching and Materials and Learners Performance

Clarke and Abbott (2016) examined the iPad project at Northern Ireland schools on how technology has influenced literacy and numeracy learning. The research found progress and significant willingness on pupils to consider the initial core concepts of literacy and numeracy, such as lower abilities and unique needs of learners. This indicates that preprimary schools should create an enabling environment to access different educational media that facilitates academic improvement, especially in the mastery of learners' literacy skills.

In Nigeria, Amosa and Ogunlade (2015) examined the disparities in the pupils' outcomes in teaching using an audio instruction kit on the English pronunciation performance of elementary school pupils and those teaching using an exhibition approach and their accomplishment. The analysis showed that the pupils teaching using the audio instruction kit did much better than those teaching using the expositional dialogue approach. The study found that the pupils taught using the audio instructional package performed significantly better in oral skill examinations than their counterparts taught using the expository method.

Ogunmilade (1984) notes that the choice of educational and learning materials or media rests on these kinds of factors. These are educational goals, media availability, age level, learner interest and background, teacher capacity, costs, and technical quality. Therefore, primary school heads must ensure that teachers' use of materials meets these criteria. They must also instruct the teachers to use reasonable materials and protect themselves against excessive use of resources. The observation of Ogunmilade is aimed at headteachers of primary schools, which is in line with this study.

Udosen (2012) researched teaching materials and learning performance at elementary schools in Nigeria. The study examined the responsibilities of the headteacher and found that many teachers in the schools did not have the skills and abilities to use teaching materials. Udosen also found a link between teaching material and learning but did not link the learning material to learners' performance, therefore the motive of this study is to investigate the influence of T/L materials management on learners' outcomes in preschools. The equipment played similar roles, resulting in incomparable performance. The study also suggested that the government organize workshops to provide teachers with knowledge and skills in dealing with improvised materials.

Nwambam and Eze (2017) examined instructional supervision in enhancing teachers' effectiveness in public primary schools in Ebonyi State. Four research questions were formulated to guide the study. Descriptive survey research design was adopted for the study. The population of the study consists of all the 462,186 teachers including the headteachers in the 1035 primary schools in the area of study. Major findings of the study include that instructional supervision helps teachers improve their professional growth, use relevant teaching and learning materials, improve their teaching methods and evaluate pupils' learning outcomes appropriately.

Ogbuagu (2016) posits that instructional supervision aims at seeing how the teacher manages the classroom, teachers' mastery of the subject matter and lesson delivery. This implies that instructional supervision makes the teachers be effectively in charge of the lesson to be taught and how to make the classroom conducive to delivering the lesson.

Karanja (2015) found that learning materials could be available at school, but how they are used determines school performance. Monitoring visits are significant tools employed by the Quality Assurance and Standards Officer (QASO) to evaluate educational institutions. Institute of Medicine and National Research Council (2015), states that monitoring of teaching and learning materials used ensures that the materials used are appropriate and appropriately used to enhance learners' performance.

According to the South African Consortium for Quality of Education (SACMEQ), Human resources are the key contributions to the education system. Therefore, proper management and use of human resources are crucial for the quality of learning outcomes (GoK, 2005). School Heads must work with the education department to ensure that teachers are supervised to promote the effectiveness of the use of T/L materials which will result in improved the performance of learning. This study showed that teaching materials are available and suitable; however, if the management resource responsible for management is not effective in supervision, performance is affected. Therefore, this study determined the influence of management and supervisory duties of headteachers on the purchase and use of T/L materials on preschool learners' performance.

Mohammed (2016), in his study on the direct role of school headteachers for quality education and effective school management of primary schools in Nigeria, noted that effective teaching-learning process depends heavily on the utilization of relevant teaching and learning materials. The study also showed that teachers provided material for the effective completion of assigned tasks and encouraging experimentation.

School managers must ensure through supervision that teachers use the materials provided appropriately. This was achieved by offering teacher training courses by the Ministry; however, the investigator did not investigate whether such an arrangement led to better performance in learning activities. This study investigated whether school headteachers' leadership and monitoring responsibilities in purchasing and using T/L materials influence performance in preprimary schools.

Makokha (2017) investigated the determinants of improvised material in preschool education in science education in the Bungoma East Sub-County in the Bungoma County of Kenya. In kindergartens, various improvised scientific teaching materials were not sufficiently used. The study shows a small significant correlation between teachers' educational level and improvised material in academic education.

Okoth (2014) carried out a study on the responsibility of school teachers in providing educational materials for environmental education in Kenya's Siaya district. The researcher concluded that school headteachers in many schools did not encourage teachers to use appropriate T/L materials. The focus of Okoth's research paper, however, was more on high schools than on preschools. The focus of this study was in preprimary schools.

Nzambi (2012) examined the headteachers' role in supervising the classroom as perceived by secondary school teachers in Kitui sub-county, Kitui County, Kenya. The target group was all schools in the larger County of Kitui. The study found that principals in most schools did their best to lead the teachers and assist them with teaching materials. Also, principals encouraged teachers to participate in workshops, bring in new ideas and promote creativity, innovation and new skills.

Effective guidance for teachers on the use of learning resources appears to positively affect learner performance in the Kitui district, as conceptualized in this study. The focus of Nzambi, however, was on high schools and not on the preschool.

Kaaria (2009) on his research into the accessibility, acquisition and usage of English teaching and learning tools in elementary schools in the Imenti North District, Kenya division of Bururi, found that textbooks are the most significant learning resources available in primary education. Whereas other T/L resources were accessible at the Kenya National Library Services (KNLS) and the Teachers Advisory Centre (TAC), they were rarely used in English teaching. The headteacher was unable to monitor the utilization of available materials in the schools. The researcher also points out that inadequate oversight has affected learner performance in English. This study determined the influence of the School Management oversight functions on using T/L materials on learner performance in Narok County preschool activities.

Were (2014) examined the correlation between teaching and learning resources for pre-school-aged children in education in the Rachuonyo South Sub-county, Kenya, through a case study. The study was anchored in Piaget's cognitive development theory, which acknowledges educational institutions' crucial role in developing a child schema. Questionnaires were used to collect data from 118 target schools with a sample size of 259. The study showed that teaching and learning materials, when adequately procured, used and stored, increase children's transition rate. Thus, the study recommended that T/L materials be used efficiently and effectively in the education of learners.

Regarding that effectiveness, efficiency cannot be achieved without a teacher being competent to use T/L materials. The research by Were, the area of focus was teaching resources on transition rate. However, this study strived to examine the relationship between teaching and learning materials management and performance in public preprimary schools in Narok County, Kenya.

A survey by Kibe (2011) stated that there is a good relationship between effective teachings and use of instructional materials. Kibe (2011) argued that while some educators have been fascinated by instructional materials' potential to enhance teaching and learning, teachers lagged in using instructional materials during teaching and learning. Instructional materials are integral components of teaching number work in learning situations. It then shows that, for effective teaching of number work, utilization of instructional materials is necessary. Thus the research explored how the use of resources affects preschool children's performance in number work.

Olembo and Karagu (1992) pointed out that primary school Heads have the task of supporting teachers by mobilizing them, children and parents to ensure that the curriculum is appropriately implemented in schools. It is their responsibility to ensure that all systems are planned correctly at school and that there are sufficient teaching and teaching materials to make the effective learning process. The research further found out that the majority of Heads are not concerned with preschool children. When headteachers are not involved in preschool education, school dropout and poor learner performance are always high (Njenga & Kabiru, 2001). Therefore, school Heads must be involved in all activities at kindergarten. The study by Njenga and Kabiru agrees with this study. However, it was not tied to the availability and adequacy of learning resources.

Ngunjiri (2012), states that during the lesson observation, the headteacher, as a supervisor in the classroom, must check how T/L materials are utilized. Further, the supervisor should check whether the teacher knows the subject in terms of structure and order, language quality of the teacher, language expressiveness, comprehensibility, and suitability of the teaching material. The observation by Ngunjiri firmly focuses on the roles of headteachers as curriculum implementation supervisors. This study went further and assessed the roles of headteachers as managers about performance in public ECD centers in Narok County.

2.10 Competency Based Curriculum and ECDE

In Rwanda, Komezusenge (2018), while exploring the management of teaching and learning resources in the context of Competency-Based Curriculum (CBC) reported that the teaching aids are designed to facilitate children to learn the lessons quickly. Now teachers and children in surrounding primary schools can make their resources. "Subjects that were taught in theory are now taught practically; the teaching aids help teachers demonstrate lessons, making it easier for learners to follow and understand. Komezusenge highlighted the following issues regarding teaching and learning materials: Limited time to develop teaching aids Making Teaching and learning materials is being done in few schools in the District Lack of some materials in the surrounding environment. This means the headteachers were failing in performing their function of materials mobilization.

A report by the Rwanda Education Board (2018) emphasized that part of Head Teachers' responsibilities (HTs) is to follow up on coaching and mentoring activities in their schools. The report also revealed that some headteachers were not making regular follow up on CBC implementation but we agreed they will improve. This was a great set back to the implementation of CBC negated government and community efforts towards learners' performance.

Competency-based learning begins by identifying specific competencies or skills and enables learners to develop mastery of each competency or skill at their own pace, usually working with a mentor. Gichobi (2014) suggests that for CBC to succeed, school heads should take seriously supervisory tasks such as frequency of visiting lesson sessions, checking teachers" lesson notes, inviting teachers to observe him/her teach and checking learners' assignments to ensure regular marking takes place. The CBC creators envision that at the end of the learning period, every learner should have achieved the following competencies: Critical thinking and problem-solving; Learning to learn; Imagination and creativity; Digital literacy; communication and collaboration; citizenship; and self-efficacy.

Child-centred methods are the most appropriate pedagogical methods for delivery of the competence-based curriculum. The resources required to implement ECDE competency-based curriculum include print materials, quality teachers, enough classrooms, play materials and playfields. The study found that the most appropriate method for assessing ECDE competency-based learning was observation (Kenya Institute of Curriculum Development, 2016).

Teachers need to understand what education is and its purpose, the nature of the knowing mind and the human subject, problems of authority, the relationship between education and society, etc. It is a self-reflective statement of one's beliefs about teaching and learning. By learning philosophy, a teacher would be able to view and analyze from their students' perspective. Apart from understanding why students are behaving in a particular way, teachers would also know how students perceive their actions.

The new curriculum content requires modern classrooms, smart boards, laboratories, creative centers and technologies at all levels. The curriculum is now up to grade three, yet these infrastructures were never put in place. Early Childhood Development has two groups only (Pre-Primary 1 and 2) that is PP1 and PP2 (Kenyatta, 2020)

Hanley and Tiger (2011) confirm that one strategy to promote the selection of essential but less preferred activities is to limit access to children's activities that children like most. For instance, restricting access to dramatic play, computers, and blocks might increase participation in other activities. A more acceptable alternative, which retains the preferred activities during free play, is to provide prolonged access to select actions to decrease subsequent participation in those activities due to satiation or habituation. By reducing the amount of time spent interacting with preferred free-play activities, such a procedure might also indirectly increase the amount of time spent in originally less preferred activities. In Kenya, learning areas have been adapted to suit learners with special needs education (KICD, 2018).

Nyakangi (2021) explains that the creators of the competency-based curriculum envision that at the end of the learning period, every learner should have achieved the following competencies: Communication and collaboration, Critical thinking and problem solving, Imagination and creativity, Citizenship, Learning to learn, Self-efficacy, and Digital literacy. The responsibilities of headteachers broaden in scope following the introduction of the CBC. They have to ensure adequacy and availability of teaching materials to support learner performance in activity areas. Figure 2.1 shows approved learning areas in preschools after the introduction of CBC.

Childcare Heroes (2020) indicated that individual activities could be done with children sitting at different tables or stations. Children can do the same activity at the same time, with separate containers of supplies. Children can also do various activities, with supplies and toys being cleaned and sanitized in between children. Individualized activities may include: Coloring, Painting, Putting together puzzles, Using building blocks, Crafts, Making play-doh or slime, water and sand play, and Any other toys or activities the children in your program like to do alone. Group activities can be done 6 feet apart. Place children's chairs, mats, or rugs six feet apart. Group activities may include: Clapping games, Storytelling, Yoga, Singing, but only outdoors and wearing masks, and Sprinklers for water play—have children take turns and keep six feet apart.

2.11 Challenges Faced in the Use of Teaching and Learning Materials on Learners' Performance in Activity Areas

Rajapaksha and Chathurika (2015) studied the problems faced by the preschool teachers when making and using teaching aids in teaching and learning. The study also identified preschool teachers' perception of using teaching aids. The study employed a quantitative method of research. This study sample comprised 60 Sinhala medium preschool teachers and 40 English medium teachers who have registered in the Diploma in Early Childhood & Primary Education programme in the Colombo regional centre, at OUSL. The study employed a survey research design. A questionnaire was adopted to collect data. The data were analyzed using simple quantitative statistical methods. The study revealed that the teacher has a precise perception of teaching aids and its functions. However, they face problems such as lack of time for making teaching aids for each lesson, lack of training on using electronic teaching aids, lack of knowledge on relating teaching aids to the teaching-learning process.

In Ghana, Ntumi (2016) investigated challenges preschool teachers face in implementing the early childhood curriculum in the Cape Coast Metropolis. The study's key findings revealed that preschool teachers are faced with a lot of challenges in implementing the early childhood curriculum. Significant challenges are that most preschool teachers do not understand the early childhood curriculum and do not have enough teaching and learning materials to implement the Early childhood curriculum. This negatively affected learners' performance in activity areas.

Coverage of early childhood development programs remains very low in Sub-Saharan Africa, especially among children under 3.The EFA GMR 2007 indicates that Sub-Saharan Africa's gross preprimary enrollment ratio of 12 percent (compared with 48 percent for all other developing regions worldwide) is contributing to low primary completion and poor performance in primary grades. Early learning experiences help young children transition to primary school and make it more likely that they begin and complete primary school. By reducing dropout rates, repetition, and special education placements, early childhood development programs can improve the efficiency of primary education and reduce the costs for governments and households.

Across Africa, quality of instruction, however, remains a concern. Age-appropriateness of content and pedagogical approach is often questionable. Interventions on the supply side (e.g. teacher trainings or coaching) as well as on the demand side (e.g. increasing parental awareness on internationally-recognized best practices in the sector) could be explored to ensure that all dimensions of child development are at the center of the preschool experience.

Bidwell and Watine (2014) performed a formative study of the preprimary education sectors in one peri-urban area in each of four cities: Accra (Ghana), Johannesburg (South Africa), Lagos (Nigeria), and Nairobi (Kenya). The specifically explored early childhoold education programs in peri-urban settings in Africa. The study established that while most preschools in all study sites had basic materials such as textbooks, materials allowing for more diverse and ageappropriate teaching methods, such as art materials or toys were a norm only in Soweto.

These children are often disproportionately affected by serious deficits in health, nutrition and cognitive and non-cognitive stimulation and grow up in poor households with few books, toys, and learning materials, causing delays in physical and brain development. While most preschools in all study sites had basic materials such as textbooks (despite large discrepancies on quantities), materials allowing for more diverse and age-appropriate teaching methods, such as art materials or toys are particularly scarce in both Ashaiman and Mukuru

Boyd (2013) reported the result of a study conducted in 2002 by National Institute of Child Health & Human Development (NICHHD) and The Early Child Care Research Network (ECCRN) in which it was found that providers with BA degrees in ECE provided higher quality learning experiences for children in their care. This underscores the importance of giving children the opportunity to learn under professionally qualified caregivers/teachers. Unfortunately, the situation is contrary in most pre-primary schools in Nigeria. In privately owned pre-primary schools, teachers with no training in ECE are often found in children classrooms while in pre-primary sections of government owned public schools, old female teachers with no qualification in ECE are often seconded to children classrooms.

According to Chukwbikem (2013), the quantity and quality of resources available for any educational programme would determine schools systems capacity for the implementation of the type of educational programme. What this implies is that resources are critical to successful implementation of any ECE programme.

In spite of the fact that resources are critical to successful implementation of ECE programme, they are not found in many Nigerian pre-primary schools, especially in the pre-primary section of public primary schools that belong to the government. Many researchers in Nigeria who have assessed the r esources that are available for ECE at pre-primary school level have confirmed this same situation through the findings of their studies.

Akinrotimi and Olowe (2016) found that one of the challenges facing successful implementation When resources are available for ECE programme at pre-primary school level, it helps the caregiver/teacher to nurture and support the development of young children, and to successfully implement curriculum. According to Chukwbikem (2013), the quantity and quality of resources available for any educational programme would determine schools systems capacity for the implementation of the type of educational programme. What this implies is that resources are critical to successful implementation of any ECE programme. In spite of the fact that resources are critical to successful implementation of ECE programme, they are not found in many Nigerian pre-primary schools, especially in the pre-primary section of public primary schools that belong to the government.

Goble and Horm (2010) have submitted that whatever a person's profession is, the need for professional development is universal because professionals need to continually enrich their knowledge and increase their sense of professionalism over the course of their careers so as to implement current research based practice.

According to Goble and Horm (2010), 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 Nigeria in both public and private school seldom receive professional development training. In fact, some researchers have confirmed that the teachers lack professional development training.

Alabi and Ijaiya (2014) argue that in ECE, adequate funds need to be made available for provision of many resources and activities which include stimulating materials for teaching, training and re-training of staff (teachers and caregivers), enrichment and sensitization of programmes through regular workshops, monitoring, feeding, immunisation, supervision and inspection, report writing, publications, school meals and training manuals among others. This indicates that the importance of funding to successful implementation of ECE in Nigeria cannot be overemphasized. The sad thing however is that Nigerian ECE is ridiculously underfunded.

Wamba and Mgomezulu (2014) investigated the crisis in public education in Malawi. The lack of teaching and learning materials amounts to a serious issue in Malawian schools. The findings revealed the following; in terms of basic learning materials, not all of the standard 6 pupils had at least one exercise book, a pencil or a pen and a ruler. There have been some serious concernsabout the quality of primary and secondary schools including but not limited to overcrowding, poor teachers qualifications, insufficient teaching and learning materials, high–pupil teacher ratios and others. However, Wamba and Mgomezulu's study did not focus on pre primary schools.

The lack of teaching and learning materials amounts to a serious issue in Malawian schools. Among educators worldwide the three most significant factors influencing learning outcomes are teacher qualifications, the number of students in a classroom, and the availability of teaching and learning materials. The Southern and Eastern Africa Consortium for Monitoring Educational Quality (SAMEQ) produced a report assessing the quality of primary schools in Malawi in 2011.

Ngwaru (2010) in a study done in Zimbabwe pointed out that using an unfamiliar language as a medium of instruction is a major impediment to learning. This is because learners are not afforded the chance to learn from their own familiar home language with a curriculum and pedagogy that recognizes their cultural setting. For instance, there are some comprehension passages which use illustrations that learners cannot relate to. A case in point is the comprehension passage in the class three English text books which has used the English expressions, “as white as snow.

Udoba (2014) investigated the challenges faced by teachers who taught learners with development challenges in Tanzania. The research reported challenges that the instructors felt dissatisfied with the large classes that rendered inadequate and inaccessible resources. They also pointed out that the materials available had been obsolete, and they needed new teaching materials. The researcher also noted that the teachers lacked motivation and additional government support services. Many teachers with developmental disabilities do not undergo special training.

They believe that they are not suitable for teaching children with developmental disabilities and cannot use modern teaching materials, even if available.

Learning materials may be available in schools and may be appropriate, but if the school administration does not check their use, this may affect performance. The purpose of this study was to determine the impact that the supervisory functions of Headteachers have on the use of educational material in preschool education and its influence on performance.

Shofoyeke (2014) investigated the influence of three learning methods on toddlers' learning performance in several selected kindergartens and primary schools in Ondo West Local Government, Nigeria. The study found that teachers were confronted with insufficient teaching material, the lack of one ECD curriculum, and inadequate learning space, which hurt education and learning to lead to reduced learning performance. The findings of that research showed that performance depends on the availability of sufficient resources. This study examined the impact of the availability and appropriateness of T/L resources on learner performance in public ECD centers.

Ntumi (2016) examines the challenges for kindergarten teachers in the curriculum for young children; Researching teaching methods for preschool teachers in Metropolitan Cape Coast, Ghana. The study's significant results revealed that preschool teachers experienced many difficulties in implementing the curriculum for young children. It is striking that kindergarten teachers have a poor understanding of the Early Childhood program. Pre-school teachers lack adequate material to support the curriculum, so young children and parents do not participate in school programs. Therefore, it is challenging for preschool children to do an assignment on their own. The study, thus, reported that teachers and T/L materials influence the implementation of the curriculum for young children.

Mumbai's findings clearly showed that many stakeholders are included in the ECD curriculum, but T/L materials are significant for the success of curriculum implementation. This study focused on the purchase and use of educational material.

Emine (2010) investigated the challenges preschool teachers face in the curriculum implementation. The quantitative data were gathered through a questionnaire from 223 preschool teachers teaching in Ankara in public and private kindergartens. The results indicated that the most frequently reported issues by the participants were the problems related to evaluation and physical facilities followed by the ones related to planning science and math activities, organizing field trips, providing parent involvement and inclusion. Results showed that the problems related to physical facilities experienced by preschool teachers working in public kindergartens were significantly differed compared to teachers working in private preschools.

Hoot, Szente and Mebratu, (2011), researched the progress and prospects of ECDE. The study generally looked at ECDE in Ethiopia. It looked at the roots of ECDE in Ethiopia, its progress and prospects. The study highlighted challenges to early education in Ethiopia, including fundamental economic barriers, early marriages, attitude toward education and perception of teaching as a profession. This study has some relationship with the current study, although the present study has policy implementation challenges just as one of the objectives.

Wanjala (2008) critically assesses and analyzes challenges facing the current practice of teacher education for African science and technology fields. The study revealed the approach used in teaching science was theoretical in that it did not offer free laboratory experience, as there were no enough facilities, materials, and equipment.

Teacher training in technology lacks attention to science education. In this area, however, practical experience is required alongside the theoretical aspects of knowledge, which can only be obtained through practical teaching.

