A THESIS ON DETERMINANTS OF EARLY LEARNING IN PUBLIC PRE-SCHOOLS IN WAITALUK ZONE, KIMININI SUB-COUNTY, TRANS-NZOIA COUNTY, KENYA

BY

RAEL JERUTO

A RESEARCH THESIS SUBMITTED TO THE DEPARTMENT OF CURRICULUM INSTRUCTION AND EDUCATIONAL MEDIA, SCHOOL OF EDUCATION IN PARTIAL FULFILLMENT FOR THE AWARD OF MASTER OF PHILOSOPHY DEGREE IN EARLY CHILDHOOD AND PRIMARY EDUCATION

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DECLARATION

Declaration by the Student

This thesis is my original work. It has never been submitted to any other institution for the award of certificate, diploma, or degree and therefore no part of this publication may be reproduced, stored in retrieval system, or transmitted in any form without the authors consent

Sign …… **Date ……**

RAEL JERUTO
EDU/EDH/PG/1005/13

Declaration by supervisors

This research thesis has been submitted for examination with our approval as university supervisors.

Sign …… **Sign ……**

DR. MARY KERICH
Dept. of Curriculum Instruction and Educational Media,
Moi University, Eldoret, Kenya

Sign …… **Date……**

DR. LORNA WAFULA
Dept. of Curriculum Instruction and Educational Media,
Moi University, Eldoret, Kenya

DEDICATION

This thesis is dedicated to my loving husband Mr. Stephen Maiyo, my beloved daughters: Chebet Sydney, Sharon Chemutai, Mervies Chepkemei, Marrion Stevens and my beloved son Goodluck Johnathan.

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Primarily, I wish to acknowledge the Almighty God who has seen me through the entire process. I would like to extend my recognition and appreciation warm heartedly to some special people for their support and guidance throughout the thesis writing , I thank my supervisors namely: Dr. Mary Kerich and Dr. Lorna Wafula for their guidance, comments, encouragement, feedback and any other assistance they offered to me during the preparation of this research thesis, without which this piece of work would not have been complete. Mr. Buyela in charge of pre-schools in Kiminini Sub-County for his acceptance and cooperation during the interview session. I would like to thank my entire staff mates for their joint efforts for ensuring that learners did not miss lessons while I was away. The head teacher Kibagenge Primary School, Mr. David Maleya for allowing me time to carry out my research, my deeply hearted gratitude to the head teachers whom I interviewed and the pre-school teachers who filled the questionnaires for their cooperation and warm welcome. National Council for Science Technology and Innovation for the letter of Research Authorization and permit to carry out the research .The County Commissioner's office Trans-Nzoia County. Not forgetting, God bless you all. My appreciation goes to all whose names were not mentioned here your contributions were really vital. To them all I say thank you so much and God bless you abundantly.

ABSTRACT

The Early Childhood learning is an important system not only in Kenya, but also in other countries of the world. Early Childhood learning was emphasized at the world conference on Education for All in Jomtien, Thailand as being the foundation for the life of a child. A child receives a good start in life through the promotion of quality care, nurturing and safe environment. The purpose of the study was to examine the determinants of early learning among children in public pre-schools in Waitaluk Zone, Kiminini Sub-County.The objectives of the research were: to investigate the learning environment, the level of utilization of learning/teaching resources, classroom organization, and the influence of feeding program on learning in public pre-schools in Waitaluk Zone, in Kiminini Sub- County, Trans-Nzoia County. The study was anchored on the Piagets Theory of Cognitive development, which argues that mental constructs are developed by children through real experiences with the environment and supported by Maria Montessori, Dewey and Froebel who propounded that education should be child-centered active and interactive. The target population comprised 118 Pre-school teachers 54 primary school head teachers and 1 Pre-school director a total of 173 respondents .The study respondents comprised 35 Pre-school teachers,16 primary school head teachers and one Pre-school program Director .Simple random sampling techniques and purposive sampling were used in drawing a study sample size of 52.The research tools used for data collection were questionnaires, interviews and observations. Descriptive and inferential statistics were used to analyze the quantitative and qualitative data after organization and theme categorized using both narrative and discourse techniques. Statuses of classrooms, feeding program, teaching and learning resources and classroom organization were collected using observation checklists. Mixed method research was adopted because it permitted the collection of data. The findings revealed that quite a number of the pre-school, centers were connected to electricity -not linked to the main power, had access to safe and clean water, has toilets but not in good conditions and adequate playgrounds. Most pre-school teachers stated that classroom population of learners was increasing and the numbers were unmanageable and classrooms were also small in size. Majority of teachers indicated that the extent to which school-feeding programs influenced: retention, nutritional status and enrolment rates of learners was great. Results from the observation checklist, suggested that averagely there was inadequacy of teaching and learning resources as well as their utilization. Responses from school heads and Pre-school Program director showed that some of the classrooms were still under construction; they had no door and window shutters. The study concluded that for learning to take place effectively the learner should be provided with a conducive, safe with a variety and appropriate learning materials in the learning environment, appropriate physical facilities and nutritious diet The study recommended that County Governments should consider repairing and constructing enough physical facilities, supply teaching/learning resources, enhance supervision and support school feeding programs.

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ABBREVIATIONS AND ACRONYMS

DICECE - District Centre for Early Childhood Education

ECCE - Early Childhood Care and Education

ECEC - Early Childhood Education Curriculum

EFA - Education for All

FPE - Free Primary Education

GER - Gross Enrolment Ratio

GOK - Government of Kenya

IT - Information Technology

MDGS - Millennium Development Goals

MOE - Ministry of Education

MOEST - Ministry of Education Science and Technology

NACECE - National Centre for Early Childhood Education

NCTM - National Council of Teachers of Mathematics

PRE-SCHOOL - Early Childhood Development

PRE-SCHOOL CENTER - Pre-primary education center that caters for children aged 4-5 years

PRE-SCHOOLE - Early Childhood Development and Education

PUBLIC PRE-SCHOOLS- Pre-school center that is established by the community, an organization or attached to a public school which is not profit making.

SCQASO - Sub-County Quality Assurance and Standards Officer

SPSS - Statistical Package for Social Sciences

TSC	- Teachers Service Commission
UNESCO	- United Nations Educational, Scientific, and Cultural Organization

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter provides an overview of the study. It focuses an outline of the background of the study, statement of the problem, objectives of the study, research questions, purpose of the study, scope and limitations and delimitations of the study, significance of the study, justification of the study, the assumptions of the study, theoretical framework, conceptual frame work and operational definitions of terms.

1.2 Background of the Study

The need for a holistic development of children is appreciated all over the world. Consistently, United Nations' Convention on the Rights of the Child (UNCRC, 1989), African Charter on Rights and Welfare of the Child (OAU, 1990) and the Government of Kenya (Republic of Kenya, 1998) recognize the right of every child to a standard of living adequate for its physical, mental, spiritual, moral and social development. This implies that care givers should provide adequate and appropriate care to children, since developmental deficiencies that occur during this stage are difficult to reverse (Pipes & Trahms, 1993). Unfortunately, increased urbanization, introduction of formal education, the universal use of the money economy and the multiplicity of the roles of mothers, pose challenges in the use of the traditionally effective childcare systems. Consequently, Early Childhood Development (E.C.D) centres have been accepted by contemporary societies worldwide as an alternative child care system. These centres comprise one of the immediate physical and social environments experienced by young children that Bronfenbrenner (1986/1989, cited in Black and Puckett 1996) terms Microsystems. The Microsystems are made up of the personal qualities of teachers, other teachers and peers therein, as well as the quality of the

physical environment to which the child is exposed. They also comprise of the activities, roles and interpersonal relationships experienced by the developing person, all of which have an influence on children's development. However, "evidence abound that the teacher is the most important single factor in determining what a school (Pre-school) experience will be like for children" (Read, Gardner and Mahler, 1993 p. 41). Thus, creating conditions that motivate Pre-school teachers to initiate positive interactions with children and a physical environment that is conducive both to teachers' work and children's development is essential. To create these conditions, Pre-school communities who sponsor about 70% of the Pre-schools in Kenya (Republic of Kenya, 1998) need to participate to address what Herzberg, Mausner, & Snyderman (1959) termed 'hygiene' factors or 'job context' needs. These include physical working conditions, salary, benefits, job security, and interpersonal relations. Demonstrating the importance of hygiene factors, research (Howes, Smith & Clanlinsky 1995; Love, Ryre & Faddis, 1992; and Essa, 2003) has reported that preschool teachers whose 'hygiene' needs are satisfied, become warm, sensitive and nurturing. The teachers in these studies showed great responsiveness, gave encouragement to children and used less negative disciplinary techniques. As a result, children developed positive emotional adjustments and their cognitive, language and social skills were enhanced. Additionally, the children displayed fewer behavioral problems and became socially competent. Ultimately, the amount of adult interaction with children became greater and more beneficial, and children had friendlier interactions with peers. These positive child outcomes clearly demonstrate the need to motivate teachers. The key factors influencing Pre-school teacher motivation therefore needed to be investigated in order to guide.

Early Childhood Development Teachers' Motivation in Thika District, Kenya communities in areas where they need to concentrate their efforts. This was important because most preschool teachers reportedly worked in what Herzberg described as an "unhealthy psychological work environment", including unclear terms and conditions of service (Makoti, 2005), and low irregular salary averaging Ksh.2000 a month (Ngome, 2002, Waithaka, 2003 and Makoti, 2005). Heavy workload was also considered to be a de-motivating factor as Ngome (2002) found unmanageable pupil enrollment to contribute to the 54.56 percent rate of preschool teacher attrition. In addition, studies had shown that most centers lacked the necessary facilities, equipment and materials that would promote teacher motivation and holistic development of children. According to Ngome (2002), most public centers supported unfriendly work conditions characterized by windowless, rough mud walled and floored classrooms, and others that were iron-sheet walled and roofed. In such classrooms, temperatures went very high or very low, ventilation was inadequate, dust was a problem and children were easily distracted. Most of these classrooms were also congested. (Gakii, 2003 and Ng'asike, 2004). Further, findings of the Ministry of Education Science and Technology (MOEST, 1999) had revealed that on average, preschools even within primary school compounds were worse off than their lower primary counterparts, in terms of provision and appropriateness of facilities.

The foundation of learning starts at pre-school or elementary level where learners' literacy and numeracy skills develop (Ntulo, 2015). Even so, learners at such level are susceptible to any interference that influence their normal way of life and specifically learning. Learners in emerging economies unlike in developed countries are prone to challenges including limited teaching and learning resources, inexperienced teachers,

limited physical infrastructure, poor sanitation, and failure by the governments to support the pre-school program (Phyfer & Wakefield, 2015)

In their book, Bennett, Brooker, Kagan, Moser, and Neuman (2007) observed that in the United Kingdom, ratified the United Nations Committee on the Rights of the Child, which provides free and compulsory education to all. According to the convention, the right to education begins at childhood and is linked to child's right to maximum development. According the convention paragraph 28, the aim of education is to empower the child by developing skills, learning capacities, self-confidence, self-esteem, and human dignity, which should be achieved through the adoption of learner-centered methodologies. The authors noted that increased number of enrolment in pre-schools in the region lead to inequalities in content delivery and hence performance of learners.

In Latvia, North Eastern Europe, Bennett, Brooker, Kagan, Moser, and Neuman (2008) conducted a study among primary school children at noted that socio-economic situations of the family, level of education of the parents, and ability of parents to support children in reading aloud influenced the performance of learners both at the elementary and primary school levels. In the same study, it was established that boys unlike girls experienced challenges of reading because of a myriad of challenges including learning environment, and teachers' expertise.

According to a comparative study conducted by Liu, Toki & Pange (2014) in Greece and China, the main factor influencing pre-school learners is the integration of ICT in learning. Both governments initiated the use of ICT technology in teaching and learning, but teachers do not have sufficient knowledge in the ICT field. Furthermore, supportive resources needed to compliment learning with ICT are limited and

therefore, learners have to contend with the situation. In china, the situation was better because resources were available compared to Greece where classes were small, teachers were few and teaching/learning resources limited. The authors noted that children from low socio-economic background did not leverage from the use of ICT devises in learning because of negative attitude, low self-esteem, and poor cognitive skills.

According to Phyfer & Wakefield (2015), most of the Early Childhood Educational Centres in South Africa suffers the problems of interpersonal differences, inadequate financial support, poor state of infrastructure, incompetent and semi-skilled teachers with little or no experience, community/political influence and lack of policy to streamline teaching and learning. Specifically, the government policy on registration are stiff such that many schools in informal settlement and rural regions cannot afford. Furthermore, community violence and unsupportive external environment makes it difficult for an Pre-school center to enhance effective teaching and learning activity. Based on the findings of Atmore (2013), only 47% of Pre-school teachers have formal education, more than one half are not qualified to disseminate knowledge. According to the author, the majority of Pre-schools have poor instructional and physical infrastructure influencing their ability to be registered and record good academic results.

In a study conducted in Uyui District, Tabora region, Tanzania, Ntulo (2015) sought to establish factors influencing effective learning in Pre-primary schools and in his findings, he observed that most teachers teaching in pre-schools were form four leavers and old teachers who could not implement the pre-school curriculum expectedly. Apart from that, most pre-schools lack play grounds for children to enhance extra curriculum and sporting activities. Little or no teaching and learning

resources was a challenge that affected more than three quarters of the pre-schools in the region. Poor parental involvement in schooling activities and academic progress of their children demotivated both teachers and learners making them to perform poorly in assessments.

The promulgation of the Kenyan Constitution in 2010 changed the dynamics of education management, teacher training/registration, and employment to mention a few. Some of the functions of government such as pre-school education was devolved and that their management including employing teachers at that level. Considering that most counties performed dismally poor with the devolved functions, pre-school management was among the departments that were affected. Notably, poor infrastructure, delayed salaries, inadequate teaching, and learning resources, high student-teacher ratio, poor teaching methodologies, lack of situational services among other challenges.

In Thika County in Kenya, Ndani & Kimani (2010) observed that after the introduction of free primary education, school enrolments increased, and resources necessary to accommodate such a group were limited hence demotivating teachers especially in pre-school. Categorically, the authors noted that teachers who are paid lowly do not improve on knowledge content and teaching methodologies because such improvements come with motivation one derives from the effort.