The researcher also examined a few modern educational uses worldwide and proposed options applicable to education systems in Africa. The study by Wanjala was about science and technology disciplines in Africa.

This study focused on T/L materials management's influence on learners' performance in public ECD centers in Narok County, Kenya. Ezeasor (2012) study on assessing teachers' use of improvised materials in science education revealed that most science teachers did not improvise science materials or use IIM in schools' teaching sciences. This was attributed to inadequate funding, lack of time on the teacher, lack of creativity and poor improvisation skills.

Similarly, Ofoegbu (2012) study on resources for teaching basic science and technology in Nigerian primary schools found that the teachers used only textbooks and chalkboard during instruction. This inhibits the preprimary learners in developing their inherent potential and using senses in learning science.

The study by Wangila (2017) in Bungoma County identified several challenges that hindered policy implementation that included inadequacy of teaching/learning resources, socioeconomic factors such as ill-health of children financial constraints and lack of government goodwill. According to Emine (2010), the biggest problem for the teachers is the inadequacy of resources in the math activities. Lack of science centers and related materials prevents them from properly implementing science activities.

In fact, this is the problem of having same type of books which result in doing the same kind of mathematic activities. What the teachers want is to have activity books which involve original mathematic activities. Majority of the teachers have books, but they think that the books' content is inefficient. School teachers elaborated the reason for not finding time for writing detailed evaluation as there is a loaded curriculum during the day so this occupies whole time of teachers.

Karanja and Githinji, (2011), further carried out a study on challenges and solutions of ECDE programmes in Kenya. According to their research, policies were central to providing standards and guidelines for ensuring quality services to all children in their earliest years. The study was carried out to determine the extent to which the policy had been implemented at both the national and grass-root levels citing the challenges and lessons learnt from the process. The study population comprised of the QASOs at both the federal and the grass root levels.

The study used a set of questionnaire to collect data. It also used hypotheses instead of the research objectives. From the analysis done, the study looked at challenges in the ECDE programmes in Kenya. The current research has looked at challenges just as one of the factors hindering implementing the ECDE policy in Kenya. It employed various tools in collecting data that is questionnaires, interview schedules, observation schedules and document analysis in the collection of its data. This makes the current study well-informed since the instruments tend to complement and supplement each other.

Defaru (2014) assessed educational resource management and utilization for quality education in schools of Jimma town. To meet the objectives of the study, a descriptive survey design was employed. From the total population, 93 academic staff and 21 administrated staff were selected for this study. Four principal, one office supervisor and three curriculum officers, were also selected using purposive sampling. Less position of pedagogical centre service, less role in practice resource utilization, insufficient maintenance activity in the schools, and shortage of current reference books in the library. Moreover, lack of training for staff s, Lack of adequate planning skills, Lack of users' skills, Problems of adequate storage and handling, insufficient distribution and Environmental factors like rain affect educational materials management and utilization.

Ayaga (2018) studied the trends of education in Kenya, inherent inconsistencies, and preschool education challenges in Kisii County, Kenya. The study targeted all 968 (699 public and 269 private) preschools, 968 head teachers, 2357 ECDE teachers, nine sub-county education officers and 9 Sub-County ECDE officers.

The sample included 344 headteachers, 657 ECDE teachers, nine sub-county education officers and 9 Sub- County Early Childhood Education Officers in the County. The study administered a questionnaire and an interview schedule. The headteachers filled questionnaires, and preschool teachers filled questionnaire. The ECDE centers did not have enough qualified teachers to teach all the three-level (baby class, nursery and pre-unit). Also, even though play is an integral part of preschool learning, only 28.5% of the school had enough playground. During interviews, headteachers identified the challenge of meagre payment of preschool teachers; lack of physical facilities and lack of land to expand ECDE centers.

Generally, there is low funding and implementation of ECDE Programmes in Kisii County. There is a need for the improvement of ECDE services in Kisii County. Karanja and Githinji, (2011), associate non-implementation of the ECDE programme with insufficient funding, inadequate policy formulation, low participation rates by the target groups, lack of curriculum content, inadequately qualified educators, lack of scheme of service, rising number of orphans and conflict in the medium of instruction.

Despite the significance of preschool Education, numerous challenges remain to pull down its effective execution. These include insufficient instructional resources, socioeconomic issues, large learner/pupil ratio, Poor Payments, monetary constraint (Wanjohi, 2014). In various parts of the world, a good number of preschools lack suitable and sufficient resource. These include lack of appropriately ventilated rooms, apposite furniture, clean water, proper play area, toilets and playthings. Despite the significance of preschool Education, numerous challenges remain to pull down its effective execution.

These include insufficient instructional resources, socioeconomic issues, large learner/pupil ratio, Poor Payments, monetary constraint (Wanjohi, 2014). In various parts of the world, a good number of preschools lack suitable and sufficient resource. These include lack of appropriately ventilated rooms, apposite furniture, clean water, adequate play area, toilets and playthings.

Malnourishment and health issues expressively impair the cognitive processing ability of children. Pupils whose processing capability is impacted by Malnourishment and health issues may need extra hours of teaching to acquire several skills. As such, execution of an early childhood programme may prove critical impoverished nations (van de Linde, 2005).

Socioeconomic differences affect the carrying out of ECDE programmes across the region, with some being categorized 'marginalized' or arid and Semi-Arid Lands. Regional inequalities have a significant impact on preschool education access; while enrolments in rural and relegated areas are low urban areas have high enrolment.

The Financing Mechanisms in Early Childhood Education Preschool programme in Kenya runs based on collaboration and networking (Owiye, 2010). The foremost stakeholders in preschool programme are parents, community and the private sector that offer monies and other resources. Additionally, other partners are the Kenya Government and its fundamental departments coordinated by the county government. NGOs, Civic Organizations, Religious organizations as well as bilateral and multilateral partners have been offering to fund to Early Child Education (Emmily, Bota & Mwangi, 2014).

Wangila (2017) investigated the challenges facing the implementation of early childhood development and education policy in Bungoma County, Kenya. The sample size of the study comprised of 9 QUASOs, 27 head teachers, 81 teachers of ECDE and 27 non-teaching staff from selected public primary schools in the study region. The study utilised simple random sampling, stratified and purposive sampling. The study identified a number of challenges including: inadequacy of teaching and learning resources, financial constraints, and lack of government good will, poor training of ECDE teachers, insecurity, high pupil-teacher ratio, poor teacher remunerations and the introduction of FPE. the teachers also lamented over insufficient teaching /learning resources. They indicated that the centres hardly provide them with reference materials making their instructional process very difficult.

Anyiendah (2017) investigated challenges faced by teachers when teaching english in public primary schools in Kenya. The researcher found out that there is limited access to resources attributed to the large enrollments, key among them are textbooks. The study established that that the pupil/textbook ratio is a significant measure of effective teaching because pupils heavily rely on text books. Therefore, in a constrained textbook environment, it is difficult for a teacher to implement effective practices.

Makoti, (2013) in a study in Kenya found that there is lack of Schemes of Service of ECDE teachers. There has been low and irregular remuneration of pre-school teachers thus adversely affecting the morale of the teachers. Several studies have been carried out and it has been discovered that teachers' motivation is hampered by low pay and benefits as well as lack of professional development avenues.

Abdi and Hardman (2007) explain that in most schools in Kenya, learners are not given ample opportunities to practice the English language in the classroom when learning other subjects because of switching from one language to the other. Teachers of other subjects keep changing the language of instruction from English to either Kiswahili or Mother tongue either because they are incompetent in English language or in order to have the learners understand the subject matter. This situation results in minimal exposure to the language (.

2.12 Theoretical Framework

The theoretical framework is the justification of the investigation. It provides the reason for searching for new data and the analysis, interpretation, and synthesis of this data. The framework also lists the theories on which the study is anchored to examine the correlation between the study variables (Labaree, 2009).

In this study, two theories are used, Education Production Theory by Hanushek (1995) and Cognitive Load Theory by John Sweller (1988).

2.12.1 Education production theory

The study employs Education Production Theory (EPT), which was developed by Hanushek (2008). This theory demonstrates the importance of translating inputs into outputs. Hanushek (1995) notes that the approach to production function is the most attractive and appropriate for describing the commitment of pupils' accomplishments. There is no agreement about the concept and calculation of education inputs and outputs.

However, the problem may emerge from the undefined educational goals which can be converted into operational and observable purposes, so that there is an unstructured unit of inputs and outputs. Thus, inputs are mainly Teaching Learning Resources[T.L.R.], including Teaching Learning Materials[T.L.M.], competent teachers and the school's physical materials.

In other words, the quality of T/L materials affects learners performance. The theory's applicability in the analysis can be seen in that all the theoretical concepts with headteachers' management of teaching and learning materials are conceptualized to play a role on learners' performance.

2.12.2 Cognitive load theory

Cognitive load theory was developed in the late 1980s out of a study of problem-solving by John Sweller. Sweller (1988) argued that instructional design could be used to reduce cognitive load in learners. This theory states that the ability to learn or the learner's mental capacity is limited to the learners' age and mental ability. The theory further states that learners may receive overwhelming information in terms of too much content or complex concepts, and when the teaching and learning materials are poorly utilized.

Consequently, this will result in overload, where learners are provided with more content than they can learn or handle (Sweller, 1988). In other words, proper management and use of T/L resources are argued to make learners perform better in their schoolwork. These are known as intrinsic, extraneous, and germane loads and, added together, make up the working memory capacity. Cognitive overload occurs when work memory capacity is exceeded (De Jong, 2010).

When this happens, it is impossible that we will pass the new knowledge to our long-term memory. We know so little, in essence. Extraneous load is terrible for learning since it can hinder long-term memory building. That students have to do is an extra and unnecessary thought, which does not contribute to education. If teaching and learning materials are not chosen and used correctly, learning would be impeded if instructional materials exceed the limited cognitive function resources (van Merriënboer & Ayres, 2005).

T/L materials that utilize Cognitive load theory recommendation can increase learning efficiency and effectiveness for learners in a wide variety of educational and training contexts (Artino, 2008). This theory is appropriate to the study in that the management of T/L materials in preprimary schools positively influences learners' performance in activity areas.

2.13 Conceptual Framework

A conceptual framework relates to the conceptualization and measurement of the relationship between study variables and illustrates the relationship graphically or schematically (Mugenda & Mugenda, 2003). The study's conceptual framework in Figure 2.2 is considered significant as it helped the researcher quickly understand the relationship between the study's independent and dependent variables.

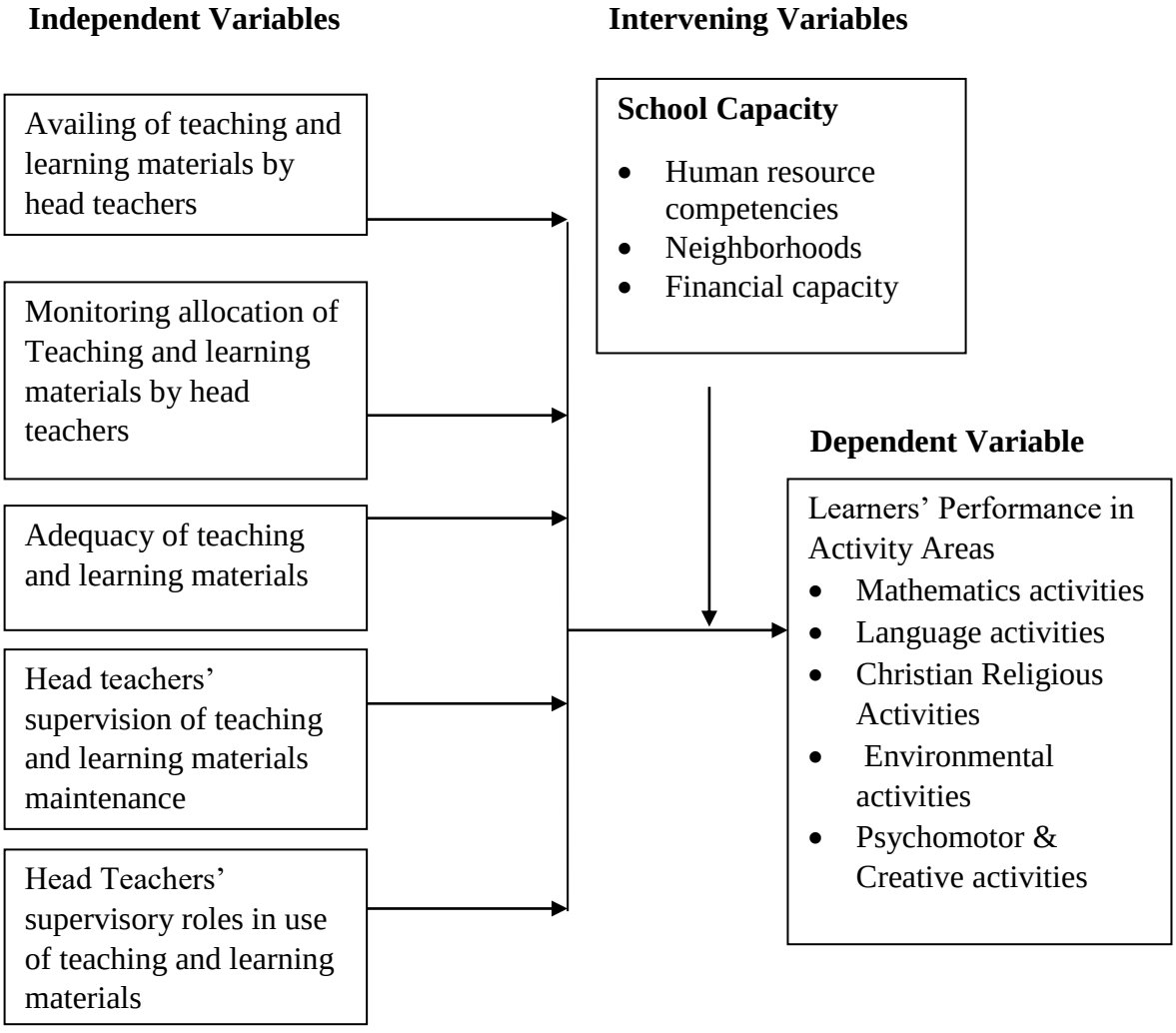


Figure 2. 1: Conceptual Framework of a Critical Analysis of headteachers management of teaching and learning materials for learners perfomance in activity areas

The study conceptualizes that headteachers' management of teaching and learning materials (independent variable) influence learners' performance in activity areas (dependent variable). In this paper, the relevant dimensions of the management of Teaching and Learning materials include the availing of teaching and learning materials by headteachers, monitoring allocation of T/L material by heads, adequacy of teaching materials, the leadership role of Heads in the maintenance of Teaching and Learning Materials, and the oversight roles of Managers in use of T/L materials. Learners' performance in activity areas is concerning understanding in Mathematics activities, Language activities, Christian Religious Activities, Environmental activities and Psychomotor & Creative activities.

The correlation between the variables in this study is subject to intervening variables, including human resource competencies, school neighborhoods and financial capacities. The argument is that the provision of didactic materials an input from school managers influence performance in areas of activity in public kindergartens.

Intervening variables are school capacity, which is in the form of human resource competencies, school neighborhoods, and schools will be represented in the study in similar environments or given different classifications. The researcher knows the gaps contribute to (such as rural or urban, affluent or remote) locational differences. The headteachers' efforts in the schools may differ, and schools will therefore be selected across the six sub-counties of Narok County. This is also applicable to parents' support, which varies from area to area.

2.14 Identification of Knowledge Gap

Empirical evaluation worldwide, regionally and in Kenya, shows that the management of teaching and learning materials is essential for schools' effectiveness. However, the review fails to link Teaching and Learning Materials management with children' performance in activity areas. However, the majority of studies did not focus on the influence of T/L materials management by headteachers on the performance of pre-school learners in activity areas and showed a significant knowledge gap. The studies reviewed did not look at the aspect of learners' performance in activity areas such as mathematics activities, language activities, Christian religious activities, environmental activities, and psychomotor & creative activities.

Besides, some studies have focused on secondary and primary schools. This study focused on preprimary schools. For instance, studies such as Abdelrahim (2008), Lyons (2012) and Moyo, Wadesango, and Kurebwa (2012) largely do not explain the link between headteachers' role of availing teaching and learning materials and learners' performance in activity areas. Also, no study was conducted in Narok County Pre-primary Schools.

The literature review with respect to monitoring allocations of teaching and learning materials and learners' performance, fails to establish a link between the two variables, management of Teaching and Learning Materials(T.L.M.) and learners performance. For instance, studies such as Mascitti-Miller (2012), Usman (2016), Mbaka (2012) and Wambua (2015) did not explore the relationship between headteachers' monitoring of T/L materials allocation and performance in activity areas. Moreover, none of these studies was conducted in preprimary schools in Narok County.

Even though studies such as Offenheiser and Holcombe (2008), Momoh (2010), and Lyimo, Too and Kipng'etich (2017) established that inadequate instructional resources did not specifically affect the implementation of the ECDE programme, exploring the impact of the adequacy of T/L materials on the learners' performance in the areas of activity.

The review of studies such as Beyene and Bezera (2017), Karanja (2015) and Kangethe (2011) failed to investigate the impact of maintenance of teaching and learning materials on learners' performance in activity areas. Furthermore, none of these studies was conducted in preprimary schools in Narok County.

With respect to use of teaching and learning materials, Makokha (2017) in the Bungoma East Sub-county focused on using improvised material in pre-school education in science education, not in other activity areas. The related study on the use of teaching and learning materials by Okoth (2014) was in Siaya district of Kenya and not Narok County.

Doublegist (2013) noted that T/L materials if used correctly, can form a foundation for conceptual reasoning and minimize meaningless word responses by learners who are permanently learning and have a strong interest to learn. However, the researcher could not determine what influence they had on learner performance in activity domains. Therefore, it is sufficient that the assessment shows that a study was needed to investigate the impact of T/L materials management by Headteachers on the learners' performance in preprimary schools. This phenomenon has only limited research, and the gaps are indeed blatant.

.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, the target group, the sampling field, the sampling procedure, the research tools, piloting, data collection techniques, data processing, analysis, and results presentation.

3.2 Research Design

The research methodology is the theory and analysis of how the study is to be conducted and its process. The action plan defines the choice and application of specific methods and links them to targeted results. A research methodology is a philosophical argument of a worldview underlying and informing the study style (Sapsford & Jupp, 2006). This research used convergence mixed methods design. A convergent mixed methods design of "mixing" methods" is a kind of structure in which qualitative and quantitative information is recorded separately and then combined (Creswell, 2014). This research design was selected because the researcher collected and analyzed qualitative and quantitative information over a comparable period of the research process. The two outcome agreements were presented in a general interpretation. It is a structure in which qualitative and quantitative data are gathered in parallel, analyzed separately, and combined into a general understanding.

This mixed-method addressed teaching and learning materials management by headteachers on learners' learners' in activity areas, in public pre-primary schools in Narok County, Kenya. The possibility of triangulation, such as using multiple means (methods, information sources, and scientists) to examine the same phenomenon.

This is one of the most advantageous features of undertaking mixed methods research. Triangulation allows one to identify aspects of a phenomenon more precisely by approaching it from different viewpoints using different methodologies. Effective triangulation requires a thorough understanding of each approach's kinds of data, including its advantages and disadvantages.

The advantages of the mixed-method approach include the fact that it can be simple to explain and report; it can be useful if inconsistent findings arise from a previous study; it can help generalize, to a certain degree. The approach can also help design and validate an instrument and can place research within a transformative framework. A questionnaire, a quantitative research tool, was provided to headteachers and pre-primary school teachers to retrieve information that may not be available in the interviews. The qualitative phase focused on teaching-learning material management and learner performance in activities generated through in-depth interviews with ECD coordinators and quality assurance and standards officers in Narok County. The qualitative phase complemented the quantitative results to obtain more accurate research results.

The researcher triangulated the techniques by taking quantitative, factual results into account with subjective discoveries for justification and approval. Besides, a correlation was done to examine the nature and extent of the link between indicators and paradigm factors.

Regression Analysis was used to test the hypotheses. The variables are the management of T/L materials by headteachers (independent variable) and learners' preschool activities (dependent variable).

3.2.1 Research philosophy

The research was based on Pragmatism philosophy. As a research paradigm, pragmatism is based on the proposition that researchers should use the philosophical and methodological approach that works best for the particular research problem investigated (Tashakkori and Teddlie 1998). Pragmatics "recognize t "at there are many different ways of interpreting the world and undertaking research, that no single point of view can ever give the entire picture and that there may be multiple realities" (Saunders," Lewis & Thornhill, 2012)

The pragmatic method is activity-based. The essence of the pragmatic approach is learning through the personal experience of the child. To a pragmatist, education means preparation for practical life. The child should know the art of successful tackling of practical problems and real situations of life. The pragmatists are not interested in lectures or theoretical exposition. They want the children to do something—action rather than contemplation figures prominently in pragmatic education. The child should learn by doing. "Learning by doing" is the maxim of pragmatic education.

3.3 Location of the Study

The research was carried out in Narok County. The County is located in the South Rift region of Kenya, formerly known as the Rift Valley province. Narok County is bordered by Nakuru County to the north, Kajiado to the east, Bomet to the west, and Tanzania to the south. The County is located south of the equator and is located near the famous Maasai Mara game reserve that borders Tanzania. The terrain is characterized by plains and a few mountains in the north.

The other physical feature of the County in the north is the Mau Forest, the central water tower. The most important economic activity in the region is livestock rearing. Narok County is a livestock rearing area where people are mainly dependent on livestock as a livelihood. The County government has a mandate from the Kenyan constitution (2010) to manage Early Childhood Development and Education (ECDE). The size of the Narok district is 17944 km square.

Narok County has six educational sub-counties: Narok North, Narok East, Narok South, Narok West, Transmara West, and Transmara East. The researcher selects Narok County in that the performance trends in activity areas and transition to standard one, have remained unimpressive over the past decade (Narok County Education Office, 2018). Narok County was selected for study because the residents' socio-cultural background can negatively influence the education of children (Busienei, 2014). There are also limited studies on the management of teaching materials at public pre-primary schools in this region.

It is also clear that Narok public preschools have the same school characteristics concerning the distribution, availing, adequacy, and management of teaching and learning materials.

3.4 Target Population

The target group describes a collection of individuals or subjects with common or comparable characteristics (Cooper & Schindler, 2013). In this regard, the Headteachers and pre-primary teachers were the target audience. There are 735 public preschools in Narok County, as stated in Table 3.1. The target population was 735 preschools, of which an accessible population of 1470 preschool teachers and 735 head teachers of public primary schools in Narok County were reached. The target population also included six quality assurance and standards officers of the sub-counties and 30 ECD coordinators. All respondents were accessible, and they provided the required data.

Table 3. 1

Target Population

Sub County	No. of Schools	Head Teachers	Teachers of Pre-school
Narok North	176	176	352
Narok East	83	83	166
Narok South	148	148	296
Narok West	123	123	246
Transmara West	126	126	252
Transmara East	79	79	158
Total	**735**	**735**	**1470**

Source: Narok County Education Office (2018).

3.5 Sample Size and Sampling Procedures

The sampling frame is an extensive list of all sample items or people from which a sample is taken. All preschools in Narok County provided the sample framework for the study. The selection framework consisted of pre-primary schools, Headteachers and pre-primary teachers responsible for their respective preschools. A survey study uses part of the population to extrapolate outcomes and draw conclusions about the population.

A stratified random selection is a method whereby schools are classified and selected according to the sub-counties. The unit of sampling in this study was the pre-primary schools. The sample size of the pre-primary schools in the research has been calculated according to a scientific formula from Kothari (2004) (Appendix VII).

The Sample for Head Teachers and Teachers: purposive sampling was used to sample 85 head teachers and 85 pre-school teachers (those in charge of every pre-school)

Table 3. 2

Sample Distribution Matrix

Sub County	No. of Schools	Population Proportion (PP)	Head Teachers (PP x 85)	Teachers I/C of Preschool (PP x 85)
Narok North	176	24%	20	20
Narok East	83	11%	10	10
Narok South	148	20%	17	17
Narok West	123	17%	14	14
Transmara West	126	17%	15	15
Transmara East	79	11%	9	9
Total	**735**	**100%**	**85**	**85**

Source: Author, (2018)

Table 3.2 above shows that one Headteacher and one preschool teacher were selected from each of the 85 primary schools.

The percentage column was computed by taking the school population for each sub-county and dividing the same with the total target population for schools (735) and then multiplying the result by 100 to get the percentage to ensure proportionality among the six sub-counties of Narok County. Usage of purposeful sampling technique to sample headteachers and preschool teachers from 85 primary schools.

This means 85 Headteachers and 85 preschool teachers (one per school selected). The sample was then divided proportionally to the six sub-counties of Narok County based on the population share. The choice of these respondents used purposive sampling method.

Sampling for Quality Assurance Officers in Sub-counties: Census sampling technique was used in sampling Quality Assurance Officers from the six Sub-counties to be polled, each representing a Sub-county. Census technology is suitable because it is economical and given the small size of this population (Farooq, 2013).

This method has a high level of accuracy and helps the researcher represent the County's six geographical regions.

The Sample for ECD Coordinators: The study used 30% of the population as the sample, as informed by Gall and Borg (2003) recommendation. Given that these coordinators' population is 30, it means 30% of (30) which is 9 ECD coordinator, when it is divided into the Six sub-counties, it translates to 1.5, (that is 2 ECD Coordinators per Sub County). Therefore, 10 ECD Coordinators were sampled for the study, using a simple random sampling technique.

Response rate over 75% would be acceptable in the study, Dommeyer, Baum, Chapman, and Hanna, (2002) states that the adequate response rate for on-paper surveys is 75%.

3.6 Data Collection Instruments

Primary data was collected via self-directed (one-to-one) semi-structured questionnaires and interview plans. Questionnaires can collect data from a large sample, keep confidentiality, save time, and avoid interview interference (Kombo & Tromp, 2006).

Questionnaires were used to gather data from school Headteachers and preschool teachers, while the survey schedule is used to collect data from quality assurance officers and ECD coordinators. An observation checklist was also kept at 85 preschool schools to determine the availability and adequacy of T/L materials.

Questionnaires are important for data collection, as the researcher can obtain a large sample within a specific period as well as guarantees the confidentiality of the information provided by respondents. The questionnaires contain open and closed questions, which are on a 5-point Likert scale.

Questionnaires: Headteachers and preschool teachers gave information on the influence of headteachers' teaching and learning materials on learner performance in public preschools.

Part A of the questionnaire gathered information on the specific aspects of headteachers and teachers. Part B collected data on teaching and learning materials management by headteachers on learner performance in public preschool activities in Narok County.

Schedules for interviews: The interviews' schedules contained closed and open questions that were suitable for collecting qualitative data. They were used to collect data from the Quality Assurance Officers of Sub Counties and the ECD coordinators for all five research objectives.

Observation checklist: an observation checklist was kept in all the preschools studied. The purpose of the checklist was to collect qualitative data on the availability and adequacy of Teaching and Learning materials in preschools.

Secondary Data: The survey collected secondary data from preschool teachers by reviewing learner progress records to verify performance. In the current Competency-Based Curriculum (CBC), Assessment Rubrics are used to check learning outcomes. A rubric is a tool generated by a teacher, that maps specific learning outcomes which specify efficiency, success level and results mastery.

Rubrics are meant to measure the product, process, and learning progress (KICD,20I7). The Curriculum designs utilize exceeding expectations, meeting expectations, approaching expectations, and below expectations regarding performance levels in pre-primary school.

3.6.1 Validity of the instrument

The instruments' validity refers to the extent to which the instrument measures what it must measure (Cooper & Schindler, 2013). Various strategies ensured the validity of the research tool. As Wiersma (1995) puts it, the content's validity determines the representation of the elements in compliance with the research's purpose.

The study did both Content validity and Construct validity. These types of instruments' validity were determined by consultation with university experts, from the University's Education Planning and Management and the regulatory authorities, as this type of validity is not statistically measurable.

3.6.2 Reliability of the instrument

A pilot study was carried out at nine public preschools in Bomet County (10 per cent of the 85 preschools). The researcher chose the schools to ensured that selected pilot schools do not participate in the main research. The pilot study detected shortcomings in the questionnaires before the final data collection was carried out (Cooper & Schindler, (2013). Using test experiments, the researcher can determine whether respondents understand the instructions and questions in the research tools or not. Pilots, therefore, determined the reliability and validity of the research tool.

According to Cooper and Schindler (2013), reliability is a measure of the extent to which a study instrument provides consistent results in repeated investigations. The instruments' consistency was tested by calculating Cronbach alpha reliability coefficients from the pilot studies using the benchmark with coefficient values greater than 0.7.

The instruments' reliability was tested by computing Cronbach Alpha coefficients reliability using the Test-Retest approach from the pilot study data. Orodho (2008) states that a correlation coefficient of > 0.7 is reliable for collecting quality data for a study. Instruments with a correlation coefficient of > 0.7 were considered reliable and adapted for the study.

The Cronbach Alpha coefficient results were as provided in Table 3.3.

Reliability test results for 23 questionnaires administered to headteachers were as contained in Table 3.3.

Table 3. 3

Reliability Test Per Instruments

	Cronbach's Alpha
Heatachers questionnaires	0.886
Teachers questionnaires	0.712
Teaching and learning materials observation checklist	0.721

The alpha index for all sections combined for teachers' questionnaire was 0.886. While the alpha index for all sections combined for Centre Teaching Learning Materials Observation Checklist was 0.712. Further, the alpha index for all sections combined for Centre Teaching Learning Materials Observation Checklist was 0.721.

The reliability of interview schedules administered to Quality Assurance Officers and ECD Coordinators were tested using the test-retest approach. The research conducted pre-interview which were used to assess the quality and capacity of the interview schedules.

3.7 Data Collection Procedures

The researcher obtained an introductory letter from the University of Kabianga, which was used to apply for research permit. The researcher applied for a research permit from the National Commission for Science Technology and Innovation (NACOSTI).

The permit and introductory letter were presented to the school Headteachers and education authorities, who gave the researcher permission to access pre-primary research schools.

The permit was used to receive an introductory letter from the Director of Education in Narok County. The data collection tools were administered to respondents in person by the researcher.

3.8 Data Analysis and Presentation

This section presents the data analysis techniques and procedures that were adopted in this study. According to Chapman (2018), data analysis entails checking, organizing, modifying, transforming and extracting useful information from raw data.

3.8.1 Descriptive and inferential analysis

The data in the questionnaires were processed to remove inconsistencies. The processing ensured that the answers were complete, accurate and suitable for further processing. The data was then encoded and finally analyzed electronically with Social Science Statistics Version 23 (SPSS).

Quantitative data were analyzed using both descriptive and inferential statistics. First, the descriptive statistics (frequencies, averages, and percentages) include distribution and critical trends and deviations. Regression analyses were computed to examine the relationships between the research variables, as stated in the null hypotheses H01-H04. The regression analysis involved the computation of the ANOVA, t-tests, Beta value (β), and the p values.

The golden goal is to reject the null hypothesis when the p-value is less than 0.05 significant test ($p<0.05$) and accept the null hypothesis when the p-value is more significant than 0.05 ($p>0.05$).

The following regression model guided the study.

$\hat{y} = bx + a$ (or, equivalently, $\hat{y} = \beta_1 x + \beta_0$)

where:

x = a value on the x axis

b = slope parameter

a = intercept parameter (i.e., value on y axis where $x = 0$ [not shown above])

$\hat{y}$ = a predicted value of y

$LPAA = \beta_0 + \beta_1 AvTLM + \beta_2 MATLM + \beta_3 AdTLM + \beta_4 MTLM + \beta_5 STLMU + \varepsilon$

Where:

LPAA= Learners' Performance in Activity Areas

AvTLM = Availing Teaching and Learning Materials

MATLM= Monitoring Allocations of Teaching and Learning Materials

AdTLM = Adequacy of Teaching and Learning Materials

MTLM = Maintenance of Teaching and Learning Materials

STLMU = Supervision of Teaching and Learning Materials Utilization

β_0 = regression Constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$: Regression coefficients for independent variables

ε = Error/Disturbance Term assumed to be normally distributed

The categorical variables for the regression are as follows:

$H_{01:}$ Availing teaching and learning materials by Head teachers and learners' performance in activity areas

H_{02}: Head teachers' monitoring allocations of teaching and learning materials and learners' performance in activity areas

$H_{03:}$ Adequacy of teaching and learning materials, and Learners' performance in activity areas

$H_{04:}$ Head teachers' managerial roles in the maintenance of teaching and learning materials and Learners' performance in activity areas

$H_{05:}$ Head teachers' supervision of teaching/ learning materials utilization and Learners' performance in activity areas.

The quantitative data results were presented in tables (tabular summaries) and charts (pie charts, graphs, and bar charts).

Qualitative data collected from interview schedules and the ECD Centre teaching-learning materials observation checklist will be analyzed using Thematic Textual Analysis. This approach involved sorting and classification of related themes emerging from the responses. The classification was according to the study objectives. The results were presented in prose form(Narrations).

3.9 Ethical Considerations

According to Resnik (2015), ethics assists researchers to define moral issues pertaining to research procedures. The first ethical consideration in this study was that the respondents responded voluntarily to the questionnaires and informed consent.

Kombo and Tromp (2006) argue that researchers should consider the study's behaviour and should consider ethical issues related to the study. The ethical issues such as confidentiality and informed consent, openness, honesty, accountability in dealing with other researchers, and research topics are given due to physical and psychological protection.

The study participants were accordingly informed about their participation in the study and the terms and conditions for their contribution. Information about the study's aim, method, and the procedure was given to the participants, including the preschool leaders and teachers.

The investigation ensured that the permit to conduct the investigation was collected from the relevant authorities before collecting data. The researcher obtained approval from the National Commission for Science, Technology, and Innovation (NACOSTI) before conducting this study to ensure ethical compliance during the study process. The researcher then used the obtained permission to obtain approval from the Narok County Education Bureau to exercise regularly. The researcher also confirmed that participants were treated with the highest respect and were made aware that their participation was voluntary.

Participants also had the free will to retire at every stage of the data collection process. The approval was to be obtained long before the study starts, and the consent forms are signed. Participants were completely aware of the investigation's purpose and were given confidentiality and anonymity, as their identities and details remained anonymous and confidential. The participants were not exposed to any emotional stress because their participation was voluntary.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the study's data analysis, presentation, interpretation, and discussion. Detailed data analysis sections in descriptive analysis, descriptive statistics, and inferential statistics, as guided by the methodology in Chapter three, are included in the chapter. Questionnaires and interview schedules were used to collect data. The analysis and presentation are guided by the study's objectives and are related to the literature review in chapter two.

4.1.1 Respondents Response Rate

The researcher distributed 170 questionnaires targeting teachers and headteachers in public pre-schools in Narok County, and the response rate was as presented in Table 4.1.

Table 4. 1

Response Rate

Response Category	Target	Actual	% Response
Head teachers	85	81	95.3%
Teachers	85	85	100.0%
Total	**170**	**166**	**97.65%**

The study obtained a response from 81 head teachers and 85 teachers, translating to an average rate of 97.65%. That was adequate to enable the researcher to arrive at reliable findings and recommendations.

Dommeyer, Baum, Chapman, and Hanna, (2002) opined that the acceptable response rate for on-paper surveys is 75%; therefore, the attained percentage was good and found adequate to the researcher.

4.2 Demographic Characteristics

This section presents the results for the respondents' demographic characteristics. The section contains outputs on the respondent's gender, age of respondent, length of respondents' experience in the current station, and pre-school position.

4.2.1 Gender of the respondents

The responses concerning the gender of the respondents for the two categories (headteachers and teachers) were as presented in Table 4.2.

Table 4. 2

Gender of Respondents

		Head teachers		Teachers	
		F	**%**	**F**	**%**
Gender of respondent	Male	54	66.7%	18	21.2%
	Female	27	33.3%	67	78.8%
	Total	**81**	**100.0%**	**85**	**100.0%**

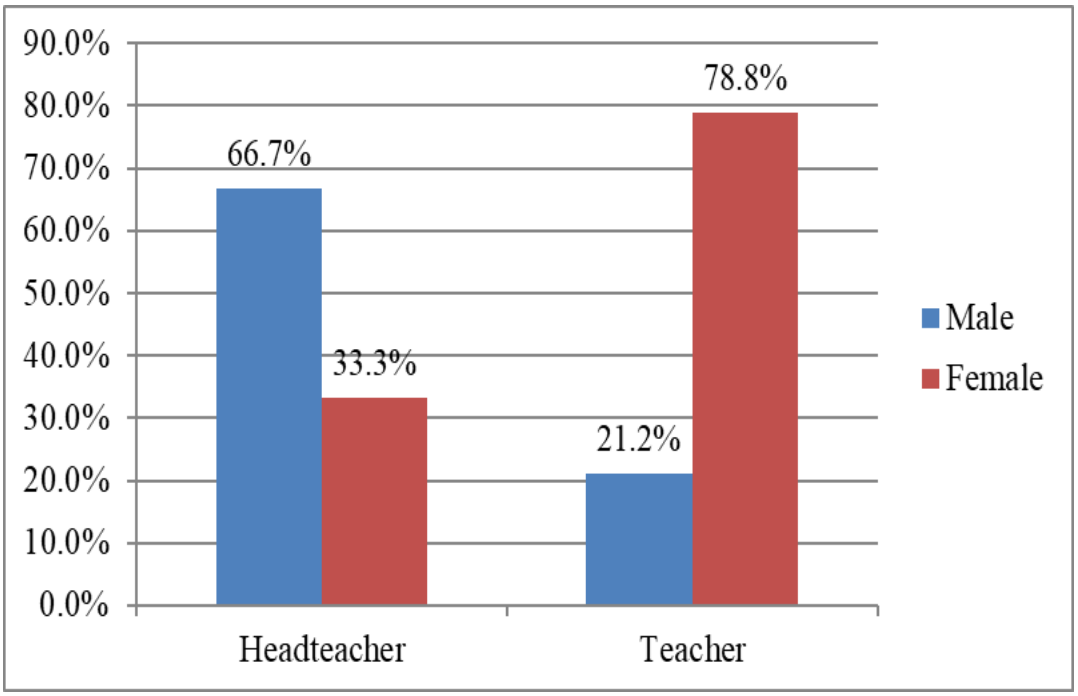


Figure 4. 1: Gender of Respondents

The results in Table 4.2 and Figure 4.1 show that 66.7% of the headteachers and 21.2% of the teachers were male participants, while 33.3% of the headteachers and 78.8% of the teachers were female respondents. This implied that male respondents occupied headteachers positions in most of the pre-schools, while most of the pre-school teachers were female. Likwop (2016) found that there were more male headteachers than female headteachers in Narok County. This result reveals a similar pattern, showing few women in school leadership in the County.

4.2.2 Age of respondents

The responses concerning the age of the respondents for the two categories (headteachers and teachers) were as presented in Table 4.3.

Table 4. 3

Age of Respondents (N=166)

		Head teachers		Teachers	
		F	**%**	**F**	**%**
Age of Respondent	18-27 years	4	0.0%	0	4.7%
	28-37 years	9	11.1%	29	34.1%
	37-48 years	36	49.4%	46	49.4%
	49 years and above	32	39.5%	10	11.8%
	Total	**81**	**100.0%**	**85**	**100.0%**

Table 4.3 show that 39.5% of the headteachers and 11.8% of the teachers were in the age bracket of 49 years and above. It is also demonstrated that 49.4% of the headteachers and teachers were aged 37 to 48 years, whereas 11.1% of the headteachers and 34.1% of the teachers were aged 28 to 37 years, while 4.7% of the teachers were aged 18 to 27 years. This implied that the respondents participating in the research were in the age bracket of 37 years or above in both cases.

Table 4. 4

Length of Service in the Current Station (N=166)

		Head teachers		Teachers	
		F	**%**	**F**	**%**
How long have you been in the current station?	Below 1 year	5	6.2%	4	4.7%
	1-3 years	18	22.2%	9	10.6%
	Above 3 years	58	71.6%	72	84.7%

The results in Table 4.4 show that 71.6% of the headteachers and 84.7% of the teachers had been in their current workstation for a period above three years. The results also show that 22.2% of the headteachers and 10.6% of the teachers had been in their current workstation. In comparison, 6.2% of the headteachers and 4.7% of the teachers indicated a period below one year. The results show that majority of the teachers and headteachers have worked in their current workstation for a period long enough to provide the information sought on the status of management of teaching and learning materials and learners' performance in activity areas.

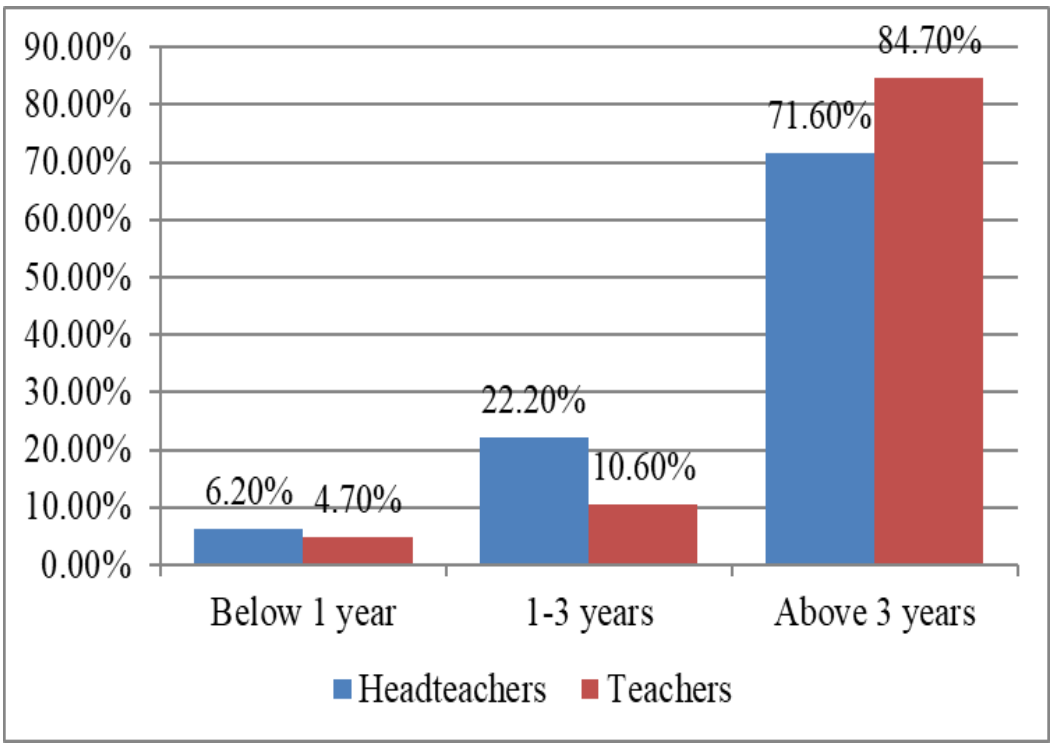


Figure 4. 2: Length of Service in the Current Station

4.3 Availing of Teaching and Learning Materials by Head teachers on Learners' Performance in Activity Areas

This section presents the findings concerning the first objective, which sought to investigate the influence of teaching and learning materials by Headteachers on learners' performance in activity areas in public pre-primary schools in Narok County.

4.3.1 Descriptive statistics for head teachers' role in availing teaching and learning materials

Descriptive statistics were computed for the headteachers' role in the use of teaching and learning resources, and the results were as shown in Table 4.5.