In Kericho County Kenya, Kipkosgei & Kabwos (2016) attested that lack of enough apparatus especially in environmental and number work activities affect learning abilities of children in pre-schools. According to the authors, most learners prefer having access to all resources during a learner-centered session; however, the failure of such resources hampers the cognitive abilities and creativity of learners most of

which develop learning disorders. Lack of enough reading materials, poor storage facilities, and incompetence among teachers were observed to be contributing factors that influence learning in pre-schools.

1.3 Statement of the Problem

Although the Government of Kenya, (GOK) has tried to improve pre-school programs in Kenya by employing teachers through the County Governments and distributing teaching and learning resources, pre- school education still faces many challenges in the provision of quality services. Pre-school policies stresses on the use of plenty of relevant instructional resources to develop the totality of the child (GOK, 2006). It is regrettable however, that the situation in most pre-schools in Waitaluk zone in Kiminini Sub-county is worrying. There is a problem in examining external environmental factors influencing learning, examining the level of utilization of teaching and learning resources , examining the appropriateness of classroom organization for indoor activities and determining the effects of feeding program on learning. Most inspection report have proved that most teachers teach without using relevant instructional materials (County Education Office: DQASO Report, 2010), being an evidence of deteriorating quality education. In most centers, teaching and learning has been more of structured and academic in orientation, putting pressure and stress on the tender children yet school days are supposed to be the learners happiest moment. According to Montessori , our senses are the gateways for learning and children at eight years and below have absorbent minds with very active senses for learning and through affective interaction with selected variety of concrete materials. Psychologists have proved that the way the children are molded at this stage determines the kind of adults they become in future because human brains is at its best in

absorbing information. Research by Kipchumba and Francisca (2006) on physical facilities and personnel and also Obuchere etal (2010) on diet and teaching/learning resources there is a gap in research on teacher preparedness concerning utilization of teaching and learning resources, classroom organization and the influence of feeding programe. County Government is employing teachers, but some of them are not competent, qualified, and experienced to implement the pre-school curriculum (Kipkosgei & Kabwos, 2016). This study aims to describe environmental factors, utilization of teaching and learning resources , the appropriateness of classroom organization for indoor activities and feeding program. It expected that the finding of this research will bridge this knowledge gap.

1.4 Purpose of the Study

The purpose of the study was to investigate the factors influencing children's learning in public pre-primary schools in Waitaluk Zone, Kiminini sub-county, Trans-Nzoia County**.**

1.5 Research Objectives

i. To examine the learning environment and its influence on learning in public pre-school in Waitaluk Zone, Kiminini sub-county, Trans-Nzoia County.
ii. To examine the level of utilization of teaching and learning resources and their influence on learning in public pre-schools in Waitaluk Zone, Kiminini sub-county, Trans-Nzoia County.
iii. To examine the influence of classroom organization on learning in public pre-school in Waitaluk Zone Kiminini sub-county, Trans-Nzoia County.
iv. To determine the influence of feeding program on learning in public pre-school in Waitaluk Zone, Kiminini sub-county, Trans-Nzoia County.

1.6 Research Questions

i. How is the learning environments and how it influence learning in public pre-school in Waitaluk Zone?
ii. What is the level of utilization of learning/teaching resources and its influence on learning in public pre-schools in Waitaluk Zone?
iii. How does classroom organization influence learning in public pre-school in Waitaluk Zone?
iv. How does feeding program influence learning in public pre-school in Waitaluk Zone?

1.7 Justification of the Study

There was need to thoroughly examine the learning environment influence on learning in public pre-school in Waitaluk Zone. To determine the level of utilization of learning/teaching resources and its influence on learning in public pre-schools in Waitaluk Zone. To examine the influence of classroom organization on learning in public pre-school in Waitaluk Zone. To determine the influence of feeding program on learning in public pre-school in Waitaluk Zone.

This justified the evaluation of the determinants of early learning in public pre-schools in Waitaluk zone, Kiminini Sub-County. The selection of Kiminini Sub-County justified the study since; very little has been done on issues concerning factors influencing children's learning in public pre-schools, the place was also feasible to the researcher. The finding would form the basis for future studies and policy formation to the ministry of education. The finding would also empower pre-school administrators with the necessary knowledge and administrative skills that would help in improving the quality of education offered to the pre- schooling children's.

1.8 Scope of the Study

The study was carried out in Kiminini Sub-County, Trans-Nzoia County. The area had various public pre-schools. The researcher was interested in public pre-schools in the area; this was because, they receive funding from the Government through the County Government, in terms of human resource, teaching and learning materials and finances. Yet the performance of children was low than. This triggered the researcher to embark on the study.

The area had very many pre-schools. The study sample included the teachers, and administrators who were considered particularly because the study revolved around the issue on determinants of early learning in public pre-schools, which in one way or another touched on all of them. The area had a good representation of public pre-schools hence making it possible for the researcher to obtain relevant information from respondents. The study was confined into investigating determinants of early learning in public pre-schools in Kiminini Sub-County .

1.9 Significance of the Study

The research is expected to provide useful information for the Kenya Institute of Curriculum Development (KICD) and Ministry of Education (MOE) to produce relevant instructional materials and course books for the pre-school education in Kenya. The Quality Assurance and Standards Officers (QASOs) would use the study findings to mount country – wide workshops and in-service courses for the trainers of the pre-school teachers on their teaching methodologies and new emerging issues in the curriculum as they train the teachers to acquire the skills and knowledge to effectively select and utilize the instructional resources. The Government would use the study to consider funding and extending the Free resources for effective teaching and learning. The County Government would

use the findings to employ the pre-school trained teachers to boost their morale in curriculum implementation. The findings will inspire the managers and sponsors of the pre-schools in the country to broaden their scope in instructional resource acquisition to equip their pre-school with appropriate and relevant education resources for the effective curriculum implementation. Further still, the results of this study would be significant to the education stakeholders, school administrators and the government in guiding them to formulate policies that may enhance efficient utilization of instructional resources to reduce the costs of schooling and improve performance at all levels in Kenya. Scholars may find this research of much value as a source of inspiration and reference to conduct similar and related studies in other regions of Kenya.

1.10 Limitations

The study was essentially concerned with assessing the factors influencing children's learning in public Pre-Schools in Waitaluk zone, Kiminini Sub-County, Trans-Nzoia County, Kenya. Thus generalization of the findings by other interested researchers should be done with a lot of caution. Some schools were not willing to allow the researcher access their records. This was because they were not updated or due to other hidden reasons. The researcher assured the school administration that the research was specifically for educational purpose. In some schools, their program and schedules did not allow time for interviewing the head teachers. The researcher was forced to be patient and wait for an ample time to do the interview although this affected the researchers time table and also affected the response rate. Some of the respondents did not understand some items in the questionnaires. The researcher ensured that the respondents were briefed on the items in the questionnaires and clarification was made on areas that were not clear to the respondents. Some subjects

especially teachers, may not have told the truth for fear that they might be victimized for telling the truth. The researcher assured the respondents that the research is confidential.

1.11 Assumptions of the Study

Teachers and school heads were present during the research period and they would participate fully in the data collection process. There would be no institutional barriers hindering the research process. Early Childhood Development and Education Centres (Pre-schoolE) have well-kept inventory records of the instructional resources. Early Childhood Development and Education Centres (Pre-schoolE) have well trained, motivated, experienced and competent teachers for curriculum implementation and that the teachers are trained in both content and pedagogy.

1.12 Theoretical Review

According to Woolland (2010, p 472) a theory is @an proven conjector hypothesis that gives a tentative insight into a complex situation through to a well –established explanation of that complex situation. The study was based on the Piagets Theory of Cognitive development (1964). Piaget argued that mental constructs were developed by children through real experiences with the environment. There are always mental pictures of reality in the mind from which new meanings are built on the past experiences. The meaning given to the incoming message is not transferable but is only constructed basing on what the child knows previously. Therefore, children should be encouraged to freely play, manipulate, and explore a variety of instructional resources. Further still, by learners interacting directly with the instructional resources accelerates cognitive development (Wadworths, 1984). This facilitates children to follow, understand, respond to and retain the lesson content especially at 6 years and below. Dewey, Montessori &

Froebel discussed that education should be child-centred active and interactive and that education must involve the child's social world and community. The theory was very vital to the researcher when the researcher was seeking answers to these questions: How the learning environment influence learning in public pre-school?; What is the level of utilization of learning/teaching resources and its influence on learning in public pre-schools?; How does classroom organization influence learning in public pre-school?; How does feeding program influence learning in public pre-school?

1.13 Conceptual Framework

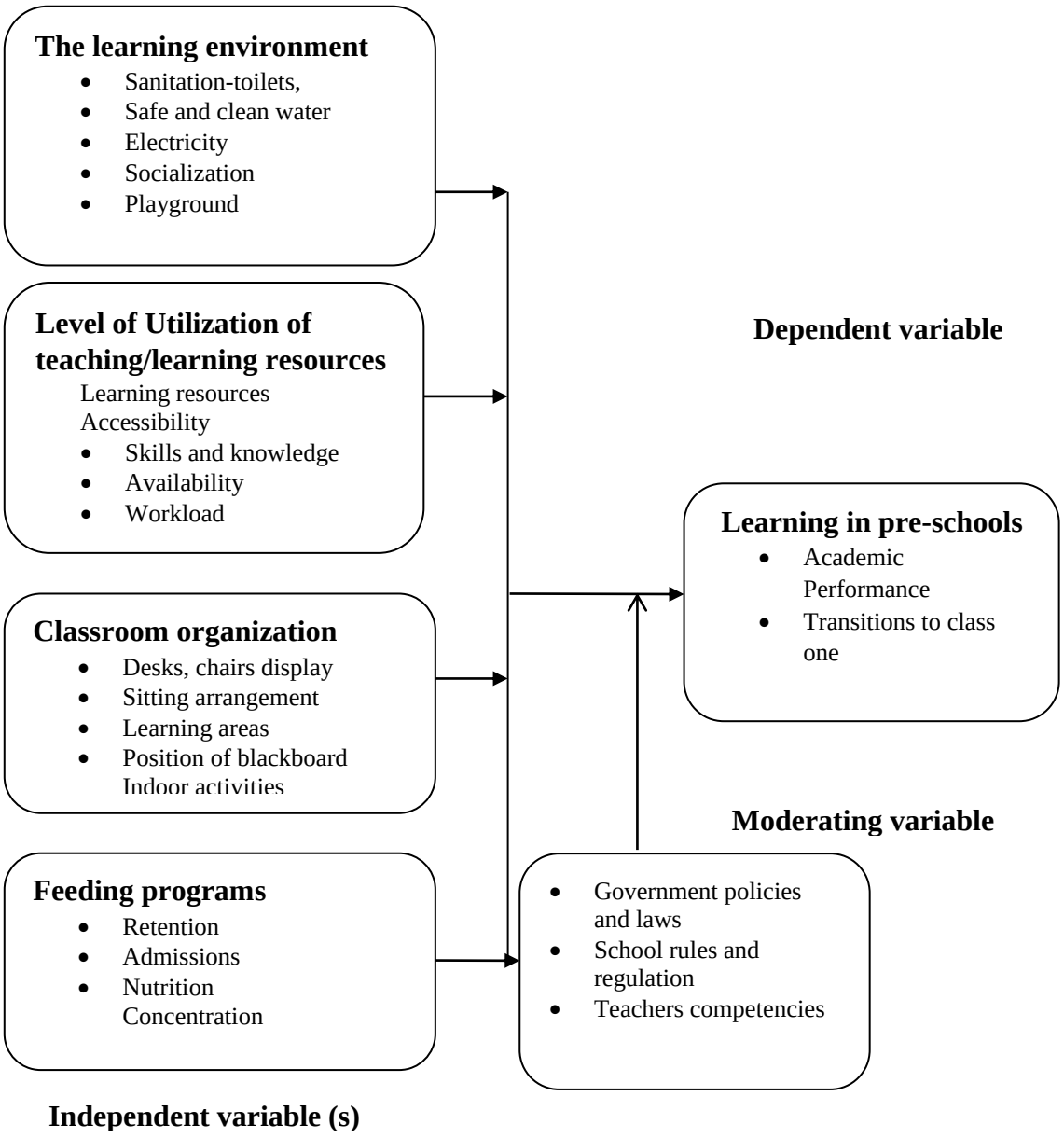

Figure 1: Conceptual Framework

Conceptual framework showing determinants of early learning in public pre- schools. The conceptual framework in the figure 1 above illustrates three categories of variables, independent variable, dependent variable and moderating variable. The independent variable was a variable which was presumed to determine the dependent

variable. In this study, the first independent variable was the learning environment and its influence on learning characterized by sanitation-toilets, safe and clean water, electricity, playground and socialization thus, their availability and safety promotes good academic performance since absenteeism due to ailments and discomforts are minimized. In addition the environment has an effect on a particular individual because it is a basis upon which one gain new experience The second independent variable was the level of utilization of teaching and learning resources in terms of accessibility, availability, teachers' skills, knowledge and workload; in this way their provision plays an enormous role in improvement of learning they also help ECE teachers to teach conveniently thus determine the quality of learning.

The organization of the classrooms which include ventilation, nature of classrooms, size and roofing inhibit the learning process since learners require conducive conditions to learn freely. There is a significant relationship between learning facilities and provision of quality Early Childhood Development Education. Poor ventilated classrooms, congested, earthened floors with a lot of dust plus leaking roofs makes learners uncomfortable to learn since the conditions are not favourable.

Feeding program which enhances retention, admissions and nutrition was great if nutrition, retention and enrolment rates were improved the quality of learning was high. Children who are hungry or chronically malnourished are less able to learn regardless of the setting.

The dependent variable was the resultant effect of the interplay among the independent and the moderating variables In this study academic performance and transition to class one were the dependent variable ,therefore the influence of the interplay between the independent and the moderating variables on the dependent

variable could be established through provision of conducive learning environment, utilized teaching and learning resources; teaching and learning resources which include; furniture, play materials, text books, exercise books supplementary books among other resources. Availability of teaching and learning resources help ECE teachers to teach conveniently whereas learning materials, well organized classrooms and practical feeding program play an enormous role in improvement of learning.