Table 4. 5

Descriptive Statistics for Head teachers' role in Availing Teaching and Learning Materials (N=166)

Material	Head Teacher			Teachers		
	N	Mean	Std. Dev.	N	Mean	Std. Dev.
Reference materials	81	4.0494	0.80469	85	4.0706	0.94854
Maps	81	3.2963	0.98036	85	2.9765	1.20492
Diagrams	79	3.8481	0.84866	85	3.5059	1.05361
Charts	79	4.0506	0.86081	85	4.0824	0.90253
Pictures	81	4.2593	0.99722	85	4.3412	0.95809
Play things (toys, blocks)	80	3.9125	1.17132	84	3.8214	1.20402
Fixed play materials	80	3.2000	1.36317	84	2.9643	1.50057
Valid N (listwise)	75			83		

Referring to Table 4.5, further descriptive analysis according to the categories of the respondent revealed the following. The availability of reference materials in most of the schools influenced learners' performance in activity areas. According to the headteachers and teachers, this was indicated by mean scores of 4.0494 and 4.0706. The teacher's response had a slightly higher mean score. The findings agree with Isola's study (2010), which reported that the availability of reference materials influenced the learners' performance in schools.

The results in Table 4.5 show that the mean score for maps was as follows: headteachers mean score was (3.2963) and teachers (2.9765). Headteachers appear to suggest that maps were available in schools, while Most teachers held the opposite view, given that their response yielded a mean score less than the 3.0 neutral mean score.

The results suggest that the availability of maps in pre-primary schools did not influence learners' performance in activity areas in Narok County. The findings concur with Kris (2018), who said map availability was critical to the learners' performance. Kris noted that while many digital age skills have become obsolete, Map reading remains an essential instrument for improving children's spatial cognitive skills and enabling them to make the world's sense.

The results in Table 4.5 show indicate that in most schools, the availability of diagrams influenced learners' performance in activity areas. This interpretation stems from the fact that both the headteachers and teachers' responses to this aspect recorded a mean score of 3.8481 and 3.5059, respectively. The fact that this score was above 3.0 shows that most schools made available diagrams for supporting activity areas, which helped enhance learner performance.

Table 4.5 shows that both headteachers and teachers agree that playthings (toys, blocks) were available in most schools. This is as evidenced by the mean outputs as follows. Headteacher response recorded a mean score of 3.9125 while that of the teachers recorded a mean score of 3.8214. The mean score was above the 3.0 neutral mean score but below the 4.0 score. The implication was that playthings were available in most of the schools in Narok County.

The results agree with a study by Trawick-Smith, Wolff, Koschel and Vallarelli (2014), where the use of playthings such as toys was mentioned as crucial for teaching and learning, and their availability in a pre-school contributed favourably towards learner achievement. Pre- Primary school learners use toys and play to explore their identity, help their bodies grow stronger; learn causes and effects, analyze interactions, and practice future skills.

The results in table 4.5 show that the headteachers and teachers did not share the same understanding concerning the availability of fixed play materials in their schools. This was as evidenced by a mean score of 3.200 for headteachers and 2.9643. Nevertheless, the results show that there were still many schools where fixed play materials were not available. The dispersion from the 3.0 neutral mean score in both outputs indicates that there is a problem. The results are like those in a study by Ochanda (2015), who found that fixed play materials unavailability negatively affected learners' academic performance. Ochanda observed that children were engaged in outdoor play with inadequate play equipment and teachers' supervision. Following this, was a recommendation that stakeholders cooperate to help equip pre-schools within their locality with enough play equipment and materials necessary to promote participation in outdoor activities.

The results resonate with the QASO and ECDE Coordinators' responses who indicated that headteachers with their education zones were keen on ensuring pre-schools had adequate teaching and learning materials. One ECDE coordinator was reported saying: "The headteachers try to avail learning resources, but the resources are scarce.

Moreover, communities around take time to respond to headteacher calls for them to supplement learning materials."

A Quality Assurance Officer stated that: *"The head teachers are unable to provide adequate storage, and thus can only store the few available against theft damage by pests."*

4.3.2 Correlations between availing of teaching and learning materials and learners' performance in activity areas

The Pearson correlations between headteachers' role of availing of teaching and learning materials and learners' performance in activity areas were as presented in Table 4.6.

Table 4. 6

Correlations between Availing of Teaching and Learning Materials, and Learners' Performance (N=166)

		Availing of Teaching and Learning Materials	Learners' Performance in Activity Areas
Availing of Teaching and Learning Materials	Pearson Correlation	1	.171*
	Sig. (2-tailed)		.028
	N	166	166
Learners' Performance in Activity Areas	Pearson Correlation	.171*	1
	Sig. (2-tailed)	.028	
	N	166	166

Correlation is significant at the 0.05 level (2-tailed).

The findings in Table 4.6 show a positive Pearson correlation between headteachers' role of availing of teaching and learning materials and learners' performance in activity areas as follows: ($r = 0.171^*$, $p = 0.028$). This demonstrates a link between the role of the headteachers in the use of teaching and learning materials and the performance of the learners in the areas of activity. Because the p-value (0.028) was lower than the test meaning level ($p < 0.05$), this relationship is statistically significant. The results are similar to those in a study by Abdelrahim (2008), who established that the availability of teaching and learning materials resources is the key to promoting and supporting education. This, therefore, means that by headteachers ensuring the availability of teaching and learning resources, there contributing towards learning performance among preschoolers in Narok County. In a study by Moyo, Wadesango, and Kurebwa (2012), it emerged that early childhood development centres did not have important teaching and learning resources, and this negatively affected learners' performance.

4.4 Head teachers' Monitoring Allocations of Teaching And Learning Materials and Learners' Performance

The second objective of the research sought to determine the influence of headteachers' monitoring allocations of teaching and learning materials on learners' performance in activity areas, in public pre-primary schools in Narok County.

4.4.1 Descriptive statistics for head teachers' monitoring allocations of teaching and learning materials

The descriptive statistics describing the extent to which head teachers' monitoring allocations of teaching and learning materials affects learners' performance in activity areas in preschools were computed and outputs are as presented in Table 4.7.

Tab le 4. 7

Descriptive Statistics for Head teachers' Monitoring Allocations of Teaching and Learning materials (N=166)

	Head Teacher			Teachers		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Timeliness in allocating resources	80	3.8750	0.97273	85	3.8000	1.07792
Equity in allocation of resources	80	3.9125	0.93041	85	3.9059	1.19147
Quality of teaching learning materials	78	4.0897	0.91433	85	3.9882	1.07453
Human resource allocation	80	4.0500	0.95334	84	4.0833	1.07780
Sufficiency of teaching learning materials allocated	80	3.8000	1.11832	84	3.7738	1.20592
Valid N (listwise)	78			84		

The results in Table 4.7 show that the responses from both the headteachers and teachers with respect to timeliness in allocating resources recorded similar outputs that are, 3.8750 and 3.8000, respectively. Both scores were above the 3.0 mean score neutral score. These results suggest that according to headteachers and teachers from most pre-schools, the timeliness of resource allocation influenced the learners' performance in the Narok County activity areas.

The results are similar to those in a study by Usman (2016). It was established that timeliness in distributing resources was a predictor of the teaching and learning productivity and in extension learner performance.

The results with respect to equity in the allocation of resources revealed that most the headteachers and teachers agreed that this influenced learners' performance in activity areas in their respective schools. The scores were as follows Headteachers' responses mean score of 3.9125, and teachers mean score of 3.9059. Both scores were above the 3.0 mean score neutral score. These findings indicate that the headteachers' role in ensuring equity in resource allocation positively influenced learner performance in activity areas. The results agree with Mwangi (2016), who established that equity in distributing resources made it possible for all the learners to access and utilize materials, which favored learner performance.

The results in table 4.7 reveal a similar pattern of response between the headteachers and teachers regarding headteachers monitoring the quality of teaching and learning materials and its influence on learners' performance. Their responses recorded the follow mean score; headteachers (4.089) and teachers (3.9882). Both scores were above the 3.0 neutral mean scores. The headteachers mean score was slightly above 4.0, while the teachers' score was slightly below 4.0. The results suggest that in most schools, learners' performance has been enhanced by the headteachers' responsibility in controlling the quality of teaching and learning materials. The works resonate with those in a study by Mascitti-Miller (2012), where the researchers found that the level and quality of the teaching and learning materials received by schools are crucial in determining learners' performance.

The results regarding the influence of human resource allocation by headteachers on learners' performance were as follows. The head teacher's response yielded a mean score of 4.0500, while that of the teachers was 4.083.All scores were above 4.0 standard, suggesting that the distribution of human resources in most schools influenced the performance of the learner. The results were similar to those in a study by Ganira, Odundo and Muriithi (2016), who pointed that human resource allocation was key in determining learners' performance.

The results in Table 4.7 show that the response with respect to the sufficiency of teaching and learning materials allocated was as follows. The mean scores for the head teacher's response were 3.800, while that of the teacher's response was 3.7738. The value was more significant than the 3.0 neutral mean score. This implied that the sufficiency of teaching influenced learner's performance in activity areas. The results are similar to those in a study by Okongo, Ngao, Rop and Nyongesa (2015). It was observed that insufficient teaching and learning resources had negatively affected learners' performance in pre-school centers.

The larger the standard deviation is, the more spread out the observations are. In this case, the SD spread is between 1.07453 and 1.20592, implying that the observations are fairly spread to a significant segment of respondents.

4.4.2 Availability and adequacy of teaching and learning materials from observation schedules

The results on the availability and adequacy of teaching and learning materials captured by the use of observation schedules were as provided in Table 4.8.

Table 4. 8

Availability and Adequacy of Teaching and Learning Materials - Observation Checklist

Activity Area	Status	Frequency	Percentage
Mathematics Activities	Available and adequate	30	35.7%
	Available and inadequate	54	64.3%
Language Activities	Available and adequate	24	28.6%
	Available and inadequate	60	71.4%
Christian Religious Activities	Available and adequate	43	51.2%
	Available and inadequate	41	
Environmental Activities	Available and adequate	24	28.6%
	Available and inadequate	60	71.4%
Psychomotor & Creative Activities	Available and adequate	49	58.3%
	Available and inadequate	35	41.7%

The results in Table 4.8 show that majority of the schools did lack adequate teaching and learning materials. This was the case with respect to Mathematics Activities (64.3%), Language Activities (71.4%), Environmental Activities (71.4%), and Psychomotor & Creative Activities (41.7% and many preschools, and in Christian Religious Activities 48.8%. The implication was that even though these teaching and learning materials were available in most schools.

4.4.3 Correlations between monitoring allocation of teaching and learning materials and learners' performance in activity areas

The Pearson correlations between headteachers' role of monitoring of teaching and learning materials and learners' performance in activity areas were as presented in Table 4.9.

Table 4. 9

Correlations between Monitoring Allocation of Teaching and Learning Materials, and Learners' Performance (N=166)

		Monitoring of Teaching and Learning Materials	Learners' Performance in Activity Areas
Monitoring of Teaching and Learning Materials	Pearson Correlation	1	-.021
	Sig. (2-tailed)		.785
	N	166	166
Learners' Performance in Activity Areas	Pearson Correlation	-.021	1
	Sig. (2-tailed)	.785	
	N	166	166

The findings in Table 4.9 show that there was a negative Pearson correlation between headteachers' role of monitoring allocation of teaching and learning materials and learners' performance in activity areas as follows: ($r = -0.021^*$, $p = 0.785$). This shows no association between headteachers' role of monitoring of teaching and learning materials and learners' performance in activity areas. Given that, the p-value (0.785), was greater than the test significance level ($p < 0.05$), this relationship is statistically insignificant. The results are contrary to those in a survey by the Institute of Medicine and National Research Council (2015). It was reported that the monitoring of teaching and learning materials used ensured that the materials used were appropriate and properly used to enhance learners' performance.

4.5 Adequacy of Teaching and Learning Materials and Learners' Performance In Activity Areas

This section presented the findings with respect to objective three that sought to establish the influence of adequacy of teaching and learning materials on learners' performance in activity areas in public preprimary schools in Narok County.

4.5.1 Descriptive statistics for adequacy of teaching and learning materials

The results with respect to the Descriptive Statistics for Adequacy of Teaching and Learning Materials were as provided in Table 4.10.

Table 4. 10

Descriptive Statistics for Adequacy of Teaching and Learning Materials (N=166)

	Head teachers			Teachers		
Materials	**N**	**Mean**	**Std. Deviation**	**N**	**Mean**	**Std. Deviation**
Reference materials	80	4.1500	0.78111	84	4.0119	0.87114
Maps	80	3.4250	1.04063	83	2.9639	1.32007
Diagrams	79	3.7342	1.02167	83	3.5542	1.31829
Charts	80	4.0500	0.95334	83	4.0843	1.00249
Pictures	79	4.2785	0.89065	84	4.3690	0.92853
Play things (toys, blocks etc)	79	3.8481	1.22043	83	3.8072	1.14186
Fixed play materials	78	3.2564	1.24249	83	2.9157	1.50774
Valid N (listwise)	76			79		

The results in Table 4.10 concerning the influence of adequacy of reference materials show that headteachers' responses recorded a mean score of 4.1500. In contrast, that of the teachers recorded a mean score of 4.0119. The mean scores were above the 4.0 mean score. Thus, the results suggest that both the headteachers and teachers from a majority of the primary schools agreed that adequacy of reference materials influenced learners' performance in activity areas. The Ministry of Education National Pre-Primary Education Policy Standard Guidelines (2018) emphasizes the availability and appropriateness of reference materials in preprimary schools. This, therefore, means that the adequacy of these materials is critical for learners' performance in activity areas.

The results in Table 4.10 concerning the influence of adequacy of maps show that the responses from headteachers recorded a mean score of 3.4250, while that of the teachers recorded a mean score of 2.9639. Only the response from the headteachers recorded a mean score above the 3.0 neutral mean score. Thus, the results suggest that the headteachers and teachers did not share the same understanding about the adequacy of maps and their influence on learners' performance in activity areas. This also implies that maps were not adequate in most of the schools. The use of maps was reported to be an effective teaching approach in a study by Gloria & Papadopoulou, (2008). In their research, various activities with electronic and printed maps were designed to help the children reorganize their beliefs and expand their ideas and representations about maps as a means of communication. Preschool teachers were trained in the proper use of maps, meaning that they were familiarized with reading and interpreting visual information presented in a symbolic form on maps. A delay in learning to read maps or a lack of proficiency in reading maps can be an obstacle to academic and intellectual progress.

The results in Table 4.10 show that both the headteachers and teachers shared the same opinion on the influence of diagrams' adequacy on the learners' performance learners in activity areas. This aspect's mean score was as follows; head teacher's response 3.7342 and teacher's response 3.5542. The results were above the 3.0 neutral mean score. This implied that in most schools, adequacy of diagrams influenced the performance of learners is activity areas. Pancare (2020) explains that posting charts or diagrams can reinforce students' information or have already learned. In this case, several schools use of diagrams in an approach of teaching did not influence learners' performance in activity areas in Narok County.

The results concerning the influence of adequacy or charts on learner performance in activity areas revealed that both the headteachers and teachers agreed. The mean score was as follows; headteachers (4.0500) and teachers (4.0843). The results show that the adequacy of charts influenced learner's performance in the majority of the schools. The findings agree with those in a study by Pancare (2018), who explained that a standard, effective teaching method uses visual presentations in a classroom. Charts and diagrams are beneficial, as they enable learners to see ideas visually laid out in an organized way. Also, visual tools can help the students' process content and make connections more easily.

The results in Table 4.10 show that both the headteachers and teachers believed that pictures' adequacy influenced learner's performance in activity areas. The mean scores were 4.2785 and 4.3690, respectively. Both values were higher than the 3.0 neutral mean score. The results suggest that pictures' adequacy influenced learner's performance in activity areas in the majority of the schools. The mean scores recorded for playthings' adequacy, such as toys and blocks, were as follows: headteachers (3.8481) and teachers (3.8072). The mean scores were above the 3.0 mean score. The results suggest that according to both the headteachers and teachers from most of the primary schools, adequacy of pictures had an influence on learner's performance in activity areas in most of the schools. This is contrary to Wambui (2013) study, who reported that preprimary school teachers exhibit low instructional media utilization during teaching. Bušljeta (2013), who state that viewing a photograph or painting can evoke different memories and emotions or encourage creativity in an individual, explains the importance of pictures.

With respect to the influence of fixed play materials on learners' performance in activity areas, most of the head teachers and teachers did not share the same opinion with the teachers. This is as shown in the following mean scores where the head teachers' response recorded a mean score of 3.2564 and the teachers' responses a mean score of 2.9157. The results show that according to most of the teachers, adequacy of fixed play materials did not have an influence on learners' performance in activity areas. The results are similar to those in a study by Ojuondo (2015), who found that real objects helped to enhance concentration. However, teachers confirmed that where learners did not use real objects, their concentration and motivation were low. In this section, the standard deviation spread is small. The smaller the standard deviation is, the less spread out the observations are. In this case, the SD spread is between 0.87114 and 1.50774, implying that the observations are spread fairly to a significant segment of respondents.

The results are similar to those in a study by Ogunyemi (2012), who reported that children are active learners. If they are to develop the skills and competence, they must be able to work and access play materials appropriate to their developmental age. This means that school management needs to ensure that there are adequate teaching and learning resources. Data from questionnaires from headteachers teachers presented above indicated that some preschools lacked fixed play materials like see-saws, swings and balancing equipment. In contrast, most simple materials like balls, beanbags, ropes and tyres were plenty in preschools. Play which involves the 'manipulation of concrete objects' for its own sake, cannot serve the purpose of meaningful early childhood education.

Some children who manipulate guns could be seen as engaged in 'play' like another set of children who 'playfully' throw hard or sharp objects such as stones, sticks and knives at each other.

4.5.2 Correlations between Adequacy of Teaching and Learning Materials and Learners' Performance in Activity Areas

The Pearson correlations between headteachers' role of adequacy of teaching and learning materials and learners' performance in activity areas were as shown in Table 4.11.

Table 4. 11

Correlations between Adequacy of Teaching and Learning Materials and Learners' Performance (N=166)

		Adequacy of Teaching and Learning Materials	Learners' Performance in Activity Areas
Adequacy of Teaching and Learning Materials	Pearson Correlation	1	.059
	Sig. (2-tailed)		.450
	N	166	166
Learners' Performance in Activity Areas	Pearson Correlation	.059	1
	Sig. (2-tailed)	.450	
	N	166	166

The findings in Table 4.11 show a positive Pearson correlation between headteachers' role of ensuring the adequacy of teaching and learning materials and learners' performance in activity areas as follows: ($r = 0.059$, $p = 0.450$). This shows an association between headteachers' role of monitoring adequacy of teaching and learning materials and learners' performance in activity areas.

Given that, the p-value (0.785), was less than the test significance level ($p < 0.05$), this relationship is statistically insignificant. The results are similar to those in a study by Mwalyego (2014), where it was established that insufficient resources for teaching and learning hamper teachers and learners' ability to use the resources available to improve their learners' performance. Beyene and Bezera (2017) in a study in Benishangul Gumuz Regional State Metekel Zone, Ethiopia observed that lack of budget and maintenance personnel affected the school management ability to maintain teaching and learning resources.

4.6 Head teachers' Managerial Roles in Maintenance of Teaching and Learning Materials on Learners' Performance in Activity Areas

The findings in this section relate to objective four which sought to assess Headteachers' managerial roles in the maintenance of teaching and learning materials on learners' performance in activity areas in public preprimary schools in Narok County.

4.6.1 Descriptive statistics for managerial roles in maintenance of teaching and learning materials on learners' performance

The descriptive statistics for the supervision of teaching and learning materials utilization and learners' performance were provided in Table 4.12.

Table 4. 12

Head teachers' Managerial Roles in the Maintenance of Teaching and Learning Materials (N=166)

	Head teachers			Teachers		
Statement	**N**	**Mean**	**Std. Deviation**	**N**	**Mean**	**Std. Deviation**
Supervision of storage of T/L materials	79	3.9747	0.99968	85	3.7882	1.22566
Repairs to T/L materials	79	3.7342	0.92969	85	4.0588	4.54960
Putting measures in place to avoid materials loss,	79	3.8734	1.04227	83	3.7108	1.22504
Timeliness in replacement of spoilt and lost items	79	3.5949	1.13814	85	3.4000	1.27429
Control of material damage or deterioration	79	3.6329	0.97635	85	3.5529	1.17012
Supervision of cleanliness of T/L materials	79	3.6962	0.99169	85	3.6118	1.11370
Ensuring safety of T/L materials in classrooms and stores	79	3.8481	1.00114	84	3.9643	1.02318
Valid N (listwise)	79			82		

The responses in Table 4.12 concerning the extent to which supervision of the storage of teaching and learning materials influenced the performance of the learners in the areas of activity with the following mean scores. Headteachers responses recorded a mean score of 3.9747, while that of the teachers indicated a mean score of 3.7882. Both mean scores were above the 3.0 neutral mean scores. Thus, the results suggest that in most of the primary schools' supervision of teaching and learning materials, learners' performance in activity areas is influenced. In a study by Kipkosgei and Kabwos (2016), it was observed that inadequate storage facilities for teaching and learning materials negatively affected the teaching of the science curriculum in kindergartens.

The responses concerning the degree to which repairs to teaching and learning materials influenced learners' performance in activity areas attracted the following mean scores. Headteachers responses recorded a mean score of 3.7342, while that of the teachers recorded a mean score of 4.0588. Both mean scores were above the 3.0 neutral mean scores. Majority of the teachers were slightly more convinced that repairs to teaching and learning materials influenced learners' performance in activity areas. Thus, the results suggest that in the majority of the preprimary schools' repairs to teaching and learning materials influenced learners' performance in activity areas. The results are similar to those in a study by the United Nations Educational, Scientific and Cultural Organization (UNESCO) (2015) in Bangladesh. It was reported that repairs to teaching and learning materials, for instance, filling of playfields.

The responses concerning the extent to which control of material loss or degradation influenced the learners' performance in the areas of operation attracted the following mean scores. Headteachers responses recorded a mean score of 3.8734, while that of the teachers recorded a mean score of 3.7108. Both mean scores were above the 3.0 neutral mean scores.

The inference here is that the headteachers and teachers in most preprimary schools believed that the measures put in place by the headteachers to prevent material losses largely influenced the performance of the learners in the areas of activity.