1.14 Definition and Operationalization of Terms

Current practices – Mastery of reading skills, writing, music, and movement, performing psychomotor skills, counting, matching of items and other practices that address learning.

Curriculum – Subjects included in the course of study. They include Mathematics, Language, Physical out-door, Science, creative, in-door activities.

Pre-schoolE – Early Childhood Development and Education, it refers to educational programs and strategies geared towards children from birth to the age of eight years.

Environmental factors – All factors originating from outside the school that inhibit or facilitate learning. They include home environmental related stresses, inadequate provision of food in the learner's household and domestic violence. Provision of balanced diet in their homes, enough rest, and enough play materials.

Factors - Elements contributing to a particular results or situation in reference to learning in early years.

Feeding Programme - Refers to planned and organized act of offering the desired nutritional needs to pre-school learners within their learning environment.

Learning environment - A place where learning takes place with all the facilities, equipments, instructional materials and human resource.

Pre-school - An institution for children between 3 and 6 years. It is provision of education for pre-school children before start of primary school education.

Retention - How well the behavior is remembered.

Situational services – all services (sanitation, clean water, health, growth monitoring, nutrition, and education) provided in schools. Sanitation means provision of clean water in schools for washing and for use during the school activities, proper water drainage should be ensured to avoid stagnant water in the compound. Therefore, it is expected that the situational services affect the social and emotional welfare of a child as well as cognitive achievement.

Utilization - How pre-school resources are put to correct use.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Chapter presents an analytical review of journals, books, publications, and reports from government and Non-Governmental Organization relating to the topic of discussion. The section will feature the concept of learning in early childhood education, environmental and situation services, classroom organization, feeding program, teaching and learning resources and their influence on learning in pre-school.

2.2 The Concept of Learning in Early Childhood Education

Education equips the human capital with the skills, attitudes and competences required in promoting self and national development (Curtis, 2000). What happens during the early stages of life of an individual has a significant influence in his entire life. Education is viewed as a social good because it creates opportunities and provides people with choices. Gilbert (2001) adds that education is an end in itself and a means to an end because it helps achieve economic personal development and investment in education is considered an essential pre-condition to economic growth. Early Childhood Development (ECE) entails the all-round growth and development of a child from the time of conception up to eight years (Gakii, 2003). Growth and development is influenced to greater levels by the environmental factors which parents expose their children to (Mungai, 2004). Article 28 of the Children's Right Commission (CRC, 1989) and the UN Convention both emphasized the importance of pre-school education as drivers of economic development. Keeping in line with these and other declarations, the Government of Kenya signed various agreements such as the 1990 Jomtiem World Conference on Education for All (EFA), the 1990 African

Charter on the rights and Welfare of the Child, the 2000 World education forum (Dakar Senegal) and 2000 Millennium Development Goals (MDGs) and the 2001 Children's Act Rok (2006). These forums underscored the importance of Early Childhood Education (ECE). Subsequently, education has been and continues to be of paramount importance and concern since it prepares people to socialize and become organized in life.

The need for a holistic development of children is appreciated all over the world. Consistently, United Nations' Convention on the Rights of the Child (UNCRC, 1989), African Charter on Rights and Welfare of the Child (OAU, 1990) and the Government of Kenya (Republic of Kenya, 1998) recognize the right of every child to a standard of living adequate for its physical, mental, spiritual, moral and social development. This implies that care givers should provide adequate and appropriate care to children, since developmental deficiencies that occur during this stage are difficult to reverse (Pipes & Trahms, 1993). Unfortunately, increased urbanization, introduction of formal education, the universal use of the money economy and the multiplicity of the roles of mothers, pose challenges in the use of the traditionally effective childcare systems. Consequently, Early Childhood Development (E.C.D) centers have been accepted by contemporary societies worldwide as an alternative child care system. These centers comprise one of the immediate physical and social environments experienced by young children that Bronfenbrenner (1986/1989, cited in Black and Puckett 1996) terms Microsystems. The Microsystems are made up of the personal qualities of teachers, other teachers and peers therein, as well as the quality of the physical environment to which the child is exposed. They also comprise of the activities, roles and interpersonal relationships experienced by the developing person, all of which have an influence on children's development. However, "evidence

abound that the teacher is the most important single factor in determining what a school (Pre-school) experience will be like for children" (Read, Gardner and Mahler, 1993 p. 41). Thus, creating conditions that motivate Pre-school teachers to initiate positive interactions with children and a physical environment that is conducive both to teachers' work and children's development is essential. To create these conditions, Pre-school communities who sponsor about 70% of the Pre-school in Kenya (Republic of Kenya, 1998) need to participate to address what Herzberg, Mausner, & Snyderman (1959) termed 'hygiene' factors or 'job context' needs. These include physical working conditions, salary, benefits, job security, and interpersonal relations. Demonstrating the importance of hygiene factors, research (Howes, Smith & Clanlinsky 1995; Love, Ryre & Faddis, 1992; and Essa, 2003) has reported that preschool teachers whose 'hygiene' needs are satisfied, become warm, sensitive and nurturing. The teachers in these studies showed great responsiveness, gave encouragement to children and used less negative disciplinary techniques. As a result, children developed positive emotional adjustments and their cognitive, language and social skills were enhanced. Additionally, the children displayed fewer behavioral problems and became socially competent. Ultimately, the amount of adult interaction with children became greater and more beneficial, and children had friendlier interactions with peers. These positive child outcomes clearly demonstrate the need to motivate teachers. The key factors influencing Pre-school teacher motivation therefore needed to be investigated in order to guide.

Early Childhood Development Teachers' Motivation in Thika District, Kenya communities in areas where they need to concentrate their efforts. This was important because most preschool teachers reportedly worked in what Herzberg described as an "unhealthy psychological work environment", including unclear terms and conditions

of service (Makoti, 2005), and low irregular salary averaging Ksh.2000 a month (Ngome, 2002, Waithaka, 2003 and Makoti, 2005). Heavy workload was also considered to be a de-motivating factor as Ngome (2002) found unmanageable pupil enrollment to contribute to the 54.56 percent rate of preschool teacher attrition. In addition, studies had shown that most centers lacked the necessary facilities, equipment and materials that would promote teacher motivation and holistic development of children. According to Ngome (2002), most public centers supported unfriendly work conditions characterized by windowless, rough mud walled and floored classrooms, and others that were iron-sheet walled and roofed. In such classrooms, temperatures went very high or very low, ventilation was inadequate, dust was a problem and children were easily distracted. Most of these classrooms were also congested. (Gakii, 2003 and Ng'asike, 2004). Further, findings of the Ministry of Education Science and Technology (MOEST, 1999) had revealed that on average, preschools even within primary school compounds were worse off than their lower primary counterparts, in terms of provision and appropriateness of facilities.

The foundation of learning starts at pre-school or elementary level where learners' literacy and numeracy skills develop (Ntulo, 2015). Even so, learners at such level are susceptible to any interference that influence their normal way of life and specifically learning. Learners in emerging economies unlike in developed countries are prone to challenges including limited teaching and learning resources, inexperienced teachers, limited physical infrastructure, poor sanitation, and failure by the governments to support the pre-school program (Phyfer & Wakefield, 2015)

In their book, Bennett, Brooker, Kagan, Moser, and Neuman (2007) observed that in the United Kingdom, ratified the United Nations Committee on the Rights of the Child, which provides free and compulsory education to all. According to the

convention, the right to education begins at childhood and is linked to child's right to maximum development. According the convention paragraph 28, the aim of education is to empower the child by developing skills, learning capacities, self-confidence, self-esteem, and human dignity, which should be achieved through the adoption of learner-centered methodologies. The authors noted that increased number of enrolment in pre-schools in the region lead to inequalities in content delivery and hence performance of learners.

In Latvia, North Eastern Europe, Bennett, Brooker, Kagan, Moser, and Neuman (2008) conducted a study among primary school children at noted that socio-economic situations of the family, level of education of the parents, and ability of parents to support children in reading aloud influenced the performance of learners both at the elementary and primary school levels. In the same study, it was established that boys unlike girls experienced challenges of reading because of a myriad of challenges including learning environment, and teachers' expertise.

According to a comparative study conducted by Liu, Toki & Pange (2014) in Greece and China, the main factor influencing pre-school learners is the integration of ICT in learning. Both governments initiated the use of ICT technology in teaching and learning, but teachers do not have sufficient knowledge in the ICT field. Furthermore, supportive resources needed to compliment learning with ICT are limited and therefore, learners have to contend with the situation. In china, the situation was better because resources were available compared to Greece where classes were small, teachers were few and teaching/learning resources limited. The authors noted that children from low socio-economic background did not leverage from the use of ICT devises in learning because of negative attitude, low self-esteem, and poor cognitive skills.

According to Phyfer & Wakefield (2015), most of the Early Childhood Educational Centres in South Africa suffers the problems of interpersonal differences, inadequate financial support, poor state of infrastructure, incompetent and semi-skilled teachers with little or no experience, community/political influence and lack of policy to streamline teaching and learning. Specifically, the government policy on registration is stiff such that many schools in informal settlement and rural regions cannot afford. Furthermore, community violence and unsupportive external environment makes it difficult for an Pre-school center to enhance effective teaching and learning activity. Based on the findings of Atmore (2013), only 47% of Pre-school teachers have formal education, more than one half are not qualified to disseminate knowledge. According to the author, the majority of Pre-school have poor instructional and physical infrastructure influencing their ability to be registered and record good academic results.

2.3 Environment and learning

The influence of environment on learning in Early Childhood Education (ECE), which according to UNESCO (2005) refers to a discipline in the education sector, which concerns the care, development, and learning of children from 0 years to about 5 years. Environmental experiences during early years of learning are vital in one's life because it is the period where one goes through a fast session of growth and development. According to Omogi (2010), the development of the brain at this level is estimated at 70% that of an adult and by the time the child reaches 6 years, 90% of the brain would have developed. Researchers have noted the significance of this stage of life has attracted almost no attention from social science researchers, and "Its critical nature for early development has been largely overlooked by the public and

markers alike" (Entwise & Alexander, 1999; Melton, Limber & Teague, 1999, Entwisle & Alexander, 1999).

Recognition is growing internationally that school is significant to the social and emotional welfare of the child, as well as their later cognitive achievements (Ramey & Ramey, 1998; Kagan & Neumann, 1999), and that along with many other changes a child will experience, creates both challenges and opportunities for growth. That succeeding at these challenges can give both the child and the family confidence and competence to manage later moves. Hence the United Nations (UN) Declaration of the rights of the child and philosophies of World Health Organization(WHO), UNICEF and UNESCO empathizes that it is the task of all those working with children whether they are parents/teachers or members of the community to provide the necessary conditions appropriate and suitable for learning.

Edgar (1986) suggest that Some children adapt easily to a new educational environment, however for others moving from an environment in which they are familiar and secure to a new classroom environment can be a difficult task Brostrom, (2000). Dunlop and Fabian (2003) propose that, continuity and progression are key elements in school success. They suggest that continuity is all-important during this phase to enable children to predict events and have some sense of control over their environment. It is essential that children are given the knowledge they need about the timings involved in the change, people involved, and expectations of the new setting.

Pianta and Cox (1999) reported that by the end of the third grade, most children are on "a trajectory of development that they will follow for the remainder of their school years." Although these early years play an important role for our children's future, knowledge of this, particularly in terms of important resources trained and competent

teachers appropriate teaching methods availability of resources the support of parents, guardians is still demanding.

Willms & Chao (2002) found that parenting practices have important effects on a child's social and cognitive outcomes. In their study, the authors asked parents of 19,000 children between the ages of two and eleven years 25 questions pertaining to parental practices. Strong positive effects on outcomes were associated with positive parenting practices, in particular the effect of responsive parenting. Holding, rocking, talking, singing, and playing with a child are all positive parental practices that facilitate early childhood learning and development. Based on the large representative sample of Canadian families used, the researchers found that both positive and negative parenting practices occur in families of all socio-economic levels. These results highlight the need for early learning opportunities to be universal as positive parenting practices is important for all families. Steven Barnett (2010), Co-director of The National Institute for Early Education Research (NIEER) points out that designing and providing additional programs and resources to children in families below an arbitrary income cutoff as a means to reducing the achievement gap ignore the fact that children and families move in and out of different income levels. Barnett insists that programs and services that are universal in nature minimize the risk of moving children in and out of programs and services that serve children whose families who may have a short-term reduction in economic resources.

Tamis-LeMonda & Rodriguez (2009) list three aspects of children's experiences in the home environment that is critical to early language growth and learning. These aspects include: the provision of certain learning activities like reading to children on a daily basis, a parenting style characterized by responsiveness, and the provision of materials such as age-appropriate toys and books. In addition, they point out that

parents with higher education levels and higher economic resources are better able to provide positive learning experiences for their young children. Research findings conducted over the past three decades have led to an understanding of the rapid growth of the brain in the early years and how stimulation acts as a catalyst for that growth. In The Early Years Study (1999) and The Early Years Study 2: Putting Science into Action (2007) Dr. Fraser Mustard of the Council for Early Child Development (CPre-school) and others have established that the experiences in the early years 1) shape the architecture of the brain and 2) set the developmental trajectories that influence lifelong learning, behaviour, and health for individuals.

The Council for Early Child Development (CPre-school) founded by Dr. Fraser Mustard in 2004 has provided an abundance of research studies which illustrate that the early years are a period of opportunity where children's experiences establish a powerful neural foundation for later development. The more experiences provided to babies, the more opportunities they have to permanently establish learning pathways in their brain. The physical wiring and sculpting process of the brain is not merely dependent on environmental stimulation, but is also dependent on the timing and quality of the stimulation. Keating & Hertzman (1999) point out that the experiences that young children have while their brain is developing will remain with them for their entire lives. Furthermore, Irwin, Siddiqi, & Hertzman (2007) in their final report for the World Health Organization's Commission on early child development concluded that "what children experience during the early years sets a critical foundation for their entire life course".

Conversely, this time can be a risk where development can be compromised, the effects of which can be seen throughout life. Adults, particularly parents/teachers, play a vital role in providing stimulation that establishes the neuron functioning of the

brain which ultimately determines the pathways for language, coping, and understanding. Quasi-experimental studies suggest that increases in maternal education when their children are young (between the ages of three and six) may improve the academic skills of young children, especially those living in families with low income, even when the mother' earnings did not increase (Magnuson, 2003). In a 2007 study by Moore & Schmidt it was found that a mother's enrollment in education during the first three years of her child's life was associated with higher mathematics and reading achievement by age six.

Young children experience their world through an environment of relationships. Beginning at birth, nurturing, secure, and stable relationships with caring adults are essential for the development of feelings of trust, safety, and confidence. During the infant stage, developing strong attachment relationships with parents/teachers and other significant adults in their lives is very important for children. Researchers at the National Scientific Council on the Developing Child at Harvard University (2004) established that the quality of early relationships between children and the significant adults in their lives sets the foundation for later developmental outcomes and affects virtually all aspects of their social-emotional, physical, and cognitive development. The significant adults around children are the most important contributors to their social and emotional development. Early relationships lay the foundation for social competency and later relationships with peers. Parental support greatly increases the likelihood that children will develop early emotional competence (Boyd et al, 2010). Children who feel safe in a supportive environment are more likely to take risks in problem-solving and inquiry as their self-confidence and competency grow. The foundations of social competence developed in the first five years of a child's life are linked to emotional well being and social skills needed later in life (Berchied & Reis,

1998; Reis et al, 2000).While social and emotional development is important in its own right, it is also important because it facilitates cognitive development. Children with effective social and emotional skills do better with getting along with others, understanding directions, and focusing on a task; skills that enhance learning and important in school success and lifelong learning. The brain circuits that regulate the emotions in the early years are ultimately associated with the development of problem-solving skills (Posner & Rothbart, 2000).

Emotional, behavioral, and cognitive functioning in the early years are more closely connected than had been previously understood (Shonkoff & Phillips, 2000). “In particular, a child’s emotional status affects early school performance, which in turn predicts later school outcomes” (Knitzer, 2002, p.7). Children, who are able to focus attention, understand directions, get along with others, and control negative emotions of anger and distress do better in school than children who have difficulty with social and emotional competence.

Dickenson and Tabors (2002) identify strengths in homes and in preschool early learning programs that build strong language and literacy foundations. The study is based on the assumption that rich language experiences during the preschool years play an important role in children being able to read with comprehension when they reach middle school. They concluded that the early childhood period is the key to getting children off to a strong start in language and literacy and that building early foundations in rich oral language contributes to latter literacy development. The vocabulary children bring to written text affects their reading and comprehension. It has been established that children’s vocabulary, in particular, in Kindergarten is one of the best predictors of reading comprehension in grades three and four (Sénéchal, Ouellette, & Rodney, 2006; Storch & Whitehurst, 2002). Davis-Kean (2005) points

out those parents with higher educational levels are more apt to engage their children in more learning-related opportunities in the home and in environments outside the home. Activities such as storytelling, singing, role-playing, and conversations all help to develop and sustain oral language development with young children. Later reading and writing extend and represent oral language.

Tamis-LeMonda & Rodriguez (2009) reported that central to children's early language development is consistent participation in shared book reading and storytelling as a means to expanding their vocabulary. Providing environments in the home and in other settings that are rich in oral language, print, shared storytelling and reading promotes the development of vocabulary, early reading, and early writing for young children. Ginsburg et al (2008) cite evidence by researchers Baroody, Lai, & Mix (2006); Clements & Serama (2007); and Ginsburg, Cannon, Eisenband, & Pappas, (2006)show that young children from birth to five years of age develop informal ideas of size, space, pattern, shape, more and less, taking away, location, and position that are actually quite sophisticated, complex, and broad. This informal knowledge sets the stage for learning more complex mathematical skills and concepts (Osana et al, 2010).

According to the National Council of Teachers of Mathematics (NCTM) (2007), "Research on children's learning in the first six years of life validates the importance of early experiences in mathematics for lasting positive outcomes" A socio-cultural view of mathematical development acknowledges that young children's engagement and learning are affected by mathematically-related influences from a variety of 'others' in the child's life (Bronfenbrenner, 1979; Rogoff, 2003). Through tracking a cohort of students in England through primary school, Aubrey, Dahl & Godfrey (2006) found that children who exhibit mathematical knowledge when they enter

school appear to be advantaged in terms of their mathematical progress through primary grades. They concluded that children who enter school with limited mathematical knowledge continue to under achieve throughout their primary years unless there is active intervention on their behalf.

The frequency of activities related to early mathematical development in the home has been linked to family income and maternal levels of education. There is growing evidence that differences in young children's mathematical knowledge in early childhood are related to socioeconomic status (SES). A study by Starkey, Klein, & Wakeley (2004) found a significant SES-related gap in mathematical knowledge at the beginning of the pre-Kindergarten year. They contend that young children from families with low incomes receive less support for mathematical development than their peers from families with higher incomes. When the researchers implemented an intervention program they found that while it significantly enhanced the mathematical knowledge of both groups of children, the children from families of lower incomes acquired more knowledge, relative to their starting point, than the children from families with higher incomes. The level of maternal education and their level of understanding of mathematics (number work) both impact on the frequency of mathematical activities that occur in the home with young children. Paris, Morrison and Miller (2006) showed that Kindergarten children's mathematical performance was higher when the level of mother's education was at the post-secondary level.

The informal mathematical language and understanding that they use in their play becomes the basis for formal mathematical language and understanding as they move through school. Children who are provided with opportunities to play with blocks discover in a natural way the size relationships among them and the more frequently they make the comparisons the more complex their thinking develops. According

Piaget (1964), children should be encouraged to play freely, manipulate and explore a variety of instructional resources Providing young children at home with materials such as blocks, shapes, and puzzles that inspire mathematical thinking can foster the development of skills such as early numeracy, patterning, and measurement (Sherman-LeVos, 2010).

Young children play mathematics as they explore, problem-pose and problem-solve across a variety of situations as a regular component of their everyday play. Piaget argues that mental constructs are developed by children through real experiences with the environment; there are ways mental pictures of reality in the mind from which new meanings are built on the past experience. Children with a healthy disposition toward mathematics (number work) have a positive attitude toward their ability and the value of mathematics (number work) in their lives. They enjoy doing mathematical activities and games and believe that they are capable of reasoning or solving a problem themselves. They show persistence and curiosity when they meet a challenging problem. In the early years young children are developing their beliefs about what mathematics is and about themselves as mathematics learners.

The NCTM (2000) Position Paper on mathematics in the early years emphasizes the importance of young children's first experiences with mathematics being encouraging, engaging and positive as their early experiences influence their performance in later years. In addition to the concepts and skills that underlie mathematical proficiency, children who are successful in mathematics (number work) have a positive disposition towards mathematics (Kilpatrick et al, 2001) And providing opportunities for young children that are developmentally appropriate and joyful helps them to experience success and meet challenges that build their confidence (Early Years Study 2, 2007, p. 139).

According to Perry, Hogan & Marlin (2000), “Central to a child's healthy development is the opportunity to act on their natural curiosity – to explore, to play and, thereby, to learn (1). They go on to point out that play and exploration help a child’s brain develop in optimal ways and emphasize that opportunities for play in a safe, nurturing and developmentally and age appropriate environment should be the focus of all child-centered learning programs. Thelin (2009) emphasizes that outdoor play for young children helps them with their sensory development because when they are playing outdoors they are using all of their physical senses. As reported in Zigler, Singer and Bishop-Josef (2004), embedding literacy materials in pretend play increases young children’s engagement in literacy acts. Using environmental print in pretend play helps children understand what reading is and how print works. For example, placing literacy materials like lists and newspaper grocery flyers in a kitchen play centre helps children to understand that print carries a message. Through dramatic play, like acting out parts of a story they have heard or had read with them, children develop their oral language skills and the capacity for understanding narrative. During play, children often imitate literacy acts that they have seen adults model, such as “writing” lists. Playing with language builds a base through which children later learn to decode words (Burke, 2010).

Play is vital to the development of children’s mathematical thinking. Unlike some forms of knowledge, mathematical knowledge, which deals with relationships between and among things, cannot be learned by hearing adults talk about it” (Pronin Tromberg & Bergen (1998:56). Playing with sand, blocks, water and clay helps children to develop their skill in logic. For example, playing with blocks encourages problem-solving, reasoning and divergent thinking and playing with water leads to knowledge of volume. And that by learner interacting directly with the instructional

resources accelerates cognitive development (Wadworths, 1984). According to Piaget theory of cognitive development Piaget,(1964). Mental constructs are developed by children through real experiences with the environment thus being familiar with shapes, directions, and positions as they use boxes to build a tower helps children in their understanding of mathematics. The “informal” language they use as they talk about such concepts as “over”, “on”, “higher”, becomes the basis for “formal” mathematical language later in their learning. Through play and problem-solving children learn that there is more than one way to solve a problem, a skill increasingly important in today’s world. Fine motor development occurs when children perform activities that involve exercise of fingers and the palm. During outdoor play the activities that promote the development of these muscles are picking, throwing and catching, skipping, carrying and building with blocks, grasping. Block play develops children’s finger muscles during lifting, carrying, stacking and building processes. Notably children use any point to get to the play environment. Children require a lot of opportunity for creative play and creative thinking which is important for holistic development (Clark, 2005)

Developmentally appropriate practice is a phrase coined by the National Association for the Education of Young Children (NAEYC). DAP is based on a philosophy of education that espouses the idea that children are active learners who construct their own knowledge by interacting with peers, teachers and other adults, and materials. It describes teaching techniques that identify and foster the developmental needs of children, both individually and in groups Bredekamp and Copple, (1987, 1997, 2009). It is culturally sensitive, inclusive, and emphasizes the developmental level and the learning style of the whole child in terms of physical, cognitive, social and emotional needs. That vertical discontinuity exists between Pre-school which results in anxiety

and stress for many children, and can produce long-term negative effects on children's learning at this stage of primary school. Kakvoulis, (1994). So, although change can be a stimulating experience for children, the gap between the two developmental levels should not be too great or this will have negative consequences for the child.

Heath, Bishop, Bloor, Boyle, Fletcher, Hogben, Wigley, and Yeong (2014) conducted a study in Australia with an aim of establishing the influence of family factors has on literacy skills of pupils in pre-school. The researchers noted that family socio-economic status, parents' awareness of phonology and family history influenced literacy skills of pupils in pre-school. The study however, did not consider other environmental factors at the school setting; even though the family is the basic unit of the society where learning begins, learners in pre-school socialize and learn academic concepts in schools.

In a study conducted by Atmore (2013) in South Africa to evaluate the development of Pre-school in South Africa since the independence period, the researcher established that many Pre-school function without basic infrastructure such as clean and safe water, toilets, and electricity, which pose a risk to the health of pupils and compromise the quality of learning. The researcher further observed that the department of social development failed to fund the development of basic infrastructure and instead the burden to improve basic infrastructure was left to the community, whose socio-economic status has always been low. Relative to this study, the study by Atmore did not consider the influence school feeding programs have on learning of pupils in pre-school considering that it is important to ensure pupils retention in the education system.

According to Mwamwenda (2014) who conducted a study purposed to establish the state of Pre-school learning in countries in Sub-Saharan Africa, most Pre-school in Africa suffer from the challenges of poor infrastructure, unqualified teachers, limited or no government support, and lack of standardization. Notably, in Ethiopia, Pre-school was relegated to Communities, NGO's and faith-based institutions, an indication that the government plays a limited role in managing pre-schools. In Lesotho, the government has invested in the development of infrastructure and training teachers because of low quality of learning in Pre-school. Relative to the study in Ethiopia and Lesotho, the author failed to establish the influence of teaching/learning resources on learning in Pre-school; instead the author established the role of government in managing Pre-school. The study in Tanzania could have considered the influence school feeding programs have on learning as this study considers. In Tanzania, classroom size, ventilations, teachers' interaction with learners and situational services influence learning.

The need to redefine and reform the Pre-school has been a priority of many governments. Before the establishment of Pre-school in Kenya, the mother, older siblings and grandparents were the primary teachers, this group shaped the behavior of a child based on norms, practices, and beliefs in the society until the time when the child was old enough to learn and make informed decisions on his own (Swadener, Kabiru, and Njenga, 2000). A few years after independence, Kenya formed commissions that would reform the education sector to ensure access, quality, cost-effective, and relevant knowledge is imparted in learners from early levels of learning to advanced levels. The Gachathi Commission of 1976 was set up by the Government of Kenya (GOK) to redefine Kenya's educational objectives and suggest programs to achieve the National Education Goals. The commission laid

emphasis on exposing Kenyan children to Practical work and Provision of education materials that would promote national, social and economic realities and values (Jepkorir, and Hsu, 2013). The Commission put emphasis on Pre-school Education by recommending the establishment of the National Center for Early Childhood Education (NACECE) at national level and the District Centers for Early Childhood Education (DICECE) at the District levels.

The Koech Commission (1998/1999) recommended the provision of Science Equipment and other Instructional Resources for the curriculum implementation. The Commission further stressed the provision of policy Guideline to streamline Early Childhood Education (Jepkorir, and Hsu, 2013). After devolving Pre-school to the County Governments, the Ministry of Education is considering to formulate policies that would standardize learning, give guidelines to be followed by the devolved units, and if necessary take over the employment function of teachers (Murunga, 2015). The rationale behind it has been that most counties do not employ qualified and experienced teachers, there are limited or no physical and instructional resources, teachers are poorly paid, there is no regulation in terms of performance. Considering that it is the foundation of learning in the Kenya System, challenges faced are sustained to subsequent levels of learning, which compromise the quality and relevance of academics. It is important to consider concepts such as class population, availability of classrooms, teacher content knowledge, availability of teaching/learning resources, adequacy of safe water, feeding programme and clean toilets as highlighted in this study. Largely, the aforementioned factors influence learning in the school setting as compared to family factors, which influence though indirectly; their influence is low. However, researchers have noted that the significance of this stage as a life has attracted almost no attention from social science

researchers, and “Its critical nature for early development has been largely overlooked by the public and markers alike” (Entwise & Alexander, 1999; Melton, Limber & Teague, 1999, Entwisle & Alexander, 1999). This study not only seek to establish the influence, situational services, teaching/learning resources, physical/instructional resources, school feeding program have on learning on learning of pupils in pre-schools in Kenya Trans Nzoia County Kiminini, Waitaluk Zone.