The results with respect to the extent to timeliness in replacement of spoilt and lost items influenced learners' performance in activity areas attracted the following mean scores. Head teachers responses recorded a mean score of 3.5949, while that of the teachers recorded a mean sore of 3.4000. Both mean scores were above the 3.0 neutral mean scores. The implication was that the head teachers and teachers in most of the preprimary schools were of the opinion that timeliness in replacement of spoilt and lost items influenced learners' performance in activity areas largely.

The results in Table 4.12 with respect to the extent to control of material damage or deterioration did influence learners' performance in activity areas attracted the following mean scores. Head teachers responses recorded a mean score of 3.6329, while that of the teachers recorded a mean score of 3.5529. Both mean scores were above the 3.0 neutral mean scores. The implication was that the head teachers and teachers in most preprimary schools believed that control of material damage or deterioration influenced learners' performance in activity areas.

The responses concerning the extent to which supervision of cleanliness of teaching and learning materials influenced learners' performance in activity areas attracted the following mean scores. Headteachers responses recorded a mean score of 3.6962, while that of the teachers recorded a mean score of 3.6118. Both mean scores were above the 3.0 neutral mean scores.

Most of the headteachers and teachers were convinced that the cleanliness of teaching and learning materials influenced learners' performance in activity areas. Thus, the results suggest that in most of the preprimary schools' supervision of cleanliness of teaching and learning materials by headteachers influenced learners' performance in activity areas in the preprimary schools.

The results in Table 4.12 with respect to which the extent to which ensuring the safety of teaching and learning materials did influence learners' performance in activity areas attracted the following mean scores. Head teachers' responses recorded a mean score of 3.8481, while that of the teachers recorded a mean score of 3.9643. Both mean scores were above the 3.0 neutral mean scores. The implication was that the head teachers and teachers in most of the preprimary schools were of the opinion that ensuring safety of teaching and learning materials influenced learners' performance in activity areas largely. The smaller the standard deviation is, the less spread out the observations are. In this case, the SD spread is between 1.02318 and 4.54960, implying that the observations are spread fairly to a significant segment of respondents.

The results from interview schedules indicated the QASO and ECDE Coordinators thought that the headteachers in their zone made efforts to ensure that teaching and learning resources were available. According to these officers, headteachers achieved this by encouraging teachers to collect the required teaching materials with pupils and parents—the head teachers-maintained records for teaching and learning materials and by providing lockable storage facilities.

One of the ECDE Coordinators explained as follows: "*Head teachers ensure adequacy of teaching and learning materials, by allocating finance for the purchase of adequate materials, obtaining from the well-wishers like the donors, having material development day with the parents and by ensuring that the materials are kept safe to avoid stolen."*

A QASO officer stated, "During purchasing the head teacher takes into consideration versatility of teaching and learning materials this ensure adequacy."

4.6.2 Correlations between maintenance of teaching and materials and learners' performance

The Pearson correlations between headteachers' role of maintenance of teaching and materials and learners' performance in activity areas were as presented in Table 4.13.

Table 4. 13

Correlations between Maintenance of Teaching and Materials and Learners' Performance (N=166)

		Maintenance of Teaching and Learning Materials	Learners' Performance in Activity Areas
Maintenance of Teaching and Learning Materials	Pearson Correlation	1	.193*
	Sig. (2-tailed)		.013
	N	166	166
Learners' Performance in Activity Areas	Pearson Correlation	.193*	1
	Sig. (2-tailed)	.013	
	N	166	166

*. Correlation is significant at the 0.05 level (2-tailed).

The results in Table 4.13 indicate a positive Pearson correlation between headteachers' role of ensuring maintenance of teaching and learning materials and learners' performance in activity areas as follows: ($r = 0.193$, $p = 0.013$). This demonstrates a relationship between the responsibility of the headteachers in maintenance of teaching and learning materials and the learners' performance in the areas of activity. Given that, the p-value (0.013), was less than the test significance level ($p < 0.05$), this relationship is statistically significant. The study findings are similar to those in a study by Asogwa (2010). It was reported that the maintenance of teaching and learning materials was critical for enhancing learners' performance in schools in the Obollo-Afor education zone.

4.7 Head Teachers' Supervision of Teaching and Learning Materials utilization on Learners' Performance

The fifth objective of the research sought to determine the influence of headteachers' supervision of teaching and learning materials utilization on learners' performance in activity areas, in public preprimary schools in Narok County.

4.7.1 Head teachers' supervision of teaching and learning materials utilization and learners' performance

The Descriptive statistics for headteachers' supervision of teaching and learning materials utilization and learners' performance were computed, and the findings are shown in Table 4.14.

Table 4. 14

Head teachers' Supervision of Teaching and Learning Materials utilization on Learners' Performance

Aspect	Head teachers			Teachers		
	N	**Mean**	**Std. Deviation**	**N**	**Mean**	**Std. Deviation**
Classroom supervisory visits	80	4.2500	0.87872	85	4.0824	1.04894
Lesson observation in the use of T/L materials	79	4.0886	0.87983	85	4.0118	1.04077
Approval of lesson plans, schemes of work	80	4.2875	0.84485	85	4.2588	0.92778
Checking of Learners progress reports	79	4.2532	0.91243	85	4.7765	5.91482
Checking the suitability of teaching and learning resources used	80	4.1125	0.96776	85	3.8235	1.20689
Checking the safety of teaching and learning resources used	80	3.9375	0.89079	85	4.4471	4.44679
Valid N (listwise)	78			85		

The results in Table 4.14 with respect to the extent to which classroom supervisory visits did influence learners' performance in activity areas yielded the following mean scores.

Headteachers responses recorded a mean score of 4.2500, while that of the teachers recorded a mean score of 4.0824. Both mean scores were above the 4.0 a value equivalent to a large extent. The results are similar to those in a study by Knudson (2013).

They found that education leaders' failure to facilitate everyone to become smarter and better approved that they failed to effectively execute their supervisory role. Adequate creative instructional supervision has a positive impact on teachers and classroom instruction process, focusing precisely on Headteachers work behaviour. The implication was that the headteachers and teachers in most pre-primary schools supported the idea that the classroom supervisory visits influenced learners' performance in activity areas largely. School supervision and support services are a crucial element in improving the quality of basic education. These services, although existing in almost every country, have been severely neglected by policymakers. However, Awino (2014) reported that school inspectors' occasional visits could not prevent the problems and the schools' gradual deterioration.

The results in Table 4.14 with respect to the extent to which lesson observation in the utilization of teaching and learning materials did influence learners' performance in activity areas yielded the following mean scores. Headteachers responses recorded a mean score of 4.2875, while that of the teachers recorded a mean score of 4.0118. Both mean scores were above the 4.0, a value equivalent to a large extent. The implication was that the headteachers and teachers in most pre-primary schools believed that assessment of lessons in the use of teaching and learning resources influenced the learners 'learners' performance in activity areas largely.

The results in Table 4.14 with respect to the extent to which approval of lesson plans, schemes of work influenced learners' performance in activity areas yielded the following mean scores. Headteachers responses recorded a mean score of 4.0886, while that of the teachers recorded a mean score of 4.2588.

Both mean scores were above the 4.0, a value equivalent largely. The implication was that the headteachers and teachers in most pre-primary schools opined that headteachers teachers' approval of lesson plans and schemes of work influenced learners' performance in activity areas largely. This agrees with Moraa (2010) findings that headteachers played instructional, supervisory roles by supervising the implementation of the curriculum, which involved supporting teachers in their instructional practices.

The results in Table 4.14 with respect to the extent to which checking of learners' progress reports influenced learners' performance in activity areas yielded the following mean scores. Headteachers responses recorded a mean score of 4.2500, while that of the teachers recorded a mean score of 4.0824. Both mean scores were above the 4.0, a value equivalent to a large extent.

The implication was that the majority headteachers and teachers in the pre-primary schools were of the opinion that checking of learners' progress reports influenced learners 'learners' performance in activity areas largely.

The results in Table 4.14 with respect to the extent to which checking the suitability of teaching and learning resources used influenced learners' performance in activity areas yielded the following mean scores. Head teachers' responses recorded a mean score of 4.1125, while that of the teachers recorded a mean score of 3.8235.

Both mean scores were above the 3.0, a value equivalent to a moderate extent. The implication was that the head teachers and teachers in the majority of the pre-primary schools believed that checking the suitability of teaching and learning resources used influenced learners 'learners' performance in activity areas largely.

The results in Table 4.14 with respect to the extent to which checking the safety of teaching and learning resources used influenced learners' performance in activity areas yielded the following mean scores. Head teachers' responses recorded a mean score of 3.9375, while that of the teachers recorded a mean score of 4.4471. Both mean scores were above the 3.0, a value equivalent to a moderate extent. The implication was that the head teachers and teachers in the majority of the pre-primary schools were of the opinion that checking the safety of teaching and learning resources used influenced 'learners' performance in activity areas largely. The results are similar to those in a study by Mwaniki (2015), who pointed out that learner performance was remarkably a function of safe teaching and learning resources.

This chapter's observations illustrate that the headteachers supervise the curriculum's scheduling to ensure that all subjects are arranged and that rational numbers of lessons are conducted as specified by the education policy. They supervise to ensure proper utilization of teaching materials. Headteachers oversee the program's timetable and ensure that there are no inconsistencies in lessons where one teacher is supposed to be in two separate classrooms for a period of time. The findings further imply that Headteachers monitor preschoolers' academic progress. They supervise the frequent testing of students through the heads of departments. They also check the spreadsheet to monitor each student performs and discuss them with the relevant teachers.

4.7.2 Correlations between supervision in the use of teaching and learning materials and learners' performance

The results for Pearson correlations between head teachers' role of supervision in the use of Teaching and Learning Materials and learners' performance in activity areas were as presented in Table 4.15.

Table 4. 15

Correlations between Supervision in the use of Teaching and Learning Materials and Learners' Performance

		Supervision in the use of Teaching and Learning Materials	Learners' Performance in Activity Areas
Supervision in the use of Teaching and Learning Materials	Pearson Correlation	1	.167*
	Sig. (2-tailed)		.031
	N	166	166
Learners' Performance in Activity Areas	Pearson Correlation	.167*	1
	Sig. (2-tailed)	.031	
	N	166	166

*. Correlation is significant at the 0.05 level (2-tailed).

The findings in Table 4.15 indicate a positive Pearson correlation between head teachers' role of supervision in the utilization of teaching and learning materials and learners' performance in activity areas as follows: ($r = 0.167$, $p = 0.031$).

This reveal that there was an association between head teachers' role of supervision in the use of teaching and learning materials and learners' performance in activity areas. Given that, the p-value (0.031), was less than the test significance level ($p < 0.05$), this relationship is statistically significant. These results resonate with those studied by Karanja (2015), where it was reported that learning materials could be available at school, but how they are used determines learning performance at school. Moreover, the GoK (2005) report emphasized that school Heads must work with the education department to ensure that teachers are supervised to promote the effectiveness of teaching and learning materials, which will result in improved learning performance.

4.8 Learners Performance in Activity Areas

This section presents the descriptive statistics for learners' performance in activity areas, and these include mathematics activities, language activities, Christian religious activities, environmental activities, and psychomotor & creative activities.

4.8.1 Learners' performance in activity areas in pre-schools

The teachers and head teachers were asked to describe learners' performance in activity areas, and the results were as captured in Table 4.16.

Table 4. 16

Descriptive Statistics for Learners Performance in Activity Areas

Activity Area	Head teachers			Teachers		
	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Mathematics activities	77	2.7922	0.56980	83	2.8916	0.60510
Language activities	78	2.4615	0.65846	83	2.6024	0.60364
Christian Religious Activities	78	2.9103	0.64839	83	2.8916	0.62493
Environmental activities	78	2.9231	0.57591	83	3.0723	0.57981
Psychomotor & Creative activities	79	2.9494	0.65826	83	2.9759	0.76471
Valid N (listwise)	77			83		

The results in Table 4.16 show that learners' performance in activity areas recorded the following mean scores. Mathematics activities (head teachers = 2.7922; teachers = 2.8916); Language activities (head teachers = 2.4615; teachers = 2.6024); Christian Religious Activities (head teachers = 2.9103; teachers = 2.8916); Environmental activities (head teachers = 2.9231; teachers = 3.0723); and Psychomotor & Creative activities (head teachers = 2.9494; teachers = 2.9759). Overall, the means were below 3.0 neutral mean score. This implied that performance of learners' performance in activity areas was unimpressive. The lowest mean scores were in Language and Mathematics.

The results thus show that mathematics is generally not performed well compared to other subjects. In a study by Ngei (2015) it was established that there was unsatisfactory performance in mathematics among pre-school children is not a unique problem.

However, contrary to this study poor performance in mathematics was attributed to poor background the learners have had in lower levels of learning starting from pre-schools. The current performance links poor management of teaching and learning materials. In a study by Melly and Mwangi (2018), it was established that learners' performance in Psychomotor and Creative activities was compromised by limited teaching and learning resources.

Preschools that had play materials for children had higher mean scores in language skills compared to preschools that did not have play materials. Those preschools that achieved low mean scores in language skills were confirmed to lack play materials and therefore the children did not have face-to face interaction with the teachers and peers to enhance language skill acquisition. This is in line with Kombo and Khalayi (2011) who confirmed that quality and relevance of ECE is affected by inadequate state of learning materials, equipment and supervision.

In a study by Ojuondo (2015), it was established that learners in preschools performed well in language activities because they had access to quality instructional materials and were also exposed to different types of play like manipulative, creative, dramatic and physical plays with play materials. Learners who interacted with the teachers, peers and utilized play materials were eloquent in communication and free to respond to questions confidently compared to their counter parts from schools who did not utilize play materials.

4.8.2 Description of learners' performance in activity areas by quality assurance officers and ECD coordinators'

The Quality Assurance Officers and ECD Coordinators in Narok County were asked to describe how they were able to assess learners' performance in activity areas in pre-schools in their area of administration. The responses were as follows: One of the QASO officers indicated: *"I am able to monitor and evaluate performance through observation of learners and rating them using approved rating scales of Exceeding Expectation, meeting expectation, approaching expectation and below expectation".* This was the response provided by the majority of the Quality Assurance Officers and ECD Coordinators in Narok County.

An ECD coordinator stated as follows: "*As an administrative, you crisscross teacher progress records made by the learner's teacher and you can understand the performance of the learners*."

According to most of the Quality Assurance Officers and ECD Coordinators' most pre-school learners in their administrative zones are at now approaching expectations in the following activity areas: Mathematics, Languages, Christian Religion, while environmental and psychomotor/creative activity most of them meet the expectation.

A Centre performance tool was administered to the respondents, and the results were as captured in Table 4.17.

Table 4. 17

Learners' Performance as captured by the Centre Performance Assessment Tool

[a]		Frequency	Percentage
Mathematics activities	Below Expectation	0	0.0%
	Approaching Expectation	22	28.6%
	Meeting Expectation	49	63.6%
	Exceeding Expectation	6	7.8%
Language activities	Below Expectation	4	5.1%
	Approaching Expectation	37	47.4%
	Meeting Expectation	34	43.6%
	Exceeding Expectation	3	3.8%
Christian Religious	Below Expectation	1	1.3%
Activities	Approaching Expectation	17	21.8%
	Meeting Expectation	48	61.5%
	Exceeding Expectation	12	15.4%
Environmental activities	Below Expectation	0	0.0%
	Approaching Expectation	16	20.5%
	Meeting Expectation	52	66.7%
	Exceeding Expectation	10	12.8%
Psychomotor & Creative	Below Expectation	1	1.3%
activities	Approaching Expectation	16	20.3%
	Meeting Expectation	48	60.8%
	Exceeding Expectation	14	17.7%

The results in Table 4.17 revealed that learners' performance levels reported the following mean scores, which were averages of the number of learners at each performance level. The results were as follows: in the case of mathematics activities in 68.6% of the schools were meeting expectations, while 7.8% were exceeding expectations, while 28.6% were approaching expectations.

The performance for language activities was as follows: Language activities were below Expectation (5.1%), Approaching Expectation (47.4%), Meeting Expectation (43.6%) and Exceeding Expectation (3.8%). This shows that in 43.6% of the preschools were meeting expectation with regard to performance in language activities.

The performance for Christian Religious activities as documented in the preschools was as follows: Christian Religious activities were below expectation (1.3%), Approaching Expectation (21.8%), Meeting Expectation (61.5%) and Exceeding Expectation (15.4%). This shows that in majority of the preschools were meeting expectation with regard to performance in Christian Religious Activities.

The performance for environmental activities as documented in the preschools was as follows: performance in environmental activities was approaching expectation (20.5%), meeting expectation (66.7%) and exceeding expectation (12.8%). This shows that in majority of the preschools were meeting expectation with regard to performance in environmental activities.

The performance for psychomotor and creative activities as documented in the preschools was as follows: performance in psychomotor and creative activities was below expectation (1.3%), approaching expectation (20.3%), meeting expectation (60.8%) and exceeding expectation (17.7%). This shows that in majority of the preschools were meeting expectation with regard to performance in psychomotor and creative activities.

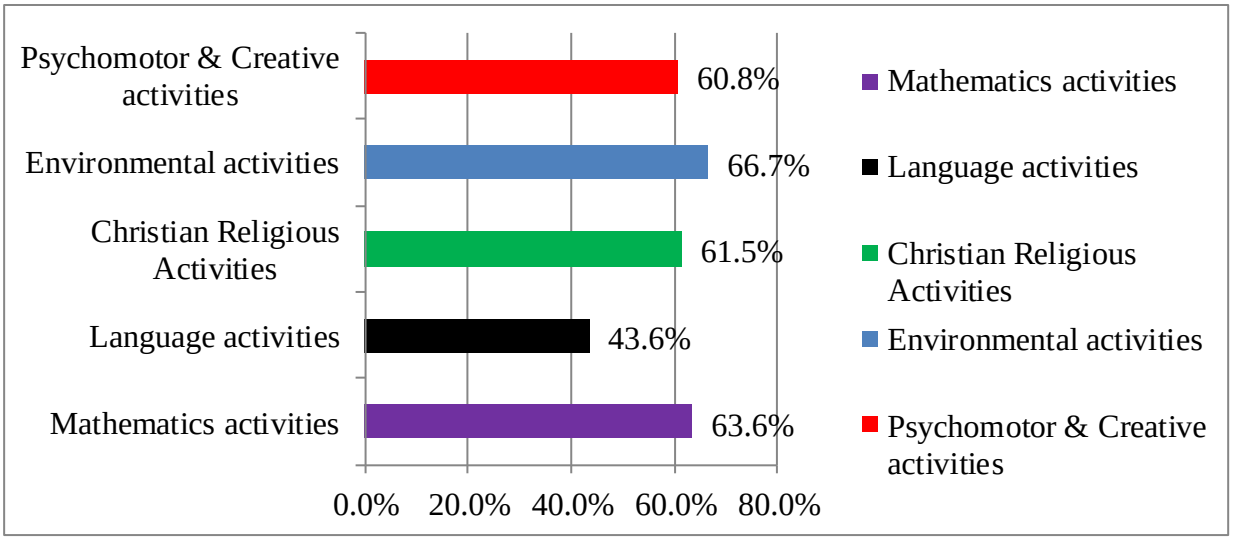


Figure 4. 3: Learners' Performance – Meeting Expectations

The outputs in Figure 4.3 show that the activity area registering the highest performance (meeting expectation rating) was environmental activities (66.7%), followed by mathematics activities (63.6%), Christian Religious activities (61.5%), psychomotor and creative activities (60.8%) and language activities (43.6%).

4.9 Regression Analysis

Multiple regression analysis was performed to establish the correlation between the independent and dependent variables and the results in this section are shown. The variables under investigation included supervision in the use of teaching and learning materials, availing of teaching and learning materials, maintenance of teaching and materials, monitoring of teaching and learning materials, and adequacy of teaching and learning materials (independent variables) and learners' performance (dependent variable).

4.9.1 Model summary

This section shows the analysis of multiple regression to investigate the relationship between the independent variables and dependent variables. Table 4.18 presents the model summary of the regression.

Table 4. 18

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.358[a]	.128	.101	.40207

a. Predictors: (Constant), Supervision in the use of Teaching and Learning Materials, Availing of Teaching and Learning Materials, Maintenance of Teaching and Materials, Monitoring of Teaching and Learning Materials, Adequacy of Teaching and Learning Materials.

The R Square value in the Model Summary table demonstrates how much variance can be explained by the independent variables in the dependent variable. The independent variables listed below Table 4.18 accounted for 12.8 percent of the variability in student safety.

The R-value (358) is the multiple coefficients of the association between all independent variables entered and the dependent variable. The Revised R Square accounts for bias with increasing number of variables. The Std. Estimate Error is a function of the prediction 's accuracy.

4.9.2 Analysis of Variances (ANOVA)

The research results with respect to variance analysis are as shown in Table 4.19.

Table 4. 19

Analysis of Variances (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.808	5	.762	4.711	.000[b]
	Residual	25.866	160	.162		
	Total	**29.674**	**165**			

a. Dependent Variable: Learners' Performance in Activity Areas

b. Predictors: (Constant), supervision in the use of Teaching and Learning Materials, Availing of Teaching and Learning Materials, Maintenance of Teaching and Materials, Monitoring of Teaching and Learning Materials, Adequacy of Teaching and Learning Materials

The predictors are important when Sig is present in the sample. (P): $p < 0.05$. Table 4.19 results indicate p-value was 0.000. Since the p values are less than 0.05 (confidence level), we may conclude that the important of the management of teaching and learning materials by head teachers on learner's performance in the areas of operation is important. As $p < 0.05$, the predictor variables are much stronger than would be predicted by chance.

The regression line predicted by teaching and learning materials management by headteachers explains a significant amount of the variance in the learners' performance in activity areas. This is reported as follows: $F(5, 160) = 4.711$; $p < 0.05$, and consequently, the regression can be concluded statistically significant.

4.9.3 Beta Coefficients

The Beta Coefficients with respect to regression outputs are as presented in Table 4.20.

Table 4. 20

Beta Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.454	.185		13.253	.000
	Availing of Teaching and Learning Materials	.147	.056	.270	2.639	.009
	Monitoring of Teaching and Learning Materials	-.168	.057	-.340	-2.955	.004
	Adequacy of Teaching and Learning Materials	-.052	.066	-.099	-.792	.429
	Maintenance of Teaching and Materials	.116	.042	.276	2.732	.007
	Supervision in the use of Teaching and Learning Materials	.066	.033	.164	1.977	.050

a. Dependent Variable: Learners' Performance in Activity Areas

The following regression model was used

$LPAA = \beta_0 + \beta_1 AvTLM + \beta_2 MATLM + \beta_3 AdTLM + \beta_4 MTLM + \beta_5 STLMU + Ɛ$

$LPAA = 2.454 + 0.147 - 0.168 - 0.052 + 0.116 + 0.066$

From the findings, it emerges that the most influential determinant of learners' performance in activity areas was the headteachers' role in availing of teaching and learning materials (Beta = 0.147; p = 0.009). The t value (t = 13.253, p = 0.00) for Constant tells us that the intercept is significantly different from zero.

The t value for availing of teaching and learning materials (t = 2.639, p = 0.009), $p < 0.05$ shows that the regression is significant. This was followed by headteachers' role in ensuring maintenance of teaching and materials (Beta = 0.116; p = 0.009; t = -2.955). The t-test value with $p<0.05$ shows that the regression is statistically significant.

The rest of the factors recorded the following beta values in the order of their strength. Supervision in the use of Teaching and Learning Materials (Beta = 0.066; p = 0.050). The t value for supervision in the use of Teaching and Learning Materials (t = -0.792, $p < .05$) shows that the regression is significant, Adequacy of Teaching and Learning Materials ((Beta = -0.052; p = 0.429) and Monitoring of Teaching and Learning Materials (Beta = -0.168; p = 0.004; t = 2.732).

4.10 Hypotheses Testing

Using coefficients outputs for the independent and dependent variables in Table 4.18, the study hypothesis was tested. The decision rule rejected the null hypothesis if p values computed from the regression outputs per variable under measure were less than the conventional value of 0.05.

The first hypothesis stated that “Ho1: There is no significant influence of availing of teaching and learning materials by headteachers on learners’ performance in activity areas, in public pre-primary schools in Narok County.” Since the p-value associated with capital adequacy was 0.009, which is less 0.05 ($p<0.05$), the null hypothesis is rejected and therefore, the study holds that availing of teaching and learning materials by headteachers influenced learners’ performance in activity areas, in public pre-primary schools in Narok County. The results resonate with Monda (2012), who established that teaching and learning materials’ availability influenced learners’ performance in activity areas.

The second hypothesis stated that “Ho2: There is no significant influence of monitoring allocation of teaching and learning materials by headteachers on learners’ performance in activity areas, in public pre-primary schools in Narok County.” Since the p-value associated with capital adequacy was 0.004, which is less 0.05 ($p<0.05$), the null hypothesis is rejected and therefore, the study holds that monitoring of allocation of teaching and learning materials by headteachers had a significant influence on learners’ performance in activity areas, in public pre-primary schools in Narok County. The results are similar to those in a study by Ndungu, Gathu and Bonnett (2015) who found that monitoring of allocation of teaching and learning materials positively impacted pupils' academic achievement.

The third hypothesis stated that "Ho3: There is no significant influence of adequacy of teaching and learning materials on learners' performance in activity areas, in public pre-primary schools in Narok County." Since the p-value associated with capital adequacy was 0.429, which is less than 0.05 ($p>0.05$), the null hypothesis is accepted and therefore, the study holds that adequacy of the teaching and learning materials does not have a significant influence on learners' performance in activity areas, in public pre-primary schools in Narok County. The results are similar to those in a study by Akungu (2014) found out that teaching and learning materials were available and are utilized in schools, especially those used in classroom instruction, like chalks, dusters and charts except physical facilities are lacking, and this affected learners' performance.

The fourth hypothesis stated that "Ho4: There is no significant influence of head teachers' managerial roles in the maintenance of teaching and learning materials on learners' performance in activity areas, in public pre-primary schools in Narok County." Since the p-value associated with capital adequacy was 0.007, which is less than 0.05 ($p>0.05$), the null hypothesis is rejected and therefore, the study holds that headteachers' managerial roles in the maintenance of teaching and learning materials had a significant influence on learners' performance in activity areas, in public pre-primary schools in Narok County. The results are similar to those in a study by Mwanasiti (2019) who found that school managers' managerial roles in the maintenance of teaching and learning materials had an influence on learners' performance in activity areas.

The fitth hypothesis stated that “Ho5: There is no significant influence of head teachers’ supervision of teaching and learning materials utilization on learner’s performance in activity areas, in public pre-primary schools in Narok County.” Since the p-value associated with capital adequacy was 0.050, which is equal to 0.05 ($p>0.05$), the null hypothesis is rejected and therefore, the study holds that headteachers’ supervision of teaching and learning materials utilization had a significant influence on learners’ performance in activity areas, in public pre-primary schools in Narok County.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study description, findings, and recommendations are provided in this chapter. The study's goal was to investigate the effect of the management of teaching and learning materials by the headteachers on learners' performance in activity areas in public pre-primary schools in Narok County. The chapter includes a description of the results of the report, the conclusions, recommendations and suggestions for further investigations.

5.2 Summary

The study examined the influence of supervision in the use of teaching and learning materials, availing of teaching and learning materials, maintenance of teaching and materials, monitoring allocation of teaching and learning materials, and adequacy of teaching and learning materials (independent variables) on learners' performance in activity areas (dependent variable).

5.2.1 Influence of head teachers' role in availing teaching and learning materials on learners' performance in activity areas.

The first objective sought to investigate the influence of teaching and learning materials availing by Headteachers on learners' performance in activity areas, in public pre-primary schools in Narok County. Availability of reference materials in the majority of the schools influenced learners' performance in activity areas. The research revealed that the availability of maps in pre-primary schools did not influence learners' performance in activity areas in the County.

It was established that most schools made available diagrams for supporting activity areas, which helped enhance learner performance and that playthings were available in most pre-schools. The study found that there were still many schools, where fixed play materials were not available in Narok County. A positive Pearson correlation between head teachers' role of availing of teaching and learning materials and learners' performance in activity areas is as follows: ($r = 0.171^*$, $p = 0.028$). Given that, the p-value (0.028), was less than the test significance level ($p < 0.05$), this relationship is statistically significant.

5.2.2 Influence of head teachers' monitoring allocations of teaching and learning materials on learners' performance in activity areas.

The second objective of the study sought to determine the influence of head teachers' monitoring allocations of teaching and learning materials on learners' performance in activity areas, in public pre-primary schools in Narok County. According to headteachers and teachers from most schools, timeliness in allocating resources influenced learners' performance in activity areas in Narok County. The results also show that head teachers' role in ensuring equity in resource allocation positively influenced learner performance in activity areas. The majority of the schools, learners' performance, was enhanced through head teachers' role in monitoring the quality of teaching and learning materials. Majority of the schools' human resource allocation influenced learner's performance. It was discovered that the sufficiency of teaching and learning materials allocated influenced learner's performance in activity areas.

The study also established a negative Pearson correlation between head teachers' role of monitoring allocation of teaching and learning materials and learners' performance in activity areas as follows: ($r = -0.021^*$, $p = 0.785$). This implies no association between head teachers' role of monitoring allocation of teaching and learning materials and learners' performance in activity areas.

5.2.3 Influence of adequacy of teaching and learning materials on learners' performance in activity areas.

The third objective sought to determine the influence of adequacy of teaching and learning materials on learners' performance in activity areas, in public pre-primary schools in Narok County. Both the headteachers and teachers from most primary schools agreed that the adequacy of reference materials influenced learners' performance in activity areas. The results show that the headteachers and teachers did not share the same understanding about the adequacy of maps and their influence on learners' performance in activity areas. As such, maps were not adequate in most of the schools. In most schools, adequacy of diagrams influenced the performance of learners is activity areas.

It was also found that the adequacy of charts influenced learner performance in the majority of the schools—adequacy of pictures affected learner's performance in activity areas in the majority of the pre-schools. The headteachers and teachers from most primary schools believed that images' adequacy influenced learners' performance in activity areas. According to most of the teachers, the adequacy of fixed play materials did not have an influence on learners' performance in activity areas.

The study revealed a positive Pearson correlation between head teachers' role in ensuring adequate teaching and learning materials and learners' performance in activity areas: ($r = 0.059$, $p = 0.785$). Given that, the p-value (0.785), was greater than the test significance level ($p < 0.05$), this relationship is statistically insignificant.

5.2.4 Influence of head teachers' managerial roles in the maintenance of teaching and learning materials on learners' performance in activity areas.

The fourth objective sought to assess Head teachers' managerial roles in the maintenance of teaching and learning materials on learners' performance in activity areas, in public pre-primary schools in Narok County. The results show that most of the primary schools' supervision of teaching and learning materials influenced learners' performance in activity areas. The research also found out that most pre-primary schools' repairs to teaching and learning materials influenced learners' performance in activity areas.

The study found out that most teachers were slightly more convinced that repairs to teaching and learning materials influenced learners' performance in activity areas largely. The headteachers and teachers in most pre-primary schools believed that measures put in place by headteachers to avoid materials loss influenced learners' performance in activity areas largely. The findings show that the headteachers and teachers in most pre-primary schools thought timeliness in replacing spoilt and lost items affected learners' performance in activity areas largely.

The study also revealed that the headteachers and teachers in most pre-primary schools believed that control of material damage or deterioration influenced learners' performance in activity areas largely.

In most pre-primary schools, headteachers' supervision of teaching and learning materials' cleanliness affected learners' performance in activity areas in the pre-primary schools. The headteachers and teachers in most pre-primary schools believed that ensuring the safety of teaching and learning materials influenced learners' performance in activity areas largely.

The findings show a positive Pearson correlation between head teachers' role in ensuring the maintenance of teaching and learning and learners' performance ($r = 0.059$, $p = 0.450$). Given that, the p-value (0.450), was less than the test significance level ($p < 0.05$), this relationship is statistically significant.

5.2.5 Influence of head teachers' supervision of teaching and learning utilization on learners' performance in activity areas.

The fifth objective of the study sought to determine the influence of head teachers' supervision of teaching and learning materials utilization on learners' performance in activity areas, in public pre-primary schools in Narok County. The results show that the headteachers and teachers in most pre-primary schools believed that classroom supervisory visits influenced learners' performance in activity areas largely. The head teachers and teachers in majority of the pre-primary schools were of the opinion that lesson observation in the use of teaching and learning materials influenced learners' performance in activity areas largely.

The study results show that the headteachers and teachers in the majority of the pre-primary schools were of the opinion that head teachers' approval of lesson plans, schemes of work influenced learners' performance in activity areas largely.

The headteachers and teachers in the majority of the pre-primary schools were of the opinion that checking of learners' progress reports influenced learners' performance in activity areas largely.

The results show that the headteachers and teachers in the majority of the pre-primary schools were of the opinion that checking the suitability of teaching and learning resources used influenced learners' performance in activity areas largely. Further, the head teachers and teachers in majority of the pre-primary schools were of the opinion that checking the safety of teaching and learning resources used influenced learners' performance in activity areas largely.

The findings reveal a positive Pearson correlation between head teachers' role of supervision in utilization of teaching and learning materials and learners' performance in activity areas as follows: ($r = 0.167$, $p = 0.031$). Given that, the p-value (0.031), was less than the test significance level ($p < 0.05$), this relationship is statistically significant.

5.3 Conclusions

The study concludes that not all the schools had required teaching and learning materials. Moreover, the availability of some materials, such as maps did not influence learners' performance in activities. Some of the teaching and learning materials that lacked in the pre-schools included maps, diagrams, and fixed playthings.

Thus, the study concludes that in most pre-primary schools, the availability of teaching and learning materials helped enhance learners' performance in activity areas. However, the research also noted that in some of the pre-schools in Narok County, the headteachers had not effectively ensured the availability of teaching and learning materials.

The study concluded that monitoring the allocation of teaching and learning materials did not influence the learners' performance in activities areas in some schools. The study concludes that such inadequacies were seen in the case of timeliness in allocating resources. The failure to ensure equity in the allocation of TLM by headteachers affected learners' performance in activity areas. Moreover, in some of the pre-schools, the headteachers had not effectively monitored the quality of teaching and learning materials. Their responses also demonstrated weakness in monitoring human resources allocation.

The study also concluded that adequacy of reference materials, maps, diagrams, chart Pictures, and fixed play materials significantly influenced learners' performance in activity areas in most of the pre-schools in Narok County. However, the study also concludes that in some of the pre-schools, the head teachers had not been effective in ensuring the adequacy of these materials, and as such, this affected learners' performance in activity areas in most of the pre-schools in the County.

The study concludes that in most pre-primary schools, the headteachers made efforts to ensure timely maintenance of teaching and learning, which contributed favorably towards learners' performance in activity areas. However, the study findings revealed that not all the pre-schools registered this achievement.

In some of the pre-schools, the head teachers' recorded inefficiencies with respect to supervision of storage of teaching and learning materials, supervision of cleanliness of teaching and learning materials, repairs to teaching and learning materials, timeliness in replacement of spoilt and lost items, and control of material damage or deterioration. In these pre-schools, the performance of learners in activity areas was unimpressive.

The study concluded that head teachers' supervision of teaching and learning materials utilization on learners' performance in activity areas, in public pre-primary schools in Narok County. Classroom supervisory visits, lesson observation in the use of teaching and learning materials, head teachers' approval of lesson plans, schemes of work, checking the suitability of teaching and learning resources, and checking the safety of teaching and learning resources influenced learners' performance in activity areas largely. However, head teachers' supervision in teaching and learning materials was not effective in all the pre-schools.

Regarding performance, the study concluded that performance in most of the pre-primary schools was on average. The response from QASOs and ECD coordinators was that performance was at average. The study concluded that the provision of teaching and learning materials was inadequate since the most response from QASOs and ECD coordinators stated that there were insufficient resources to provide TLM to all the public pre-primary schools.

5.4 Recommendations

The study's recommendations were as follows.

i. The school management to mobilize stakeholders to provide resources for timely acquisition of teaching and learning in pre-school. This will help ensure the availability of maps, diagrams, and fixed playthings.

ii. The school management should consider scaling up the processes and practices of monitoring the utilization of teaching and learning materials and ensuring equity and timeliness in allocating those materials. Properly coordinated monitoring use of teaching and learning materials will enhance performance.

iii. The school management should consider organizing update sessions or workshop for ensuring that teaching and learning materials procured are of good quality and are adequate for activity areas as per the curriculum.

iv. The school management needs to ensure that there are enough resources to maintain or replace lost or spoilt teaching and learning resources. Supportive storage mechanisms need to be put in place to avoid damages of these materials. School personnel needs to be trained on the essence of maintaining the cleanliness of teaching and learning materials.

v. Through the delegated function of supervision, the school management should be keen on curriculum implementation and ensure that heads of department are keen on supervision in TLM. These materials need to be used appropriately and methodically to register effectiveness in supporting learners' performance in the pre-schools.

5.4.2 Recommendation to improve policy implementation

Based on this study's findings, there is a need for more decisive ECD leadership at the Ministry of education for better advocacy and visibility. To achieve this, ECD should be made a Division, just like primary or secondary divisions and headed by a Director.

5.5 Suggestion for Further Research

To further understand the factors which influence the performance of learners in pre-primary schools in Kenya. The study suggests areas for further research that may provide more insights on the success, challenges, and lessons learned such as:

1. This study can be replicated in other public ECD centers in other counties in Kenya.
2. A comparative study to determine the degree to which management of teaching and learning materials by headteachers influences public pre-primary schools in Kenya. Comparing the differences in the success and failures in the management of teaching and learning materials in public ECD centers would be an interesting area to explore and gain insights into the factors that promote or inhibit good performance in activity areas.
3. Further research is needed to establish if good performance in public ECD centers is subject to the management of teaching and learning materials by heads of primary schools. Such a study would confirm if the management of teaching and learning materials by primary heads has a significant influence on learners' performance in activity areas.

4. Finally, future research should deal with the Assessment Rubrics, which is currently being used in the competency-based curriculum (CBC) to evaluate learners' performance and test if this parameter is evaluating learners' performance satisfactorily in ECD centers in Kenya.

REFERENCES

Abdelrahim, R. (2008). *An evaluation of Intel program "Intel Teach to the future" from the point of view of Intel trained primary stage teachers in the 4th District Education.* MA thesis, University of Jordan, Amman, Jordan.

Adeoya, Y. & Tayo, A. (2012). The Role of Head Teacher in Improvisation and Maintenance of School Plants. *An International Multidisciplinary Journal, Ethiopia,* 6 (3), Serial No. 26.

Afework, T. H. & Asfaw, M. B. (2004) "The Availability of School Facilities and their Effects on the quality of education in Government Primary Schools of Harari Regional State and East Hararghe Zone, Ethiopia" *Middle Eastern and African Journal Research issues 11, 2004*.

Agosiobo, C. (2007). *Effective teaching in schools: Theory and Practice*. New Jersey: Stanley Thomas Ltd.

Akungu, J. (2014). *Influence of teaching and learning resources on students' performance in kenya certificate of secondary education in free day secondary education in Embakasi District, Kenya*. Unpublished. Masters Thesis, University of Nairobi

Akyeampong K, Lussier K, Pryor J, Westbrook J (2013) Improving teaching and learning of basic maths and reading in Africa: Does teacher preparation count? *International Journal of Educational Development,* 33 (3), 272–282

Alabi, A. T. and Ijaiya, N.Y.S. (2014). Funding strategies and sustenance of early childhood education in Nigeria: The way forward. *European Scientific Journal*, 8(1),12-21.

Amosa, A. A. & Ogunlade, O. (2013). Effect of community resources on Junior secondary schools' performance in basic technology in Ilorin, Kwara State, Nigeria. *Journal of Education in Developing Areas (JEDA),* 21(1), 214-221.

Andiema, N. (2013). *Implementation of play activities and its effects on learners' academic performance in public early childhood development centres: A Case Study Of West Pokot County, Kenya*. Unpublished. Masters Thesis, Kibabii University

Artino, J. (2008). Cognitive Load Theory and the role of learner experience: An Abbreviated Review for Educational Practitioners. *AACE Journal*, 16(4), 425-439

Asogwa, P. (2010). *Management of instructional materials for effective teaching and learning in secondary schools in obollo- afor education zone of Enugu State.* Unpublished. Masters Thesis, University of Nigeria Nsukka

Atieno, J. (2014). *Influence of teaching and learning resources on students' performance in kenya certificate of secondary education in free day secondary education in Embakasi District, Kenya*. Unpublished. Masters Thesis, University of Nairobi.

Awino, N. L. (2014). *Impact of supervision on the implementation of early childhood education curriculum in selected public pre-schools in Lang'ata District, Nairobi County, Kenya.* Unpublished. Masters Thesis, University of Nairobi.

Ayiendah, M. (2017). Challenges faced by teachers when teaching english in public primary schools in Kenya. 2(13), 1-3

Ayaga, O. A. (2010). *Management of physical and material resources in secondary schools in Kenyenya division, Gucha district–Kenya.* M.Ed Dissertation, Kenyatta University.

Beyene, S. & Tezera, D. (2017). An assessment on educational materials management and utilization in Benishangul Gumuz Regional State Metekel Zone bullen primary school in focus. *Journal of Scientific Research in Allied Sciences*, 3(3), 247-264.

Bidwell, K. & Watine, L. (2014). *Exploring Early Education Programs in peri-urban Settings in Africa*.Accra, Ghana: UBS Optimus Foundation.

Boyd, M. (2013). “I love my work but” The professionalization of early childhood education. *The Qualitative Report*, 18(71), 1-20.

Bietenbeck, J. (2019). *Preschools in Kenya and Tanzania boost learning outcomes in the long run*. https://theconversation.com/preschools-in-kenya-and-tanzania-boost-learning-outcomes-in-the-long-run-125677

Birimana, B., & Orodho, A. J. (2014). Teaching and learning resource availability and teachers’ effective classroom management and content delivery in secondary schools in Huye District, Rwanda. *Journal of Educational Practice,* 5(9),111-122

Bishop, G. (1985). *Curriculum Development a Textbook for Learners.* London: Macmillan Publishing Company Inc.

Brown, R. N., Oke, F. E., Brown, P. D. (2010).*Curriculum and Instruction.* Ibadan. Macmillan Publisher Nigerian education.

Brunner, J. (1960): *Intellect of young children.* New York M.E Sharpe.

Bušljeta, R. (2013). Effective use of teaching and learning resources. *Czech-Polish Historical and Pedagogical Journal*, 5/2, 55–69.

Bukoye, R. (2019). *Utilization of instruction materials as tools for effective academic performance of students: implications for counselling*. Proceedings 2019, 2, 1395

Busienei, A. C. (2014). *Community factors influencing pupil’s participation in public primary school education in Ololunga Division, Narok County, Kenya*. Unpublished. Doctoral dissertation, University of Nairobi

Chapman, R. (2018). *What is Data Analysis?* Retrieved from https://limeproxies.com/blog/what-is-data analysis-in-research-and-how-to-do-it/

Chukwbikem, P. E. I (2013). Resources for early childhood education. *Mediterranean Journal of Social Sciences*, 4(8), 161-172.

Childcare H. (2020). *Learning activities for child care centers*. https://childcareheroes.org/early-educators/centers-learning-activities/?gclid=CjwKCAiApNSABhAlEiwANuR9YL-4eBsbySPkfHppo9D5aQaRFQWJUC8RfFOc_3gaJgFU5BnOpFMwERoCuOkQAvD_BwE

Chingos, M. M., & West, M. R. (2012). Do more effective teachers earn more outside the classroom?. *Education Finance and Policy*, *7*(1), 8-43.

Christie, P. (2010). Landscapes of leadership in South African schools: Mapping the changes. *Educational Management Administration & Leadership,* 38(6):694-711.

Clarke, L., & Abbott, L. (2015). Young Pupils', their Teacher's and Classroom Assistants' Experiences of iPads in a Northern Ireland school: "Four and five years old, who would have thought they could do that?". *British J. Educ. Technol.* 47(6):1051-1064.