2.4 Level of Utilization of Learning/Teaching Resources and Learning

Regarding the utilization of ICT in teaching as a resource, Liu, Toki, and Pange (2014) conducted a comparative study that involved Greece and China. The researchers used document analysis as data collection method. In their findings, the researchers established that the Greek Government had invested largely in the integration of ICT in learning. Compared to Greece, pre-school children in China are exposed to computers because ICT infrastructure in their country is well-developed. However, as it was in Greece, Liu, Toki, and Pange (2014) elucidated that pre-school teachers rarely use ICT devises during instructional teaching, they only use computers to search online for teaching resources such as text, pictures, and courseware, which are printed and used as teaching aids. The main challenge attributed to such cases is lack of technical support, lack of software educational software in the local language, heavy workload, lack of guidelines and lack of knowledge and skills in ICT. Compared to this study, the study by Liu, Toki, and Pange (2014) only focused on access and utilization of ICT in teaching in pre-schools in Greece and China. This study looked at the utilization level of various teaching resources that a teacher need during academic instructional sessions in class.

Neuman and Devercelli (2012) observe that in Sub-Saharan Africa, most countries have vowed to enhance inter-sectorial development of Pre-school aimed at improving

infrastructure necessary for learning. In a study conducted in Uganda, Ethiopia, Kenya and Tanzania, Neuman and Devercelli (2012) noted that the formulation of policies targeting child protection, nutrition, education quality and access, poverty alleviation and hygiene have all been used in improving the state of Pre-school learning because of the dilapidated state in which they are. Although the study by the authors was comparatively done, it was only out to establish policy development and their practicality in enhancing learning in Pre-school. The researcher did not consider failure of some governments to delay adoption and even implementation of the unified policies. This paper sought to look at basic factors influencing learning in Pre-school as opposed to unified policies that take time, might work in one country and not the other because of political differences in ideologies. Notably, the level of utilization of learning/teaching resources and its influence on learning are some of the basic factors prioritized in this paper.

Onyango (2014) sought to establish the influence teaching and learning resources have on pre-school learners transitioning to class one. The study was focused in Rachuonyo South Sub-County, Homa bay County, Kenya and questionnaires were used to collect data from 259 sampling units. In his findings, the author confirmed that teaching and learning resource if acquired, used, and stored increases numbers of children transitioning to class one. Notably, teachers who used indoors materials and outdoor movable materials during teaching improved the literacy levels of learners. The authors further established that the use of teaching and learning resources improves enrolment and develop psychomotor skills necessary for the child ability to improve literacy levels. The study by Onyango (2014) gave a general impact of utilizing teaching and learning resources. The study by Chepkonga (2017) considered factors such as availability of desks, sanitary facilities stores and classrooms, it failed

to consider the influence of other factors such as the utilization of teaching/learning resources which this study considers. The resources in question were not mentioned and therefore it was not able to establish, which resource if utilized by the teacher or learners improves learning. This study seeks to fill the gap in knowledge by considering the impact of various teaching and learning resources on learning in Pre-school.

2.5 Classroom Organization and Learning

Classroom organization focuses on the physical environment .Effective teachers organize a safe classroom environment. Educational Review office (1998) strategically place furniture, learning centers and materials in order to optimize children's learning and reduce distractions.

According to a study conducted by Rwatirera, Mugweni and Thelma (2011) in Zimbabwe, which sought to determine the implication of situational services on the integration of Pre-school into mainstream primary school education. In the results, the researcher observed that most Pre-school did not have age specific toilets, some did not have ventilated classrooms, and there was a problem of accessing clean and safe water. Classrooms were small in size hence occupants had mobility problems. However, the point of commonality is that, this study and the one by Rwatirera, Mugweni, and Thelma (2011) have both considered the influence of water safety, sanitation of toilets, ventilation of rooms and size as they influence learning in Pre-school.

Francesca (2006) undertook a study in Keiyo District with an aim of establishing factors influencing teaching/learning in Pre-school. The researcher found that most pupils did not attend pre-school; they only got admission to class one. The rationale

behind it was the need to evade school fees levied at pre-school level because primary was free. Francesca (2006) further established that in rural areas, classes with muddy walls, no ventilation, with some having under the tree arrangement, which influenced learning negatively such that transition rates to class one were low. There was no support from the community and Education officers also failed to conduct supervisory visits to establish the state of learning in the study region. Although the study by Francesca (2006) was detailed, it failed to consider the situation relative to the population utilizing the facilities. This study sought to fill the research gap by considering the class size and population, which was then used to establish the influence such situation has on learning.

2.6 Feeding Program and Learning

Feeding programme contributes to children good performance. According to Regenade (1993), is that in most impoverished setting short term effects are worthwhile. She also stated that there is an impact of education and link between learning and hunger. She found that children who are hungry or chronically malnourished are less able to learn regardless of the setting. In Michigan State, Ross (2010) undertook a study that sought to establish the relationship between school feeding programs and academic performance. This study sought to fill the gap in research and knowledge by considering the relationship between school feeding program, learners' retention, and admission. The study findings revealed that learners who benefitted from the program were mainly from African-American decent, and they improved their performance and retention with the consistency of program. In the conclusion, the author stated that the state government should ensure that the program is funded to ensure sustainability and hence improvement in academic performance. According to Pediatre (2001), Ross (2010) there is good relation

between enrollment of a school and the feeding programme of a school. Pediatre (2001), Ross (2010) carried out a study that it only considered the relationship between school feeding program and enrollment of learners. The findings from study by Pediatre (2001), Ross (2010) revealed that there is evidence strongly suggesting that school feeding programmes can increase enrollment rates. Ahmed (2004) on the other hand, conducted a study in Bangladesh and it purposed to establish the impacts of feeding program in schools. In his findings, the author found that school feeding programs helped in the reduction of absenteeism among learners from informal settlements, it improved nutrition among learners in pre-school. Relative to this study, the study by Ahmed (2004) failed to consider feeding program have on learners retention.

In a study by Chepkonga (2017) that purposed to determine the influence of learning facilities of quality of education in Pre-school in West Pokot in Kenya. The author's findings from the study revealed that most Pre-school failed to implement school feeding programs because of the failure to have kitchen to cook meals. In such schools, learners' retention, school admissions, and literacy levels were low. Relative to this study, the study by Rwatireria Mugweni and Thelma (2011) failed to incorporate the influence of feeding programs in Pre-school. Mwangi & Joel (2017) sought to establish if feeding program exist and to what extend it influence the pre-school enrollment but it failed to study retention and nutritional status of learners. This study therefore carried out in public pre-schools sought to fill the gap by establishing the relationship between feeding program and the extent feeding program influence pre-school enrollment, nutrition and retention.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the research design methodology that was adopted in the study. It describes the study area the research design, study population, sampling technique and size. The section features research instruments, pilot study, and data collection procedure and data analysis technique. Ethical consideration that relates to the need to explain the purpose of study to respondents and ensure confidentiality of information given by respondents are highlighted in this chapter in this section.

3.2 Research Design and Methodology

The study employed descriptive survey research design. It is widely used research design in social sciences, as it aims at the description of state of affairs as they exist (Kombo &Tromp,2006) it permits the collection of data that deals with the incidence, distribution, and interrelations of educational variables. According to Orodho (2004) Survey research design describes the nature of the phenomena and examines actions as they occur. In addition, survey research design gathers data at a particular point in time with the intention of describing the nature of the existing conditions, identifying the standards against which existing conditions can be compared and determining the relationship that exists between specific events (Orodho, 2005).The independent variables are environmental and situational services, level of utilization of teaching/learning resources, classroom organization and feeding programs in this study. The independent variable according to (Mugenda and Mugenda, 1999) is a variable that the researcher manipulates. It is in order also to determine its effect on the other variable. The dependent variable in this study is learning. Dependent variables refer to the criteria variable being the outcome of the study which occurs as

a result of the manipulation of the independent variable. The methods commonly used in a research study are both qualitative and quantitative. The quantitative method is excellent in collecting and analyzing numerical data, while the qualitative method is applicable when collecting and analyzing non-numerical data (Kothari, 2007).This study employed both the qualitative and quantitative approaches. Survey research design was used because the population studied was too large to observe directly and it enabled the researcher to use questionnaires as a method of data collection because the researcher was able to collect data from all the schools. This study seeks to establish factors influencing learning in Pre-school and concepts under study require a descriptive research design.

3.3 Study Area

This study was carried out in Waitaluk Zone, Kiminini Sub-county of Trans-Nzoia County-Kenya of the former Rift Valley province of Kenya. The zone is located on the western part of Trans-Nzoia County. It has a high potential for mixed farming and Agri-business, it is also a cosmopolitan area occupied by almost every ethnic that is found in Kenya. This area was chosen because the researcher established from the program officer that the problem affecting learning in Pre-school had not been addressed in the study area.

3.4 Target Population

A target population is the aggregate of all cases that conform to some designated set of specifications, (Kombo and Tromp, 2006). Therefore a target population in statistics is the specific population about which information is desired. The target population for this study was pre-school teachers, headteachers in Waitaluk zone, Kiminini Sub-County, which according to the term report from the program officer

2017, were 54 centers. 54 School heads, 118 Pre-school teachers, and 1 official from the ministry of education will be targeted by the study.

3.5 Sample Size and Sampling Technique

The sample size for this study was 30% of the target population. (Mugenda and Mugenda, 1999). Best and Kahn1998 define a sample as a small proportion of a population selected for observation, analysis sampling technique is the process of selecting a sample to take part in the study such that the selected group is a representative of the entire population (Kisilu and Tromp, 2006) by using Mugenda & Mugenda (1999), to determine a sample from a given population. The researcher used simple random sampling technique to select teachers. Simple random sampling technique is preferred because it ensures that all members of the population have an equal chance of being selected for the study (Boit et al, 2013).The researcher used stratified sampling technique to select the pre-schools. From a target population of 173, the sample size using Mugenda & Mugenda (1999), gives 52 respondents. Purposive sampling was used to select DICECE Program Officer in charge of Waitaluk Zone. Purposive sampling was also used to select 16 school heads in charge of sampled centers. Out of 118 teachers targeted for the study, a sample of 35 Pre-school teachers was drawn using stratified sampling where schools were stratified into five clusters namely: Kibagenge cluster, Mabonde cluster, Amagoro cluster, Mitoni Mitatu cluster and Wehoya cluster, subjects were selected based on gender, and the time taken to teach in respective centers. In this case, all male teachers were considered because they were few which were a total of 7 teachers and then female teachers were reselected based on the extent to which they understood their centers.

Table 3.1: Target Population and Sample Size

Category of Respondents	Target Population	Sample Size
Teachers	118	35
Head teachers	54	16
DICECE Program Officer	1	1
TOTAL	**173**	**52**

Source: Sub-County Director of Education, Kiminini

3.6 Research Instruments.

The study used questionnaires, semi structured interviews and the observation schedule as the main data collection tools. The instruments were chosen in this study because those who took part in this study were literate and were able to answer the items asked adequately. The interview was used to complement the questionnaire to elicit hidden data. Observation schedule was also employed in this study to collect visible data. The selection of the instruments had been guided by the nature of data to be collected and objectives of the study.

3.6.1 Questionnaire

Kothari (2007) defines a questionnaire as that consisting of a number of questions printed or typed in a definite order on a form or set of forms. The researcher used the questionnaire because of its low cost, economical and it was free from bias because respondents had adequate time to give well thought out answers. The questionnaires were used to establish situational services provided to children, level of utilization of teaching/ learning resources, and the influences of classroom organization and feeding program on learning in public Early Childhood Education Centers. The questionnaires were administered to teachers .The use of questionnaire helped the researcher to gather data over a large sample spread over diverse public pre- schools within the zone. In this study, the structure of the questionnaire was that it elicited responses

relevant to the study. The questionnaires were administered to teachers. Structured questionnaire meant to collect data from Pre-school teachers was formulated and it comprised of three sections namely A, B, and C. Section A entailed information about the center, section B was about information about the Pre-school teacher while section C entailed information related to study objectives. The advantage of using questionnaire was that it generated a considerable amount of quantitative data and enabled the researcher to obtain a wider coverage of description data at a comparatively low cost and within the shortest time. This was considered a primary research instrument, which according to Kombo & Tromp upheld confidentiality (Kombo & Tromp, 2006). The disadvantage ,however, found with this instrument was that it had low respondent rate, no chance for further propping and no clear reasons for incomplete responses (Orodho,2009).

3.6.2 Interview Schedules

Interview is a method of collecting data that involves presentation of oral verbal stimuli and reply in items of verbal responses (Kothari 2007).Interviewing is a valuable assessment tool because it allows the participants to share their experiences, attitudes and beliefs in their own words. The researcher subjected the head teachers to semi-structured interview where the interviewer retained total control thought the process. Semi-structured interviews involve some planning, but there was freedom to vary the course of the interview based on the participant's responses. The use of direct quotations in the assessment findings helped the researcher present an accurate depiction of what was being evaluated. The interview was based on the use of an interview schedule. The interview enabled the researcher to collect data that was in-depth that facilitated a complete and detailed understanding of the issues that were at hand. The head teachers views about the situational services, utilization of teaching/

learning resources and the challenges related to the utilization of the said resources, the organization of classrooms and learners' retention rates, enrolment rates and nutritional status in relationship with school feeding program. Lastly their comments on the literacy level of learning in their centers, Questions were formulated to acquire information from program Officer in charge of the Waitaluk zone and the School Heads per sampled center. This was a complementary research instrument that sought to establish situational analysis and historical overview of factors influencing learning in Pre-school in the study area. Interviews allowed the collection of qualitative data, which informed the researcher about views, opinions, and ideas about the relationship between variables under study Kombo & Tromp, (2006).

3.6.3 Observation Checklist

Observation checklist helped to ensure consistency and completeness in carrying out a task Borg and Gall (2003). This involved making a list of items, which the researcher ascertained by checking or marking on the list whether they existed, their number and state. Items such as learning/teaching materials used at the centers were established in terms of state, quantity, and availability.

3.7 Validity and Reliability of Research Instruments

Validity aims at ascertaining the extent to which the research instrument collects the necessary information Boit et al, (2013). Boit, Serem and Wanyama (2013) defines reliability as whether a particular tool or instrument (or technique) would yield the same results if it is repeatedly used by one researcher or used by different researchers at once.