Cooper, D. R., Schindler, P. S., & Sun, J. (2006). *Business research methods* (Vol. 9, pp. 1-744). New York: Mcgraw-hill.

Creswell, J. W. (2014). *A concise introduction to mixed methods research*. New York: SAGE Publications.

Dale, E. (1969). *Audio-visual methods in teaching*. New York, Dryden Press

Defaru, M. (2014). *The Practices of Educational Materials Management and Utilization in Secondary Schools of Jimma town.* Unpublished. Doctoral dissertation, Jimma University

De Jong, T. (2010). Cognitive load theory, educational research, and instructional design: some food for thought. *Instructional science*, *38*(2), 105-134.

DFID (2007). *Secondary Textbook And School Library Provision in Sub-Saharan Africa: A review based on 19 National Case studies.*Washington: World Bank

Dhakal, K. (2017). Availability and utilization of instructional materials in teaching geography in secondary schools. *The Third Pole: Journal of Geography*, 17(1*):* 51-58

Dommeyer, C. J., Baum, P., Chapman, K. S. & Hanna, R. W. (2002). Attitudes of business faculty towards two methods of collecting teaching evaluations: Paper vs. online. *Assessment & Evaluation in Higher Education*, (27)5, 455-462.

Doublegist (2013). *Industrial Conflict - Causes and Effects in Universities/Colleges.* Ebonyi State*:* DoubleGist Publisher.

Eddy, M. (2016). 'The Child Writer: Graphic Literacy and the Scottish Educational System, 1700–1820". *History of Education.* 46: 695–718.Emine, E. (2010). *Problems that Preschool Teachers Face in the Curriculum Implementation.* Unpublished. Masters Thesis, Middle East Technical University

Eshiwani, G. S. (1993). *Education in Kenya since Independence*. Nairobi: East African Publishers.

European Commission (2013). *Barcelona Objectives. The development of Childcare facilities for young children in Europe with a view to sustainable and inclusive growth.* Luxembourg: Publications Office of the European Union.

Farooq, M. U. (2013). Improving prediction accuracy of hard-to-predict branches using data value correlation.Phd Dessertation. The University of Texas at Austin

Ferdaus, J. (2016). *Monitoring and Evaluation in education system of Bangladesh: Theory, reflection, and recommendation*. BRAC Institute of Educational Development, BRAC University

Gall, G. & Gall, J. P. Borg.(2003). *Educational research: An introduction*, *7*. Harlow: Longman Publishing.

Ganira K. L., Odundo, P. A. & Muriithi, Z. W. (2016). Influence of Head Teacher Management of Pre-school Programs and Learning Achievement in Mombasa County, Kenya. *Education Journal. 5(5), 2016, pp. 81-91.*

Gauntlett, D., Ackermann, E., Whitebread, D., Wolbers, T. and Wikström, C. (2010). *The Future of Play.* Billund: LEGO Learning Institute.

Ndungu, B. Gathu, A. & Bonnett, E. (2015). Influence of Monitoring and Evaluation by Principals on Effective Teaching and Learning in Public Secondary Schools in Githunguri District. *Journal of Education and Practice*, 6(9), 10-17

Goble, C. B., & Horm, D. M. (2010). *Take Charge of your Personal and Professional Development. NAEYC.* Retrieved on 10th January 2021 from https://www.naeyc.org/files/yc/file/201011/GobleOnline1110.pdf

Gogoi, S. (2015). importance of teaching learning materials for young children. *International Journal of Current Research, 7 (9), pp.20269-20273*

Government of Kenya (2010). *The Kenyan Constitution*. Nairobi. Government printer.

Government of Kenya (2005*). Kenya Education. Sector Support Programme 2005-2010; Delivering quality education and training to all Kenyans*. Ministry of Education, Science and Technology. Nairobi.

Government of Manitoba (2018). *Materials/Equipment List for Preschool Child Care Centres.*
https://www.gov.mb.ca/fs/childcare/resources/pubs/equipment_preschool.pdf

Gichobu, G. (2014). *The role of Headteachers in Curriculum and Instructional Management: A Case of Secondary Schools, in Gatundu District, Kiambu County, Kenya.* Unpublished. Masters Thesis, Kenyatta University

Gupta, K., (2001). A practical guide to needs assessment. *Performance Improvement*, *40*(8), 40-42.

Hanushek, E. A., (2008). *Educational Production Functions.* Melbourne : The New Palgrave

Hanushek, E. (1995). Interpreting recent research on schooling in developing countries. *The World Bank Research Observer, 10(2), 27-246*

Happonen, S. (2010). *On Representation, Modality and Movement in Picture Books for Children.* In: Visual History. Images of Education. Frankfurt am Main: Peter Lang, 2005, p. 75; Pingel, F.: UNESCO Guidebook on Textbook Research and Textbook Revision. (2nd revised and updated edition). Paris-Braunschweig: UNESCO-Georg Eckert Institute for International Textbook Research, 2010, p. 48.

Hildebrand, M. (1985). Energy of the oscillating legs of a fast-moving cheetah, pronghorn, jackrabbit, and elephant. *Journal of Morphology* 184(1):23-3.

Hirst, M., Jewis, W., Sojo, R & Cavanagh, S. (2011). *Transition to Primary: A Review of the Literature*. 5(8), 67-77

Institute of Medicine and National Research Council (2015). *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation.* Washington, DC: The National Academies Press.

Institute of Policy Analysis and Research. (2006). *Redressing the Governance concerns issues*. Public procurement Reform Policy Review 4-12. Routledge: London and New York

Isola, O. M. (2010). *Effects of Standardized and Improvised Instructional Materials Learners' Academic Achievements in Secondary School Physics*. M. Ed Thesis, University of Ibadan, Ibadan.

Jeptanui, C. (2011). *Efficiency in the use of Instructional Resources in Public Primary Schools in Kapseret Zone, Wareng District, Kenya*. Unpublished. MED Thesis, Kenyatta University

Kaaria, K. (2009). *Availability, Acquisition and Utilization of T/L Materials in primary schools.* Unpublished. MED Thesis, Kenyatta University

Kabwos, R. & Omwenga, E. (2020). Availability and adequacy of learning resources for implementing inclusive education in public preschools in Belgut Sub-County, Kenya. *European Journal of Education Studies, 6(11), 336 - 345*

Kangethe, P. (2011). *Challenges of T/L Materials in Public Secondary Schools in Tana River District.* MED Thesis, Kenyatta University.

Kang'ethe, S. Wakahiu, J. & Karanja, M. (2015). Assessment of the Early Childhood Development Policy Implementation in Kenya, Case Study of Ruiru District. *Journal of Education & Social Policy, 2(1), 78 – 89.*

Karagu, N. K. (2010). *Management Concepts and Organizational Behavior.* New Delhi: Kalyani Publishers.

Karaka, K. (2007): *Effective teaching in school*. Oxford University Press, London.

Karanja, K. (2015). *Management of T/L Resources in Primary Schools in Kandara Division, Kandara District, Muranga County, Kenya.* MED Thesis, Kenyatta University

Karanja, D. T., & Githinji, W. (2011). *Philosophical, Sociological and Historical Foundation of ECDE.* Nairobi: Longhorn Kenya Limited.

Kariuki. M. (2009): *Factors Affecting Teaching of Science in Kiambu Municipality, Nairobi*: Unpublished. Masters Thesis, Kenyatta University.

Kenya Institute of Curriculum Development (2016). *Report on needs assessment for ECDE School Curriculum Reform in Kenya.* Nairobi. Kenya Institute Of Curriculum Development

Kenya Institute of Education (2010): Summative Evaluation of the Primary School Education Curriculum. Nairobi:K.I.E.

Khorsan, R. (2014). External validity and model validity: a conceptual approach for systematic review methodology. *Evidence-Based Complementary and Alternative Medicine, 2014*(1), 1-12

KICD, (20I7). *Facilitator's Training Manual for Early Years Education Curriculum*. Nairobi: KICD

KIE. (2008). *Early Childhood Development and Education Handbook*. Nairobi: Government Press.

Kioko, H. (2014). *Influence of Headteachers' Management of Resources on Pupils' Performance in Kenya Certificate of Primary Education in Public Schools in Kangundo Division, Kenya*. Unpublished. Phd Dessertation, University of Nairobi.

Kipkosgei, A. & Kabwos, R. (2014). *Factors Affecting the Implementation of Pre-Schools Science Curriculum in Kenya: A Case of Kericho Municipality, Kericho County*. The International Conference, the Future of Education. 1(1), 1-12

Kitsao-Wekulo, P. & Hungi, N. (2016), *Are Kenyan children ready for the leap from pre-primary to primary school?* https://theconversation.com/are-kenyan-children-ready-for-the-leap-from-pre-primary-to-primary-school-65584

Kombo, D. K. and Tromp, D.L.A, (2006). *Proposal and Thesis* Writing -An Introduction. Nairobi: Pauline Publications.

Kothari, R. C., (2004). *Research Methodology: Methods and Techniques, 2nded*. Delhi: New Age International

Kris, D. (2018). *Why Children Still Need to Read (and Draw) Maps*. Retrieved on 22nd December, 2019 from https://www.pbs.org/parents/thrive/why-children-still-need-to-read-and-draw-maps

Labaree, R. V. (2009). Research Guides: *Organizing Your Social Sciences Research Paper*: Theoretical Framework Carlifornia: University of Southern Carlifornia

Landrum, T. J., & McDuffie, K. A. (2010). Learning styles in the age of differentiated instruction. *Exceptionality*, *18*(1), 6-17.

Leslie, P. (2014). *Early Childhood Education for All: The economic impacts of child care and early education: Financing Solution for Future.* New York: Legal Momentum.

Likoko, S. Mutsotso, S. and Nasongo, J. (2013). The adequacy of instructional materials and physical facilities and their effects on quality of teacher preparation in Emerging Private Primary. *International Journal of Science and Research*, 2(1), 403-407

Likwop, P. K. (2016). *Influence of Headteachers' Instructional Supervision Practices On Pupils' Performance in Kenya Certificate of Primary Education in Mulot Division, Narok South, Kenya.* Unpubloshed. Doctoral dissertation, university of Nairobi

Livumbaze, G. Achoka, J. (2017). Analyzing the effect of teaching / learning resources on learners' academic achievement in public secondary schools, Hamisi Sub-County, Kenya. *European Journal of Education Studies (3)1,* 361 – 376.

Lyimo, N. Too, J. & Kipng'etich K. J. (2017). Perception of teachers on availability of instructional materials and physical facilities in secondary schools of Arusha District, Tanzania. *International Journal of Educational Policy Research and Review, 4(5),* 103-112

Lynch, M. (2011). *Allocating Resources to Improve Learner Learning.* Retrieved from https://www.huffpost.com/entry/allocating-resources-to-i_b_1018778

Lyons, A. (2012). *Workers of tomorrow, Education in progress, Ministry of Education and Scientific Research.* Port Fortis: Fiji.

Mahindu, J. W. K. (2011). *Influence of play on the development of preschool Children's social skills in Kabete Zone, Kenya*. Unpublished MED Thesis, University of Nairobi.

Makewa, L. N, Role, E. & Ngussa, B. (2012). Usefulness of Media Resources in English Instruction: A Case of Adventist Secondary Schools in Tanzania. *J. Educ. Pract., 3(15):163-172.*

Makokha, E. (2017). *Determinants of pre-primary school teachers' use of improvised materials in science instruction in Bungoma East Sub County, Bungoma County, Kenya*. Unpublished. Masters Thesis, Kenyatta University.

Mohammed, S. (2016). *The principals' supervisory roles for quality education and effective school administration of basic education schools in Nigeria.* Proceedings of ISER 18th International Conference, Dubai, UAE, ISBN: 978-93-82702-45-0.

Mascitti-Miller, E. (2012). "Resource Allocation: Practices in Urban Elementary Schools" (2012). *Education Doctoral. Paper 19*

Mbaka, T. (2012). *Influence of headteachers' administrative role on kenya certificate of primary examination performance in Gucha South District, Kenya.* Unublished. Masters Thesis, University of Nairobi

Meghir, C. (2005). Educational reform, ability, and family background. *American Economic Review*, *95*(1), 414-424.

Melly, I. & Mwangi, B. (2018). Influence of selected factors on the level of implementation of preschool creative activities Curriculum in Njoro, Nakuru County, Kenya. *African Research Journal of Education and Social Sciences, 5(2), 2018*

Ministry of Education, (MOE), (2012). *Policy Framework For Education Paper*. Nairobi. Government Printers

Ministry of Education, Rwanda (2009). "Child Friendly Schools Infrastructure Standards and Guidelines" Primary and Tronc Commun schools. MoE:Rwanda, Kigali: UNESCO

Ministry of Education (2008). *ECDE Handbook.* Nairobi: K.I.E Government press.

MoEVT (2005). *Muhtasari wa Elimu ya Awali vitendo vya watoto*. Dar- as- Salaam: Taasisi ya Elimu Tanzania.

Mohajan, H. K. (2017). Two criteria for good measurements in research: Validity and reliability. *Annals of Spiru Haret University. Economic Series, 17*(4), 59-82.

Momoh, A. J. (2010). Effects of instructional resources on learners' performance in West Africa School Certificate Examinations (WASCE). *International Journal of Inclusive Education. 6(2).*113-113-126.

Monda, T. (2012). *Influence of T/l materials on children performance in pre-schools in Borabu District, Nyamira County, Kenya.* Doctoral dissertation, University of Nairobi

Montessori, M. (1998): *Discovery of child development*. Oxford series London.

Montessori, M. (1870). The Montessori Method: *The Origins of an Educational Innovation: Including an Abridged and Annotated Edition of Maria Montessori's The Montessori Method.* Rowman & Littlefield Publishers, Inc. Oxford.

Moriasi, P. (2015). Disproportionality in special education: special education teachers 'perceptions about disproportionality of African American students in Special Education. PhD Thesis, University of Oklahoma

Moyo, J. Wadesango, N. & Kurebwa, M. (2012). Factors that affect the implementation of early childhood development programmes in Zimbabwe. *Stud Tribes Tribals, 10(2): 141-149* (2012).

Mucheru, K. P. (2015). Management of teaching and learning resources in primary schools in Kandara Division, Kandara District, Muranga County, Kenya.

Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods*. Nairobi: Acts Press

Muiruri, J. (2014). *Impact of Instructional Materials on Performance of Number Writing among Pre-School Children in Kamukunji District of Nairobi County*. Unpublished. Masters Thesis, University of Nairobi.

Muithungu, C. E. (2003): *Teaching resources for young children*. Longhorn Publishers Nairobi

Mupa, P. & Chinooneka, T. (2015). Factors contributing to ineffective teaching and learning in primary schools: Why are schools in decadence? *Journal of Education and Practice, 6(19), 125 - 132*

Mwangi, L. (2015). *Effect of dramatization on learner achievement in learning english language in public secondary schools in Meru County, Kenya.* Unpublished. Doctoral Thesis, University of Nairobi.

Mwalyego, M. (2014). *An investigation on the utilization of instructional materials in pre- primary schools in Morogoro Municipality*. Unpublished. Masters Thesis, Open University of Tanzania.

Mwanasiti, M. (2019). *Influence of Head Teachers' Management Role on Learners' Academic Performance in Public Primary Schools in Kisauni Sub County, Kenya.* Upublished. Masters Thesis, Kenya Methodist University

Mwaniki, K. L. (2015). *Influence of instructional resources of pre-school children's performance in number work in Kairuri Zone, Embu County Kenya* (Doctoral dissertation, Master's Thesis, University of Nairobi).

Mwonga and Wanyama (2012) Dealing with the prevailing attitudes and challenges for effective implementation of ECD Music and Movement Curriculum in Eldoret Municipality, Kenya. *Research Journal in Organizational Psychology and Education Studies*. 1(5), 295-302.Najumba, J. (2013). *The Effectiveness of Teaching and Learning in Primary Schools.* Boston: Sage Publications.

Narok County Education Office (2018). *List of Public Pre-Primary Schools.* Narok:MoE.

National Teachers Institute (NTI, 2006). *PGDE book 2: Post Graduate Diploma in Education:* PDE 103 General methods in education

Ndirangu S. K., (2015). *Influence of head teachers' roles on pupils' academic achievement in public primary schools in Mathioya sub-county, Murang'a County Kenya.* Unpublished, Master's thesis, Kenyatta University, Nairobi.

Nemes, J. & Sharali, H. (2015). Effectiveness of Headteachers in Monitoring Teaching and Learning: The Case of Selected Public Primary Schools in Kondoa District, Tanzania. *International Journal of Education and Research, 3(1), 505 – 518.*

Ng'asike, J. (2016). *Kenya's Early Learning Centres may be doing more harm than good*. https://theconversation.com/kenyas-early-learning-centres-may-be-doing-more-harm-than-good-68798

Ngunjiri, J. (2012). *Influence of Head Teachers' Instructional Supervision Strategies on Pupils Performance in Kenya Certificate of Primary Education in Public Primary Schools in Rumuruti Division, Kenya.* Unpublished. Masters thesis, University of Nairobi.

Ngussa, B. M. (2015). Integration of Media Resources in Christian Religious Education: A Case Study of Secondary Schools in Chemundu Zone, Kenya. *Int. J. Acad. Res. Bus. Soc. Sci., 5(1):197-211.*

Ngwaru, J. M., and Opoku-Amankwa, K. (2010). Home and school literacy practices in Africa: listening to inner voices. *Lang. Educ. 24,(1) 295–307*

Njenga, A., & Kabiru, M. (2001). *In the Web of Cultural Transition: A Tracer Study of Children in Embu District, Kenya. Early Childhood Development: Practice and Reflections. Following Footsteps*. The Hague: Bernard van Leer Foundation

Njoroge A. J. (2011). *A study of factors influencing children Enrolment in pre-school education in Thogoto and Karai Zones in Kikuyu Division, Kikuyu District, Kiambu County – Kenya*. Unpublished. M.ed research project, University of Nairobi.

Ntumi, S. (2016). Challenges Pre-School Teachers Face in the Implementation of the Early Childhood Curriculum in the Cape Coast Metropolis. *Journal of Education and Practice Vol.7, No.1,* 54 – 66.

Nyakangi, E. (2021). *What is Competency Based Curriculum (CBC) in Kenya? (Detailed Illustration).* https://kenyayote.com/what-is-competency-based-curriculum-cbc-in-kenya-detailed-illustration/

Nzambi, P. (2012). *Role of the Headteacher in Instructional Supervision as Perceived by Teachers in Secondary Schools in Kitui District, Kitui County-Kenya*. Unpublished. Masters thesis, Kenyatta University

Ochanda, E. (2015). *Effect of Play Equipment on Pre-school Children's Participation in Outdoor Play Activities in Suba East Division, Migori County.* University of Nairobi.

Offenheiser, R. & Holcombe, S. (2008). Challenges and opportunities in implementing a rights-based approach to development: An Oxfam America perspective. *Nonprofit and Voluntary Sector Quarterly 32(2):* 268

Ogbandah, L. (2008). An appraisal of Instructional Materials used to Educate Migrant Fishermen‟s children in River State Nigeria. *International Journal of Scientific Research in Education, June, 2008,(1),13-25.*

Ogunmilade, C. A. (1984). *Media in Education*. Ile-Ife, Obafemi Awolowo University of Ile-Ife Press.

Ogunyemi, F. & Ragpot, L. (2015). Work and play in early childhood education: Views from Nigeria and South Africa. *South African Journal of Childhood Education SAJCE, 5(3), 1-7*

Ogunyemi, F.T., (2012). *'Epistemological relevance of constructivism in early childhood education in Nigeria.* PhD thesis, University of Ibadan.

Ojuondo, M. (2015). *Influence of Play on Development of Language Skills among Preschool Children in Kisumu Central Sub-County, Kenya.* Unpublished, Masters Thesis, University of Nairobi.

Okendu, J. N. (2012). The impact of school administrative structure and adequate supervision on the improvement of instructional processes. *Academic Research International Journal 2(3),* 497-500.

Okongo, R. Ngao, G. Rop, N. and Nyongesa, W. (2015). Effect of Availability of Teaching and Learning Resources on the Implementation of Inclusive Education in Pre-School Centers in Nyamira North Sub-County, Nyamira County, Kenya. *Journal of Education and Practice, 6 (35), 132-141*

Okori, O. A., & Jerry, O. (2017). Improvisation and utilization of resources in the teaching and learning of science and mathematics in secondary schools in Cross River state. *Global Journal of Educational Research, 16*(1), 21-28.

Okoth, U. (2014). Headteachers' leadership in providing instructional resources for environmental education in secondary schools in Siaya County, Kenya. *US-China Education Review, 4(9), 634-647*

Okune, R. Gudo, C. and Odongo, B. (2016). Implications of instructional materials on oral skills among early childhood learners in central zone, Kisumu County, Kenya. *International Journal of Educational Policy Research and Review, 3 (2),* 20-28

Olayinka, A. R. B. (2016). Effects of Instructional Materials on Secondary Schools Students' Academic Achievement in Social Studies in Ekiti State, Nigeria. *World Journal of Education*, *6*(1), 32-39.

Olembo, J., Wanga, P. E., & Karagu, N. M. (1992). *Management in education*. Nairobi: Educational Research and Publications.

Olugbenga, M. (2019). The Role of Principals in the Effective Utilization of Instructional Materials among Selected Secondary Schools in Kaduna State Nigeria. *Scientific Research Journal (SCIRJ),* 7(9), 73 -99.

Oluwafemi, O.L., Nma, A., Osita, O. and Olugbenga, O. (2014). Implementation of early childhood education: A case study in Nigeria. *Universal Journal of Educational Research. 2(2):* 119-125

Omaiyo, J (2013). *Effect of Instructional Resources on Children's Number Work Performance in Pre-Schools in Isibania Zone, Migori, County*. Unpublished. Doctoral Dissertation, University of Nairobi

Onyango, W. (2014). Effects of T/L resources on pre-school learners' transition to class one: A case study of Rachuonyo South Sub County. *Journal of Education and Practice,* 5 (34), 154- 160

Orodho, J. A., Waweru, P. N., Ndichu, M., & Nthinguri, R. (2013). Basic education in Kenya: Focus on strategies applied to cope with school-based challenges inhibiting effective implementation of curriculum. *International Journal of Education and Research*, *1*(11), 1-20.