3.7.1 Validity of Research Instruments

The validity of the instruments is determined through the content validity of instruments. Content validity is concerned with whether or not a test on measuring

instruments is representative of the full content of the things under way. For the tools to gather relevant and accurate, the researcher took the tools to the supervisors, whereby, the instruments were verified and checked by the two supervisors and other members of the department of the curriculum instruction and educational media Moi University. They assessed the relevance of the content used in the questionnaires developed, examined the questionnaire, interview and observation schedules individually and provided feedback and recommendations that made the final questionnaire appropriate for the study.

According to Mugenda and Mugenda (2003), validity is the accuracy and meaningfulness of inferences, which are based on the research result that is the degree to which results obtained from the analysis of the data actually represent the phenomena under study. Therefore, questionnaires or interview schedules are said to be valid when they actually measure the intended parameters. In order to test validity of the research instruments the researcher collected data using questionnaires, interviews, and observation schedule which informed the researcher on the state of validity of the research instrument.

3.7.2 Reliability

An instrument is said to be reliable if it produces a consistent data. The tool should be able to generate the same response from the same respondents each time it is administered. The test-retest technique was used by the researcher to assess the reliability of the research instruments. The questionnaires and interviews were administered twice to a small sample of respondents from schools in Central zone. The choice of the pre- schools was purposive since the pre- schools were not part of the study population. The same group was given the questionnaires to fill and head teachers subjected to the same interview again after two weeks. Pearson correlation

was used to compute correlation coefficient in order to establish the extent to which contents of questionnaires were consistent in eliciting the same responses every time they were administered. A correlation coefficient (r2) of o.759 that is over 75% was obtained. The closer the value of correlation coefficient (r2) was closer to +1,the greater the percentage of variation of the dependent variable was explained by the predictor variables, that is, the better the goodness of fit of the regression plane to the same observations .This was considered high enough to judge the reliability of the instruments. The reliability of the interview schedule and document analysis was done through piloting and re-piloting.

3.8 Data Collection Procedure

Before embarking on the actual data collection, the researcher obtained an introduction letter from the University which was used to acquire a research permit from the National Council of Science, Technology and Innovation that allowed her to carry out the study. A copy of the permit was presented to the county education office and the county commissioner's office who also issued the researcher with letters of authorities. The head teachers of the selected schools were also informed through official visit and by official letters by the researcher; the researcher then visited the schools to familiarize herself with the schools and build a rapport with the respondents before the actual study. The researcher then visited each school at the appointed time and collected quantitative data from head teachers and teachers using the appropriate questionnaires and interview schedules

The Pre-school teachers responded to the questions and returned the questionnaires to the researcher as agreed. Before data collection, the researcher took the respondents through the questions to ensure that they were conversant with the questions being asked. As respondents were responding to questions on the questionnaires, the

researcher was collecting information using observation checklist. Qualitative data was collected by conducting a face-to-face interview with school heads and officials from the Ministry of Education in the study area. The researcher set a specific day to conduct a face-to- face interview with the program officer Secondary sources were collected from Journals, Books, and Publications, which informed the researcher especially on relating literature to the findings.

3.9 Data Analysis

Kombo and Tromp (2007) described data analysis as the process through which the data that has been collected is examined. It involves uncovering underlying structures, extracting important variables, detecting any anomalies and testing underlying assumptions; Quantitative data collected was analyzed using inferential statistics with the aid of statistical package for social sciences software program(SPSS) where descriptive statistics was used in giving characteristics of variables. The description of variables was done using frequencies and percentages and was presented in tables. Responses from interviews was analyzed using content thematic analysis where summarized responses were organized/presented in themes and sub-themes, themes being variables and sub-themes being indicators. Information from observation schedule was analyzed by organizing and presenting those showing frequencies and percentages as they relate to items/resources under study (Mugenda & Mugenda, 1999). Data analysis was based on the objectives of the study. The first objective was to establish situational services provided to children and how they influence learning in public pre- schools in Waitaluk zone, Kiminini, Sub- County, Trans-Nzoia County. The objective yielded both quantitative and qualitative data. The quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS) and presented using frequencies and percentages. Quantitative data from the semi- structured interviews

and document analysis were organized into themes guided by research questions and presented using descriptions quotations The data from the interview and document analysis were transcribed first and then they were combined with the data that was recorded manually; The second objective was to determine the level of utilizing teaching/learning resources and its influence on learning in public pre- schools in Waitaluk zone, Kiminini Sub-County,Trans- Nzoia County. This objective yielded both qualitative and quantitative data. The quantitative data was analyzed using Statistical Package for Social Sciences(SPSS).The data generated was presented using descriptive statistics which included frequencies and percentages, Quantitative data from the interviews and document analysis were transcribed combined with the data that were recorded manually then organized into themes guided by the research questions and presented using descriptions and quotations; The third objective was to examine the influence of classroom organization on learning in public pre- schools in Waitaluk zone. Kiminini Sub-County, Trans-Nzoia County. The objective yielded both quantitative and qualitative data. The quantitative data was analyzed using Statistical package for Social Sciences (SPSS) and presented in terms of frequencies and percentages. Qualitative data from the interview and document analysis were transcribed, combined with the data that were recorded manually then organized into themes guided by the research question and presented using descriptions and quotations. The forth objective was to determine the influence of feeding program on learning in public pre-schools in Waitaluk zone Kiminini Sub-County Trans-Nzoia County. It yielded both quantitative and qualitative data. The quantitative data was analyzed using (SPSS) and presented in terms of frequencies and percentages. Qualitative data from the interview and document analysis were transcribed, combined with the data that were recorded manually then organized into themes

guided by research question and presented using descriptions and quotations. A correlation analysis was used to test the significance of correlation between children learning and factors that influence. Data was summarized and presented using tables. Qualitative data was presented thematically in prose.

3.10 Ethical Consideration

Kombo and Tromp (2007) define ethical issues as, those issues pertaining to or dealing with morals or the principals of morality in a study. The issue of ethics is very important in research. Despite the high value of knowledge gained through research, knowledge cannot be pursued at the expense of humanity. This study ensured that ethical requirements were upheld in the study. The researcher agreed to comply with the following principle of anonymity of the respondents, which aims at protecting the dignity and privacy of every individual who, in the course of the study was required to provide personal or commercially valuable information about him/herself or others.

Before collecting data, the researcher sought for necessary approval from NACOSTI, County Director of Education and County Commissioner. The acquisition of these licenses instilled confidence in the researcher who showed respondents before requesting them to provide necessary information for the study. Respondents were assured about the confidentiality of the information given and that it was meant for academic research only. No names or person identification numbers was reflected on the questionnaire except the numbering for questionnaire, which was for the purposes of identification of data during data editing.

3.10.1 Informed Consent

The subjects in the research made their decision to participate based on adequate knowledge of the study. They were informed about the procedure of the study. The

researcher provided the respondents with the information on: the purpose of the study; the expected duration of participation; any benefits to the subjects and the extent of privacy. Before an individual became a subject of research, the subject had the right to abstain from participation in the research and had the right to terminate at any time his/her participation.

3.10.2 Privacy and Confidentiality

Privacy refers to persons. Respondents have a right to keep from the public certain information about themselves. Confidentiality has to do with the data collected rather than with people. It refers to the agreement between individuals that limits others' access to private information. It is concerned with who will have access to data. This study ensured that both privacy and confidentiality was maintained throughout the study. The identity of individuals from whom information was obtained in the course of the research was kept strictly confidential. At the end of the research, any information that revealed the identity of individuals who were subjects of the study was destroyed.

3.10.3 Anonymity

All participants in this study had the right to remain anonymous, that their individual's identities were not a salient feature in the study. The researcher was not interested in knowing the respondents names.

3.10.4 Researchers Responsibility

The researcher was sensitive to human dignity and well-meaning to his intentions. The researcher ensured that ethical requirements were upheld in the study. The researcher agreed to comply with all the principle which aimed at protecting the

dignity and privacy of every individual who, in the course of the study was required to provide personal or commercially valuable information about him/herself.

CHAPTER FOUR

DATA ANALYSIS, PRESANTATION, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

This chapter presents the data analysis, presentation, interpretation and discussion of findings. The data was discussed in line with the literature review and the results were presented based on the study objectives in the subsequent section. The thematic areas were: to establish the learning environment and its influence on learning in pre - primary schools within Waitaluk zone Kiminini Sub-County; to determine the level of utilization of learning/teaching resources and their influence on learning in public pre-primary schools in Waitaluk zone Kiminini Sub-County;to examine the influence of classroom organization on learning in public pre-primary schools in Waitaluk zone Kiminini Sub-County and to determine the influence of feeding program on learning in public pre-primary schools in Waitaluk zone in Kiminini Sub-County. Research findings that include response rate, reliability test results, demographic data of respondents, quantitative related to objectives, qualitative results from interview responses and discussion of both quantitative and qualitative findings. A comparison of the findings from the study and findings from other scholars will be undertaken.

4.2 Background and Demographic Information of the Respondents

The researcher distributed the questionnaires to, 35 teachers an interview schedules to head teachers and a program officer. All the respondents who were given the questionnaires filled and returned them promptly. The head teachers were interviewed to give data and information about the learning environment , to explain on availability and utilization of learning/teaching resources, to define how classrooms

were organized to suit the learners needs and lastly to give the impact of the school feeding program.

4.3 Response Rate

This study considered a sample of 52 which included 35 teachers, 16 school heads and 1 DICECE Program director in charge of Waitaluk Zone Kiminini Sub-County. All the respondents considered took part in the study and this was 100% response rate.

4.4 Reliability of Results

In chapter three, the study considered to use Cronbach's Alpha co-efficient, which is a result of reliability test conducted after data is entered in SPSS software, the data entered in the software was obtained from pilot study and the results obtained are shown in Table 2 Demographic information of Pre-school teachers.

4.5 Reliability of Statistics

Reliability of statistics Cronbach's Alpha number of Items 0.759 59 From the results presented in table 3, it is clear that the value of Cronbach's Alpha was 0.759, which indicated that the internal reliability of questionnaires as the primary research instrument was high and that would be consistent result up to 75.9% accurate upon repeating the research process.

This section presents findings that give distribution of respondents based on gender, staff population-teaching, age, teaching experience, terms of employment, and highest level of education.

Table 4. 1: Demographic Information of the Teachers

Respondents	Demographic Factors	Variables	Frequency	Percentages
Teachers	Gender	Male	7	20
		Female	28	80
		Total	**35**	**100**
	Age	21- 30 Years	11	31.4
		31 – 40 Years	11	31.4
		41 – 50 Years	08	22.9
		> 50 Years	05	14.3
		Total	**35**	**100**
	Teaching experience	< 1 Year	2	5.7
		1 – 5 Years	11	31.4
		6 – 10 Years	11	31.4
		> 10 Years	11	31.4
		Total	**35**	**100**
	Level of Education	Masters/post graduate	01	2.9
		Degree	4	11.4
		Diploma	20	57.1
		Certificate	10	28.6
		Total	**35**	**100**
	Terms of Employment	B.O.M	09	25.7
		County Government	26	74.3
		Total	**35**	**100**

In table 4.1, 28 out of 35 respondents were female while 7 were male. This was an indication that 80% of the pre-schools teaching staff were female with only 20% being male.

It is also clear that 11(31.4%) in each case was aged between 21-30 years and 31-40 years. Out of 35 respondents, 8(22.9%) were aged between 41-50 while 5(14.3%) respondents were aged above 50 years. This is a clear indication that more than 60% of the teachers were aged between 21-40 years. In addition, 11(31.4%) respondents in each case stated that they had a teaching experience of between 1-5 years, 6-10 years, and over 10 years. Only 2(5.7%) out of 35 respondents stated that they had less than 1 year level of teaching experience. It is evident that 20(57.1%) respondents attained diploma level of education, while 10 (28.6%), 4(11.4%) and 1(2.9%) attained Certificate, Bachelor's degree, and Master/Post Graduate degree levels of education respectively. According to the results shown above, it is true that 26(74.3%) out of 35 respondents were employed by the County Government while 9(25.7%) indicated that they were employed by the Board of Management in respective pre-schools

Table 4.2: Rate the Quality of Learning in Early Childhood Education centers

	Frequency	Percentage(%)
very high	2	5.7
High	1	2.9
Moderate	5	14.3
Low	21	60.0
Poor	6	17.1
Total	**35**	**100.0**

In the results presented in table 4.2, it is evident that the quality of learning in pre-schools was low according to 21 respondents who represented 60%, the majority. Out of 35 respondents, 6 (17.1%) indicated that the quality of learning in pre-schools was poor. Different from that was a group of 5 (14.3%), 2 (5.7%) and 1 (2.9%) respondents who observed that the quality of learning in Early Childhood Education centers was moderate, very high and high respectively.

4.6 Quantitative Results Related to Objectives

4.6.1 Objective One: The Learning environment

This section presents results based on the situation of the learning environment, socialization, water safety, electricity, state of toilets and the playground.

Table 4.3: Learners Are Given a Chance to Take Part in Music Activities to Tap Talents

	Frequency	Percentage (%)
No service	3	8.6
Very Inadequate	3	8.6
Inadequate	11	31.4
Fairly Adequate	12	34.3
Very Adequate	6	17.1
Total	**35**	**100.0**

As a way of establishing the extent to which learners socialize, respondents were asked to state the extent to which learners took part in music activities and 3(8.6%) respondents stated that learners did not take part in music activities while 3(8.6%) respondents observed that the extent to which learners took part in music activities was very inadequate. Out of 35 respondents, 12(34.3%) and 11(31.4%) stated that the extent to which learners took part in music activities was fairly inadequate and inadequate respectively. Different from that was a group of 6(17.1%) respondents who confirmed that the extent to which learners were given chances to socialize through participation in music was very adequate.

Table 4.4: The School is connected to Electricity.

	Frequency	Percentage (%)
Yes	26	74.3
No	9	25.7
Total	**35**	**100.0**

According to the results presented in table 4.4, 26 respondents who represented 74.3% agreed that their centers were connected to electricity. Out of 35 respondents, (25.7%) stated that their school was not connected to electricity.

Table 4.5: The School has Access to Available Clean and Safe Water

	Frequency	Percentage (%)
Yes	33	94.3
No	2	5.7
Total	**35**	**100.0**

From the results in table 4.5, 33 respondents who represented 94.3% stated that their centers had access to clean and safe water. In another case, 2 (5.7%) observed that their centers did not have access to clean and safe water.

Table 4.6: There is Adequate Playground in the School

	Frequency	Percent
Yes	**35**	**100.0**

In table 4.6, all respondents indicated that the centers had adequate playground where learners socialized, and played various games.

The first objective of the study was to examine the learning environment in Early Childhood Education centers and their influence on learning. According to the results presented from table 4.3 to 4.6, Out of 35 respondents, 12(34.3%) stated that the extent to which learners took part in music activities was fairly adequate it was evident that learners in Early Childhood Education centers socialized through participation in singing and other outdoor games. From the interview schedule administered to school heads it was noted that learners mostly socialize through outdoor activities and that playgrounds were adequate but play materials were not adequate and not designed for young children. Responses from interviews by head

teachers indicated that toilets, play materials and playground were inadequate, in addition children socialize through water play and outdoor games.DICECE program Director pointed out that play materials were not enough, the available toilets are not tailored for young children thus being risky' Environment is very important, consequently, one cannot ignore the effect that the environment has on a particular individual because it is the basis upon which one gains new experiences Piaget (1946).This study is consistent with Pearson (2010) who argued that the environment we are in affects our moods, ability to form a relationship, effectiveness in work or play as well as health. In addition the early childhood group environment has a very crucial role in, children's learning and development. Different environment may boost or distract pupils from learning, for instance a child's environment is likely to influence its access to resources and also the learning style. The best predictors of reading growth and development is influenced to greater levels by the environmental factors which children are exposed to. The study supports a study carried out by Mungai (2004), who observed that, a playground is equally important since children play, sing and dance for different reasons, sometimes they are exploring /learning new things. At other times they are consolidating existing learning or practicing skills. Play, singing and dancing can also be a way of building or strengthening a relationship. Children often sing and dance simply for fun and enjoyment; they bring their own interpretation of situations, events, experience and expectation. Notably, it was established that most schools were connected to electricity and had access to clean and safe water.

Results from observation checklist, indicate that averagely, situational services that include safe and clean water, electricity, desks, chairs, the playground, sanitation-toilets, play materials and feeding programs were fairly implemented. In addition

responses from the DICECE Program director indicated that toilets in most pre-schools were not tailored for young children, they were meant for adults and were risky. Even though these services were available, their influence on learning was dismally low as reported by the majority of teachers, through the questionnaires, head teachers and DICECE Program Officer in interview responses. The failure of the situational services to influence learning in Early Childhood Education centers was attributed to low competency abilities of teachers as reported by head teachers and DICECE Program Officer in the interview responses. Creation of a sustainable learning environment helps deprived children to improve their academic performance (MOEST, 2005).The findings supports the study done by Edger (1986), who suggested, that some children adapt easily to a new educational environment, however for others moving from an environment in which they are familiar and secure to a new classroom environment can be a difficult task and books. In addition they point out that parents with higher education levels and higher economic resources are better to provide positive learning experiences for their young children. Research findings conducted over the past three decades have led to an understanding of the rapid growth of the brain in the early years and how stimulation acts as a catalyst for that growth .In early years study two: putting science into Action (2007) Dr. Fraser Mustard of Council for Early Childhood Development (CPre-school) and others have established that the experience. Brostrom (2000), Dunlop and Fabian (2003) propose that, continuity and progression are key elements in school success. They suggest that continuity is all-important during this phase to enable children to predict events and to have some sense of control over their environment. It is essential that children are given the knowledge they need about the timings involved in the change, people involved and expectation of the new setting. Tamis-LeMonda & Rodriguez (2009) list

three aspects of children's in the home environment that is critical to early language growth and learning. These aspects include: the provision of certain learning activities like reading to children on daily basis , a parenting style characterized by responsiveness and provision of materials such as age-appropriate toys in the early years one) shape the architecture of the brain in year two) set the developmental trajectories that influence life long behavior and health for individuals.

The study agreed with the study conducted by Atmore (2013) in South Africa to evaluate the development of Pre-school in South Africa since independence period , the author established that many Pre-schools function without basic infrastructure such as clean and safe water, toilets and electricity ,which pose a risk to the health of learners and compromise the quality of learning .The researcher further observed that the department of social development failed to fund the development of basic infrastructure and instead the burden to improve basic infrastructure was left to the community, whose social-economic status has always been low. Relative to this study, is a study conducted in West Pokot County, Kenya by Chepkonga (2017) to establish the influence of learning facilities on the quality of learning, the researcher determined that majority of Early Childhood Education centers did not have enough classrooms, desks, kitchen store, water, and playground and such affected negatively the provision of quality education of the best predictors of reading comprehension in grades three and four (Senechal Ouellete, & Rodney,2006; Storch & Whitehurst, 2002) Davis-Kean(2005) points out those parents with higher educational levels are more apt to engage their children in more learning –related opportunities in the home and in environment outside the home. Activities such as storytelling singing, role-playing and conversations all help to develop and sustain oral language development with young chidren. Later reading and writing extend and represent oral language.

Tamis-LeMonda & Rodriguez (2009) reported that central to children's early language development is consistent participation in shared book reading and storytelling as a means to expanding their vocabulary. Providing environments in the home and in other settings that are rich in oral language, print, shared storytelling and reading promotes the development of vocabulary early reading and early writing for young children. Heath, Bishop, Boyle' Fletcher, Hogben, Wigley and Yeong (2014) conducted a study in Australia with an aim of establishing the influence of family factors has on literacy skills of learners in pre –schools .The researchers noted that family socio-economic status, parents awareness of phonology and family history influenced literacy skills of learners in pre- schools. The study however, did not consider other environmental factors at the school setting; even though the family is the basic unit of the society where learning begins, learners in pre-schools socialize and learn academic concepts in schools. The study conquered with the study carried out by, Kipkoskey & Kabwos (2010) who attested that lack of enough apparatus especially in environmental and number work activities affect learning abilities of children in pre-school. According to the study, most learners prefer having access to all resources during a learner-centre session; however' the failure of such resources hampers the cognitive abilities and creativity of learners most of which develop learning disorders. Learning in an interesting way makes it easier for children to grasp concepts as well as ensuring an enjoyable experience. Therefore there is a significant relationship between the environment and provision of quality Early Childhood Development Education. Families play a great role in the learning process because they do not perform their function of taking care of the environment that children can develop low esteem and this impedes learning.

4.6.2 Objective two: level of utilization of teaching/learning resources and learning

This section features results that entail teacher workload, availability, adequacy of learning and teaching resources, and their usability

Table 4.7: The Class Population is increasing

	Frequency	Percentage (%)
Yes	29	82.9
No	6	17.1
Total	**35**	**100.0**

According to the results presented in table 4.7, it is clear that 29 out of 35 respondents, which represent 82.9% of the respondents, observed that class population of learners was increasing while 6 (17.1%) respondents stated that they did not find class population increasing.

Table 4.8: Number of Pupils Taught per Class

	Frequency	Percentage (%)
41-50	17	48.6
51-60	11	31.4
61-70	3	8.6
above 70	4	11.4
Total	**35**	**100.0**

From the results shown in table 4.8, it is evident that 17 (48.6%) respondents observed that the number of learners taught per class was between 41-50 while 11 (31.4%) 4(11.4%) and 3(8.6%) indicated that the number of learners taught per class was between 51-60, above 70 and 61-70 respectively. There was no respondents indicating that there was incidences in centers that had a class with less than 40 learners.

Table 4.9: The Number of Learners is Manageable

	Frequency	Percentage (%)
Yes	8	22.9
No	27	77.1
Total	**35**	**100.0**

In table 4.9, 27 (77.1%) out of 35 respondents observed that the number of pupils in the classes were not manageable while 8 (22.9%) respondents stated that the number of learners in their classes were manageable.

Table 4.10: Teaching /Learning Materials

	Frequency	Percentage (%)
Inadequate	8	22.9
Fairly Adequate	25	71.4
Very Adequate	2	5.7
Total	**35**	**100.0**
There are blackboards and pieces of chalks		
Inadequate	8	22.9
Fairly Adequate	21	60.0
Very Adequate	6	17.1
Total	**35**	**100.0**
There are Exercise Books, Pens, Erasers and Sharpeners		
Inadequate	6	17.1
Fairly Adequate	24	68.6
Very Adequate	5	14.3
Total	**35**	**100.0**
The School Provides Learners With Specified Course Content		
Very Adequate	4	11.4
Inadequate	4	11.4
Fairly Adequate	18	51.4
Very Adequate	9	25.7
Total	**35**	**100.0**
Learners are provided With Playing Materials		
No Service	2	5.7
Inadequate	7	20.0
Fairly Inadequate	19	54.3
Very Inadequate	7	20.0
Total	**35**	**100.0**
Availability of Progress Records		
No Service	1	2.9
Very inadequate	1	2.9
Inadequate	5	14.3
Fairly Adequate	21	60.0
Very Adequate	7	20.0
Total	**35**	**100.0**

	Frequency	Percentage
There are personal textbooks		
Yes	10	28.6
No	25	71.4
Total	**35**	**100.0**
Books that are Available in Class		
Course Books	20	57.1
Supplementary Books	15	42.9
Total	**35**	**100.0**
Other Additional Learning Materials Used in Class		
Counters	6	17.1
Charts/Pictures	19	54.3
Flash cards	4	11.4
Real Objects	6	17.1
Total	**35**	**100.0**

In table 4.10, it is indicated by 25 (71.4%) respondents that learning resources were fairly adequate; however, it was not possible for all learners to utilize their own resources, there was sharing. Out of 35 respondents, 8 (22.9%) observed that resources were inadequate even though learners shared, but they were not enough.

According to the results on blackboards and pieces of chalks majority of respondents (21 out of 35) which is 60% stated that blackboards and pieces of chalk were fairly adequate. Out of 35 respondents, 8 (22.9%) observed that blackboards and pieces of chalk were inadequate while 6 (17.1%) respondents indicated that blackboards and pieces of chalk were very adequate.

The results presented above states clearly that 24 (68.6%) respondents stated that exercise books, pens erasers, and sharpeners were fairly adequate while 6(17.1%) respondents confirmed that exercise books, pens erasers and sharpeners were inadequate. Different from that was a group of 5 (14.3%) respondents who stated that exercise books, pens erasers and sharpeners were very adequate.

Out of 35 respondents, 18 (51.4%) stated that specified course content provided by the school was fairly adequate, while 9 (25.7%) observed that specified course content provided by the school was very adequate. 4 (11.4%) respondents in each case stated that specified course content provided by the school was very adequate and inadequate respectively.

Out of 35 respondents, 21 (60%) indicated that the extent to which learners were given assignment to evaluate class progress was fairly adequate. 5 (14.3%) respondents confirmed that the extent to which learners were given assignment to evaluate class progress was very adequate. In another case, one (2.9%) respondent in each case stated that there was no service and very inadequate respectively in the extent to which learners were given assignment to evaluate class progress. 19 (54.3%) respondents observed that the extent to which learners were provided with playing materials was fairly adequate. In another case, 7 (20%) respondents in every case indicated that the extent to which learners were provided with playing materials was very adequate and inadequate respectively. The remaining 2 (5.7%) respondents stated that learners were not provided with playing materials at all. Out of 35 respondents who took part in the study, 18(51.4%), 12 (34.3%), 4 (11.4%) and 1 (2.9%) stated that the extent to which teachers periodically handed in progress records was fairly adequate, very adequate, inadequate and very inadequate

respectively. Out of 35 respondents, 25 (71.4%) stated that they did not have personal textbooks while 10 (28.6%) observed that they had some personal textbooks.

According to results the 20 (57.1%) respondents stated that course books were available for use in classes while 15 (42.9%) respondents observed that supplementary books were available for use in their respective classes.

Materials Available and In Use by Teachers

It was observed that materials available for use by E.C.D teachers were equally available and utilized by all centers. Notably, 12 (34.3%) respondents in each case stated that learning areas, play materials and facilities respectively were available for use by E.C.D teachers. Out of 35 respondents, 11(31.4%) indicated that teachers guide were available for use by E.C.D teachers.

Apart from teachers guide, learning areas and playing materials/facilities, 19 (54.3%) respondents admitted that chats were other additional learning materials used in class. Out of 35 respondents, 6 (17.1%) indicated that learning objects were available while 4 (11.4%) observed that posters were used as other additional learning materials.

Table 4.11 Learners are Given Assignment to Evaluate Class Progress

	Frequency	Percentage (%)
No Service	1	2.9
Very Inadequate	1	2.9
Inadequate	5	14.3
Fairly Adequate	21	60.0
Very Adequate	7	20.0
Total	**35**	**100.0**

Table 4.12: Assignment of Homework to Learners

	Frequency	Percentage (%)
Yes	30	85.7
No	5	14.3
Total	**35**	**100**

As a way of evaluating the level of utilization of teaching and learning resources, 30 (85.7%) respondents indicated that they usually assign homework to pupils while 5 (14.3%) stated that they did not assign homework to learners.

Table 4.13: Kind of Assignment Given to Learners

	Frequency	Percentage (%)
Reading	23	65.7
Task	7	20.0
No assignment given	5	14.3
Total	**35**	**100**

Out of 35 respondents who took part in the study, 5(14.3%) indicated in table 31 that they did not give assignment to learners while 23 (65.7%) indicated that they gave learners reading assignments. The remaining 7 (20%) respondents stated that they gave learners tasks related to writing, and solving number activities among others.

Table 4.14: There is Extra-Help/After School Tutoring Services Available

	Frequency	Percentage (%)
Yes	28	80.0
No	7	20.0
Total	**35**	**100.0**

From table 4.14,out of 35 respondents, 28 (80%) confirmed that they gave learners extra help or coaching weak learners; even slow learners or children with specific learning difficulties, 7 (20%) stated that they did not offer extra help to any learner.

Table 4.15: Inclusivity of Children with special needs

	Frequency	Percentage (%)
Give Tasks According to their Abilities	28	80.0
Handle Each Learner Personally	7	20.0
Total	**35**	**100**

In table 4.15, upon being asked how E.C.D teachers managed learners with disabilities, 28 (80%) indicated that they gave tasks according to their abilities while 7(20%) confirmed that they handled each learner with disability individually.