Orodho, J. A. (2008). *Techniques of Writing Research Proposals and Reports in Education and Social Sciences.* Maseno*:* Kanezja HP Enterprises.

Owoko, I.S. (2009). *The Role of Advocacy in Enhancing Equalization of Opportunities for Disabled People,* (unpublished paper) presented in Leonard Cheshire Disability workshop in Kisumu.

Pancare, R. (2018). *How to Use Charts & Diagrams in Classrooms.* https://classroom.synonym.com/types-diagrams-6583964.html

Panigrahi, M. R. (2012). Implementation of instructional supervision in secondary school: approaches, prospects and problems. *Science, Technology and Arts Research Journal*, 1(3): 59–67.

Performance Management and Delivery Unit (PEMANDU), (2013). Economic Transformation Programme: Annual report 2013. Retrieved from http://etp.pemandu.gov.my/annualreport2013/

Plecki, M. L., Alejano, C. R., Knapp, M. S., & Lochmiller, C. R. (2006). Allocating Resources and Creating Incentives to Improve Teaching and Learning. Center for the Study of Teaching and Policy. Report, University of Washington.

Puri, M, & Abraham, G. (2004). *Inclusive Education.* Carlifonia: Sage Publication Ltd Mohan Co-operative Industrial Area.

Rajapaksha. N. & Chathurika, D. (2015). Problems Faced by Preschool Teachers When Using Teaching Aids in the Teaching Learning Process. *International Journal of Multidisciplinary Studies* 2(2):97-109

Ramani, G.B., Siegler, R.S., & Hitti, A. (2012). Taking it to the classroom: Number board games as a small group learning activity. *Journal of Educational Psychology*, 104 (3), 661-672.

Ratemo, C. (2016). *Quality of Pre-Primary School Education: A Comparative Study of Private and Public Pre-Primary School Centres in Nairobi City County, Kenya*. Unpublished PhD Dissertation, Kenyatta University, Nairobi

Republic of Kenya (2012). *Sessional Paper No.14 of 2012 on realigning education and training to the Constitution of Kenya 2010 and Vision 2030 and beyond*. Nairobi: Ministry of Education Science and Technology

Resnik, D. B. (2015). *What is Ethics in Research & why is it important.* Retrievd from https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm.

Right, J. (2012). *The Importance of Learning Materials in Teaching.* Retrieved from: http://www.ehow.com/about_6628852_importance-learning-materials- teaching

Sapsford, R., & Jupp, V. (2006). *Data Collection and Analysis*. London. Sage Publications

Sarjoughian, H. S., Zeigler, B. P., & Cellier, F. E. (1998). Evaluating model abstractions: A quantitative approach. In Enabling Technology for Simulation Science II. *International Society for Optics and Photonics* 3369 (8), 59-70.

Saunders, M., Lewis, P. & Thornhill, A. (2012). *"Research Methods for Business Students"* 6th edition. New York: Pearson Education Limited

Schneider, D., & Trapp, M. (2018). B-space: dynamic management and assurance of open systems of systems. *Journal of Internet Services and Applications*, *9*(1), 15.

Seth, O. K. (2009). *Instructional media as a tool for ensuring quality teaching and learning for pupils in the Junior High Schools (Selected schools in the Kumasi Metropolis).* Unpublished, Master of Education, Kwame Nkrumah University of Science and Technology

Shofoyeke, A.D. (2014). The impact of teaching methods on pre-primary school pupils' learning achievement in protection issues in selected Nursery and Primary Schools in Ondo West Local Government. *Journal of Elementary Education* 25*(2),* 45-60

Sitati, Kennedy and Ndirangu (2017). Provision of teaching/learning resources in the early child hood education centres in Kakamega County, Kenya. *IOSR Journal of Humanities and Social Science (IOSR-JHSS) 22(1), 44-52*

Stewart, J. R. (2009). The evolutionary consequence of the individualistic response to climate change. *Journal of evolutionary biology*, *22*(12), 2363-2375.

Sweller, J., (1988).Cognitive load during problem solving: Effects on learning, *Cognitive Science, 12 (1), 257-28.*

Taylor A & Viastos, T. (2009). *Linking Architecture and Education Sustainable Design for Learning Environments;* New Mexico Press: Albuquerqui University of New Mexico Press

Tety, J. L. (2016). *Role of Instructional Materials in Academic Performance in Community Secondary Schools in Rombo District"*. Unpublished, Doctoral dissertation, The Open University of Tanzania

Transparency International (TI) (2010). *Mapping transparency, accountability and integrity in primary education in South Africa.* Braamfontein, Transparency International

Trawick-Smith, J., Wolff, J., Koschel, M., & Vallarelli, J. (2015). Effects of toys on the play quality of preschool children: Influence of gender, ethnicity, and socioeconomic status. *Early childhood education journal*, *43*(4), 249-256.

Tuimur H. N. & Chemwei B. (2015). Availability and Use of Instructional Materials in the Teaching of Conflict and Conflict Resolution in Primary Schools in Nandi North District, Kenya. *International Journal of Education and Practice.* 3(6) 224-234.

Udoba, H. (2014). *Challenges Faced by Teachers When Teaching Learners with Developmental Disability*. Unpublished, Master's Thesis, University of Oslo

Udosen, N.P. (2012). *Importance of School Plant to the Teaching-Learning Process*. www.scrip.org

UNESCO, (2010). *Conference concept paper of The World Conference on Early Childhood Care and Education (ECCE): Building the Wealth of Nations.* Moscow: UNESCO

UNESCO, (2015). *EFA. Global Monitoring Report (2000 - 2015).* Achievements and Challenges. Paris: UNESCO

UNESCO (2014). *EFA Global Monitoring Report 2013/4; Teaching and learning achieving Quality for all.* Paris.UNESCO.

UNICEF (2019). *Increasing Access to Early Childhood Education in Africa.* New York: UNICEF

United Nations. Office for Ocean Affairs, & the Law of the Sea. (1989). *The Law of the sea: navigation on the high seas: legislative history of Part VII, Section I (Articles 87, 89, 90-94, 96-98) of the United Nations Convention on the Law of the Sea* (Vol. 18, No. 2). New York: United Nations Publishers.

Usman, Y. D. (2016). Educational Resources: An Integral Component for Effective School Administration in Nigeria. *Online Submission*, *6* (13), 27-37.

Van Merrienboer, J. J., & Ayres, P. (2005). Research on cognitive load theory and its design implications for e-learning. *Educational Technology Research and Development*, *53*(3), 5-13.

Wamba, N. & Ngomezulu, V. (2014). The crisis in public education in Malawi. *International Journal of Advanced Research 2(4):323-331*

Wambua, A. W. (2015). *Mobilization and Allocation of Teaching and Learning Resources among Subjects in Public Secondary Schools in Makueni County, Kenya.".* Unpublished Masters Project, Kenyatta University, Nairobi.

Wambui, S. (2013). *Effect of Use of Instructional Materials on Learner Participation in Science Classroom in Pre-school in Kiine Zone Kirinyaga, County Kenya.* University of Nairobi

Wambura, D. (2015). *Impact of instructional materials on early childhood development and education in kiine zone ndia division of Kirinyaga West District, Kirinyaga County.* Unpublished. Bed Project, yMount Kenya University.

Wangila, V. (2017). Challenges facing the implementation of early childhood development and education policy in Bungoma County, *Kenya. Journal of Education and Practice, 8(15), 217 - 223*

Wanjala, W. (2008). *Science and Technology Teacher Education in Africa; Issues in the promotion of Scientific and Technological Literature.* Unpublished. Moi University

Waweru, P.N. & Orodho, A. J. (2014). Management practices and students' academic performance in national examinations in public secondary schools in Kiambu County, Kenya. *International Journal of Scientific Research, 5(25), 472- 479.*

Were, P. (2014). Effects of T/L resources on pre-school learners' transition to class one: a case study of Rachuonyo South Sub County. *Journal of Education and Practice. 5(34), 154-161*

Wiersma, W. (1995). *Research Methods in Education: An Introduction* (Sixth edition). Boston: Allyn Bacon Inc.

Willis, J. E., & Hymon-Parker, S. (2010). Expanding multicultural activities across the curriculum for Preschool. *Undergraduate Research Journal for the Human Sciences 5(2006), 1-5*

Appendix I: Questionnaire for ECD Teachers and Head Teachers

My name is Kosilei John Kipkoech, a student from the University of Kabianga, School of Education. Am collecting data about the influence of teaching and learning materials management on learners' performance in public ECD centres in Narok County. You are asked to mark and fill as accurately and appropriately as possible.

The information is used for academic purposes only and is treated confidentially by the researcher. No name or personal details required.

(Please tick/fill the answers appropriately)

SECTION A: Background information

1. Gender /sex of respondent

   Male ☐ Female ☐

2. Age of respondent

   18-27 years ☐

   28-37 years ☐

   37-48 years ☐

   48 years and above ☐

3. How long have you been in the current station?

   Below 1 year ☐

   1-3 years ☐

   Above 3 years ☐

4. You teach in?

   Primary ☐ Pre School ☐

Section B: Availing of teaching and learning materials by Headteachers on learners' performance in Activity Areas.

5. To what extent does the availing of the following teaching and learning materials by headteachers influence learners' performance in activity areas? Use the following scale.

   Very large extent [5]

   Large extent [4]

   Moderate extent [3]

   Small extent [2]

   No extent [1]

Categories of T/L materials	**5**	**4**	**3**	**2**	**1**
Reference materials					
Maps					
Diagrams					
Charts					
Pictures					
Play things (toys, blocks etc.)					
Fixed play materials					

Section C: Monitoring Allocation of Teaching Learning materials/resources by Headteachers on Learners Performance in Activity Areas.

6. To what extent does monitoring of allocation of teaching learning materials by headteachers influence learner's performance in activity areas?

   Use the following scale

   Very large extend [5]

   Large extend [4]

   Moderate extend [3]

   Small extend [2]

   No extend [1]

Allocation of teaching leaning materials/resources	**5**	**4**	**3**	**2**	**1**
Timeliness in allocating resources					
Equity in allocation of resources					
Quality of teaching learning materials					
Human resource allocation					
Sufficiency of teaching learning materials allocated					

Section D: Adequacy of Teaching and learning Materials on Learners' Performance in Activity Areas.

7. To what extent does adequacy of the following teaching and learning materials influence learners' performance in activity areas? Use the following scale.

   Very large extent [5]

   Large extent [4]

   Moderate extent [3]

   Small extent [2]

   No extent [1]

Categories of T/L materials	**5**	**4**	**3**	**2**	**1**
Reference materials					
Maps					
Diagrams					
Charts					
Pictures					
Play things (toys, blocks etc.)					
Fixed play materials					

Section E: Head Teachers' Management roles in Maintenance of Teaching and Learning Materials and Learners' Performance in Activity Areas

8. To what extent do the following Headteachers' Management roles in Maintenance of Teaching materials influence learners' performance in activity areas? Use the following scale.

   Very large extent [5]

   Large extent [4]

   Moderate extent [3]

   Small extent [2]

   No extent [1]

Managerial roles	**5**	**4**	**3**	**2**	**1**
Supervision of storage of T/L materials					
Repairs to T/L materials					
Putting measures in place to avoid materials loss,					
Timeliness in replacement of spoilt and lost items					
Control of material damage or deterioration					
Supervision of cleanliness of T/L materials					
Ensuring safety of T/L materials in classrooms and stores					

SECTION F: Headteachers' Supervisory Roles in the use of Teaching and Learning Materials and Learners Performance in Activity Areas

9. To what extent do the following Head Teachers' Supervisory Roles in use of teaching and learning materials influence learners' performance in activity areas? Use the following scale

    Very large extent [5]

    Large extent [4]

    Moderate extent [3]

    Small extent [2]

    No extent [1]

Supervisory roles	**5**	**4**	**3**	**2**	**1**
Classroom supervisory visits					
Lesson observation in the use of T/L materials					
Approval of lesson plans, schemes of work					
Checking of Learners progress reports					
Checking the suitability of teaching and learning resources used					
Checking the safety of teaching and learning resources used					

SECTION G: Learners Performance in Select Activity Areas

10. Please describe learners' performance levels for the following activity areas. Use the scale provided in the Table below.

	Below Expectation (1)	**Approaching Expectation (2)**	**Meeting Expectation (3)**	**Exceeding Expectation (4)**
Mathematics activities				
Language activities				
Christian Religious Activities				
Environmental activities				
Psychomotor & Creative activities				

Appendix II: Centre Teaching Learning Materials Observation Checklist

	ACTIVITY AREAS	COMMENTS		
		Available	**Adequate**	**Inadequate**
1.	Mathematics activities			
2.	Language activities			
3.	Christian Religious Activities			
4.	Environmental activities			
5.	Psychomotor $Creative activities			

Appendix III: Centre Performance Assessment Tool

Performance level	**Number of learners**
Exceeding expectation	
Meeting expectation	
Approaching expectation	
Below expectation	

Appendix IV: Interview Guide for Quality Assurance Officers and ECD Coordinators

1. How would you describe performance in activity areas in pre- school?

   _____

2. Do you agree that teaching Learning materials in public pre-schools affect performance positively?

   YES ☐ NO ☐

3. Are teaching learning materials available in public pre-primary schools?

   YES, ☐ NO ☐ NOT SURE ☐

4. In your opinion do you agree that teaching learning materials in public pre-primary schools are not adequate?

   YES ☐ NO ☐

5. Do adequacy of T/L materials in pre-school affects performance in activity areas positively?

   YES ☐ NO ☐

6. Whose role is the provision of T/L materials in public pre- schools?

   Parents ☐ School ☐ Government ☐ Teachers ☐

7. In a public pre-primary school who should source for T/L materials?

   Teacher ☐ Head teacher ☐ Parents ☐

8. What are the roles of a head teacher in a public pre-primary school in regard to T/L material management?

   i _____

   ii _____

   iii _____

9. Poor performance in activity areas in public pre-schools is attributed to?

   i _____

   ii _____

   iii _____

   iv _____

10. If T/L materials are inadequate in public pre-primary school, who is seen to have not performed his/her roles?

    Parents ☐ Teachers ☐ Head teacher ☐

11. Who is the administrator of a public pre-primary school? _____

12. Who plans for acquisition of teaching learning materials in public pre-primary schools?

    _____

13. If T/L materials are not available in a pre-school, who should take responsibility most?

    Head teacher ☐ Teachers ☐ Government ☐

14. Who supervises ECD teachers when they are using T/L materials in pre-school?

    _____

    _____

    _____

15. Does supervision of teachers when they are using T/L materials influence performances positively? YES ☐ NO ☐

16. In public pre-primary school supervision of teachers is done by _____

_____

17. Have you ever observed a teacher in pre-primary using T/L material in a lesson?

YES ☐ NO ☐

18. In your opinion do you agree that performance in public pre-primary school is poor?

YES, ☐ NO ☐ Undecided ☐

19. Who is the manager of a public pre-school?

ECD teacher ☐ Head teacher ☐ BOM Chair ☐

20. How do you rate performance in activity areas in a public ECD centers?

Very good ☐ Good ☐ Average ☐ Poor ☐

21. What factors in your opinion have hindered good performance in public pre-primary schools?

i. _____

ii _____

iii _____

iv _____

22. What in your opinion should be done to improve performance in pre-schools?

i _____

ii _____

iii _____

iv _____

Appendix V: Sample Determination Formula

The sample size of this study will be calculated using a scientific formula by (Kothari, 2004) as outlined below;

$$n = \frac{Z^2\, pqN}{e^2(N-1) + Z^2 pq}$$

Where:

n = the sample size for a finite population

N= size of population which is the number of pre-primary school teachers and head teachers.

p = population reliability (or frequency estimated for a sample of size n), where p is 0.5 which is taken for all pre-primary school teachers and head teachers' population

p + q= 1 e: margin of error considered is 10% for this study. Z α /2: normal reduced variable at 0.05 level of significance z is 1.96

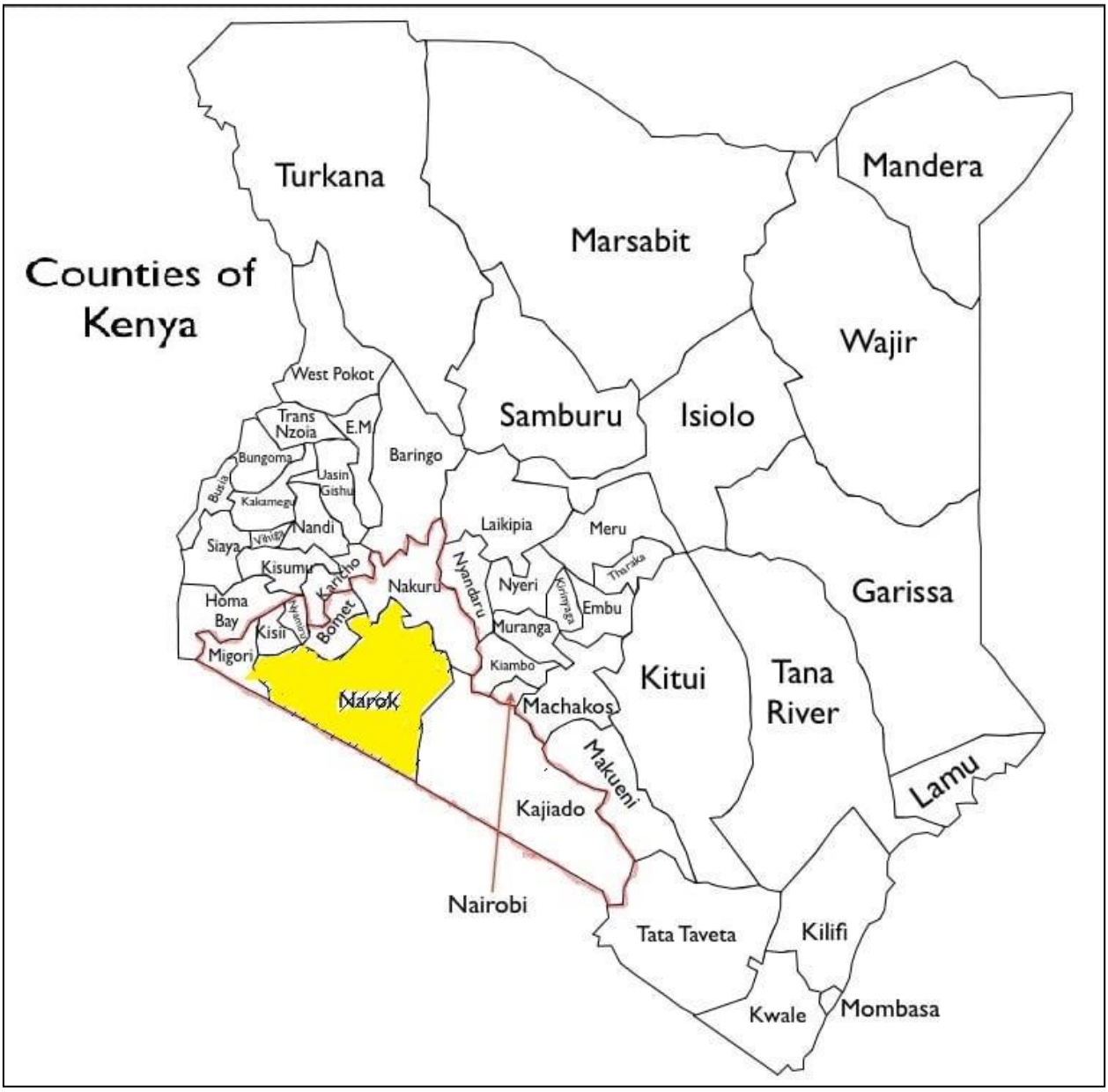
According to the above formula, the sample size for all the pre-primary schools is:

$$n = \frac{(1.96)^2 \times 0.5 \times 0.5 \times 735}{(0.1)^2\,(735-1) + [(1.96)^2 \times 0.5 \times 0.5]}$$

$$= 84.94103774$$

85 preprimary schools

Appendix VI: Map of Study Area



Appendix VIII: Clearance Letter

UNIVERSITY OF KABIANGA

ISO 9001:2015 CERTIFIED

OFFICE OF THE DIRECTOR, BOARD OF GRADUATE STUDIES

REF: PHD/DEM/0005/16 **Date: 15TH JANUARY, 2020**

John Kipkoech Kosilei,
EAPM & PF Department,
University of Kabianga,
P.O Box 2030- 20200,
KERICHO.

Dear Mr. Kosilei,

RE: CLEARANCE TO COMMENCE FIELD WORK

I am glad to inform you that the Board of Graduate Studies during its meeting on 11th December, 2019 approved your research proposal entitled **"A Critical Analysis of Headteachers' Management of Teaching and Learning Materials for Learners Performance in Activity Areas in Public Pre-primary Schools in Narok County."**

I am also acknowledging receipt of two copies of your corrected Proposal.

You are now free to commence your field work on condition that you obtain a research permit from NACOSTI.

Please note that, you are expected to publish at least two (2) papers in a peer reviewed journal before final examination (oral defence) of your Doctoral thesis.

Thank you.

Yours Sincerely,

UNIVERSITY OF KABIANGA 15 JAN 2020

Prof. J. K. Kibett
DIRECTOR, BOARD OF GRADUATE STUDIES.

cc 1. Dean, SE
2. HOD, EAPM & PF
3. Supervisors

Appendix VIII: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **719445**

Date of Issue: **24/January/2020**

RESEARCH LICENSE

This is to Certify that Mr.. JOHN KOSILEI of **University of Kabianga,** has been licensed to conduct research in Narok on the topic: A CRITICAL ANALYSIS OF HEADTEACHERS' MANAGEMENT OF TEACHING AND LEARNING MATERIALS FOR LEARNERS' PERFORMANCE IN ACTIVITY AREAS IN PUBLIC PRE-PRIMARY SCHOOLS IN NAROK COUNTY, KENYA for the period ending : **24/January/2021.**

License No: **NACOSTI/P/20/3557**

719445

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.