The government is supporting the development of school physical resources through C.D.F, County Governments are also supporting the initiative. Most teachers are trained but do not use right teaching methodologies. Teachers do not know how to improvise teaching/learning resources. Some centers have a few teaching and learning resources, which are not fully utilized. Teachers should be retrained to change their teaching methodologies. Increase in enrolment of learners had stretched utilization of resources to the limits, classrooms are now small, and most of them are not repaired. School feeding programs is supported by parents; almost all the schools are running the program.

About the effectiveness implementation of the program has a positive influence on retention rates, enrolments rates and nutritional status of learners. Learning in the majority of Pre-school is of low quality because learners' achievement is still low, transition rates to primary are average, literacy abilities of learners is low.

The second objective was to determine the extent to which teaching and learning resources influence learning in Early Childhood Education centers. In table 4.7, , it is clear that 29 out of 35 respondents, which represents 82.9% of the respondents, observed that class population of learners was increasing. In table 4.8, it is evident that 17 (48.6%) respondents observed that the number of learners taught per class was between 41-50. In table 4.9, 27 (77.1%) out of 35 respondents observed that the number of pupils in the classes were not manageable. In table 4.10, it is indicated by 25 (71.4%) respondents that learning resources were fairly adequate; however, it was not possible for all learners to utilize their own resources, there was sharing.

According to the results in table 4.11, the majority of respondents (21 out of 35) which is 60% stated that blackboards and pieces of chalk were fairly adequate. From the results presented in table 4.12, it is clear that 24 (68.6%) respondents stated that exercise books, pens erasers, and sharpeners were fairly adequate. In table 4.13, out of 35 respondents, 18 (51.4%) stated that specified course content provided by the school was fairly adequate. In table 4.14, out of 35 respondents, 21 (60%) indicated that the extent to which learners were given assignment to evaluate class progress was fairly adequate. In table 4.15, 19 (54.3%) respondents observed that the extent to which learners were provided with playing materials was fairly adequate. From table 4.16, out of 35 respondents who took part in the study, 18(51.4%), stated that the extent to which teachers periodically handed in schemes of work, lesson plan and progress was fairly adequate. From table 4.17, out of 35 respondents, 25 (71.4%) stated that they did not have personal textbooks. According to results in table 4.18, 20 (57.1%) respondents stated that course books were available for use in classes. In table 4.19, it can be observed that materials available for use by E.C.D teachers were equally available and utilized by all centers. Notably, 12 (34.3%) respondents in each

case stated that learning areas. From table 4.20, apart from teachers guide, learning areas and playing materials/facilities, 19 (54.3%) respondents admitted that chats were other additional learning materials used in class. From table 4.21, as a way of evaluating the level of utilization of teaching and learning resources, 30 (85.7%) respondents indicated that they usually assign homework to pupils. From table 4.22, 23 (65.7%) indicated that they gave learners reading assignments. From table 4.23, out of 35 respondents, 28 (80%) confirmed that they gave learners extra help or coaching weak learners; even slow learners or children with specific learning difficulties. In table 4.24, upon being asked how E.C.D teachers managed learners with disabilities, 28 (80%) indicated that they gave tasks according to their abilities.

However, according to the result from the interview schedule from both the school heads and Pre-school Program Director ,most teachers were not used to utilizing teaching and learning resources because they were no competent. The school heads explained that most learners transit to primary schools with low ability to write, spell words correctly, read and attempt number activities, they also added that few resources limit the potential of learners to learn effectively. Pre-school program director stated that learning in most of the Early Childhood Education centers was still low because of low learners' achievement, low literacy levels, and low transition rates.

However, in the results presented from the observation checklist indicated, that playing materials, teaching, and learning resources were inadequate. There were no swings slides . The increase in the number of learners and the inadequacy of teaching and learning resources impacted negatively on the literacy levels of learners. The Headteachers observed that majority of toilets are not in good condition, classrooms are small in size and some are not well ventilated, one of them pointed out that:

> "Classrooms were poor, in that lighting depended only on sunlight which was sometimes inadequate".

According to Piaget (1964) children should be encouraged to play freely, manipulate and explore a variety of instructional resources, providing young children at home with materials such as blocks, shapes and puzzles that inspire mathematical thinking can foster the development of skills such as early numeracy, patterning and measurement. This study is consistent with the study by Sigel (1987) who argued that young children can learn a lot by use of teaching/learning materials. He further argued that since the society is dynamic, there need to adopt the technological changes and improve the current teaching and learning resources so as to improve the quality of education. This is because the material the school has is likely to influence the quality of academic education. The study also agreed with the study by Onyango, (2014) which established the influence teaching and learning resources have on pre-school learners transitioning to class one in Rachuonyo South Sub-County Homa bay County, the author confirmed that teaching and learning resources if acquired, used and stored it increases number of children transitioning to class one. Notably teachers who used indoor and outdoor movable materials during teaching improved the literacy levels of learners. The study further established that the use of teaching and learning resources improves enrolment and develop psychomotor skills necessary for the child's ability to improve literacy level .The current study also agree with Sherman-Le Vos, (2010). Pianta & Cox (1999) who reported that by the end of the third grade, most children are on a trajectory of development that they will follow for the remainder of their school years. Although these early years play an important role for our children's future knowledge of this particularly in terms of important resources trained and competent teachers appropriate teaching methods ,availability of

resources the support of parents and guardians is still demanding on provision and utilization of the available resources.

Neuman and Devercelli (2012) observed that in Sub-Saharan Africa , most countries have vowed to enhance inter-sectoral development of Pre-school aimed at improving infrastructure necessary for learning. In a study conducted in Uganda, Ethiopia, Kenya and Tanzania, Neuman and Devecelli (2012) noted that the formulation of policies targeting child protection, nutrition, education quality and access, poverty alleviation and hygiene have all been used in improving the state of Pre-schoolE learning because of dilapidated state in which they are. The findings of the present study is consistent with a study carried out in Nigeria by Olowafeni Nma, Ostla and Olugpenga (2014) which found out that provision of necessary teaching/ learning resources by local government(County government Kenyan context) enhance effective implementation of ECE programs. The study also supported by the study findings by Bitok (2013) which revealed that the Pre-schoolCs lacked the necessary learning materials and resources required for effective implementation of the thematic approach, teachers were not adequately prepared for implementation of the approach and non- availability of resources influenced the implementation of thematic approach in Pre-schoolC. The study in question disagree with the findings by Pekethu (2005) which found out that majority of children were not participating in pre-school activities effectively due to their parent's inability to meet financial requirements of the school. Therefore there is a significant relationship between learning and learning resources and provision of quality Pre-school education, therefore, teaching/learning resources should be used in teaching pre-school children. Conclusively teachers should ensure acquisition, appropriate storage and use of teaching/learning resources to enable performance of learners. Notably, the level of

utilization of learning/teaching resources are some of the basic factors that should be prioritized in Pre-school set up.

4.6.3 Objective Three: Classroom Organization and Learning

In this section, responses to questions related to classroom size, condition and the nature of roof are given.

Table 4.16: Classrooms Size

	Frequency	Percentage (%)
Yes	10	28.6
No	25	71.4
Total	**35**	**100**

In table 4.16, 25 (71.4%) respondents stated that classroom sizes were not enough to accommodate the number of learners. Out of 35 respondents, 10 (28.6%) respondents gave different views from that; they observed that classroom sizes were enough to accommodate the number of pupils.

Table 4.17: Condition of Classes

	Frequency	Percentage (%)
Well-ventilated, Cemented floor and Walls	10	28.6
Earthen Floor, No walls/ Not Well-ventilated	13	37.1
Cemented Floor, Unfinished Walls	12	34.3
Total	**35**	**100**

From the results presented in table 4.17, 13 (37.1%) respondents stated that their classes had earthen floor, no walls / with limited ventilation. Out of 35 respondents, 12 (34.3%) indicated that the floor of classes had cemented floors with unfinished walls, unfinished walls referred to classes without window pens or built windows.

Different from that were 10 (28.6%) respondents who observed that their classes had well-ventilated rooms with cemented floors and walls.

Table 4.18: Nature of Roof

	Frequency	Percentage (%)
Roofing-iron sheets	30	85.7
Roofing-tiles	1	2.9
Roofing-grass/Makuti/Others	4	11.4
Total	**35**	**100**

With regard to nature of roofs, 30 (85.7%) respondents confirmed that the classes had roofs with iron sheets although most roofs had rust or leaking. Out of 35 respondents, 4 (11.4%) indicated that the roofs of their classes were grass thatched or had roofs made of natural materials such as Makuti. However, only one (2.9%) respondent indicated that the class was roofed with tiles.

The third objective sought to evaluate the influence of classroom organization on learning; notably, classroom size, nature of classes, walls, and floors was the focus. From table 4.25, 25 (71.4%) respondents stated that classroom sizes were not enough to accommodate the number of learners. Respondents indicated that classrooms were small; most of them were not spacious. From the results presented in table 4.26, 13 (37.1%) respondents stated that their classes had earthen floor, no walls / with limited ventilation. From table 4.27, with regard to nature of roofs, 30 (85.7%) respondents confirmed that the classes had roofs with iron sheets although most roofs were rusty or leaking though made of iron sheets and they sometime influenced learning activities especially during the rainy season.

During the interview session, head teachers observed that most of the classrooms were congested not well ventilated, some did not have doors and window shutters or their constructions were not complete thereby inhibiting the learning process at the centers. It is from this reason that the majority of teachers in Early Childhood Education centers stated that the quality of learning was low; respondents stated that classrooms were earthed floors, unfinished walls (no window pens or built windows) head teachers and DICECE Program Officer supported the idea in their interview schedules respectively. Overcrowded classrooms may be less able to accommodate additional children; moreover it can lead to less effective teaching-learning activities. Teachers face instructional physical and evaluation problems. The size of classes that teachers are teaching are also considered important Dabo (2015) If the size of the class is favorable the learning achievement of pupils in that class will be better than pupils in another class which has a larger class which is congested.

> "Since there are no enough desks children sit on school mats which affects children's writing skills and general physical development".

Teachers do not participate fully in socialization process of learners. The challenge experienced in utilization of teaching and learning resources is that resources are few and limit the potential of learners to enhance learning. The county government should consider providing enough teaching/learning, playing resources relative to the enrolment of learners. Some respondents commented that besides, FPE had unintended consequences for Pre-school in terms of resource allocation, Pre-school classroom set up on the premises of public Classroom organization has influence on teaching and learning The classrooms are small in sizes, are not well ventilated, have no doors, roofs leak and are rusty. Some Head teachers lamented on Pre-school learners who learn under unfinished classrooms, since the school is still under construction and the Pre-school has been given the least consideration and the first

priority given to the primary classrooms. The study agreed with the study by Francisca (2006) which established that in rural areas classes with muddy walls no ventilation with some having under the tree arrangement ,which influenced learning negatively such that transition rates to class one was low. There was no support from the community and education officers which also failed to conduct supervisory visits to establish the state of learning in the study region. The foundation of social competence developed and promoted by well organized and spacious classrooms in the first five years of a child's life are linked to emotional well being and social skills needed later in life (Berchied & Reis 1998; Reis et al 2000). While social and emotional development is important in its own right, it is also important because it facilitates cognitive development. Children with effective social and emotional skills do better with getting along with others, understanding directions and focusing on a task; skills that enhance learning are important in school success and lifelong learning. The structuring of the learning environment is essential for teachers and learners. The study also conquered with the studies by Dabo (2015) which showed that the physical arrangement of the classroom affect both learners and teachers behavior, and that well structured classroom management plan or design has the ability to improve learning and behaviour. It is teachers job to make sure that classroom is thoroughly designed and materials for play are well organized. When organizing classrooms they should create a positive and safe environment for learners that will maximize the frequency or behavior problems as well as the quality of classroom climate. One in four teachers loosing at least 30% of learning time because of disruptive learner behavior or administrative task (TALIS).

TALIS (Teaching and Learning International Survey) looked at how far factors such as aspects of professional development or varying teaching practices were associated

with self efficacy and classroom disciplinary climate. Classroom climate not only has been shown to affect learners' outcomes and attainment but is a prominent policy issue in a number of countries and regions. TALIS found that one teacher in four in most countries looses at least 30% of lesson time to disruptive learner behavior or administrative tasks and some teachers lose more than half. TALIS looked at a range of to what extend classrooms are orderly and conducive to learning and its disciplinary climate. The actions of learners within classroom and the creation of a safe and protective learning are important for many centers and can be a challenging dimension of teachers work.

4.6.4 Objective Four: Feeding Program and Learning

This section highlights responses related to feeding programs in E.C.D centers and the extent to which such program influence enrolment, retention, and nutritional status of learners.

Table 4.19: The School Is Offering Feeding Programs for E.C.D

	Frequency	Percentage (%)
Yes	33	94.3
No	2	5.7
Total	**35**	**100**

In the results highlighted in table 4.19, it is clear that 33 (94.3%) of the respondents stated that their learning institutions were offering school feeding programs while 2(5.7%) respondents confirmed that they were not offering school feeding programs.

Table 4.20: Feeding Programs and Its Relation to Learners' Nutrition, Enrolment Rates and Retention

Statements	Very great extent		Great extent		Moderate extent		Low extent		No extent at all	
	F	%	F	%	F	%	F	%	F	%
School feeding programs enhance learners retention rates	18	51.4	10	28.6	5	14.3	2	5.7	0	0
School feeding program increases enrolment rates	16	45.7	11	31.4	7	20.0	1	2.9	0	0
School feeding programs improves nutritional status of learners	19	54.3	9	25.7	6	17.1	1	2.9	0	0

In table 4.20, it is evident that the majority of respondents indicated that the school feeding program had a very great extent to which they influence learners' retention, enrolment rates, and nutritional status. Notably, 18 (51.4%) and 10 (28.6%) respondents stated that school feeding programs enhanced learners retention rates to a very great extent and great extent respectively. In another case, 16 (45.7%), 11(31.4%) and 7 (20%) respondents observed that school feeding programs enhanced learners enrolments to a very great extent, great extent, and moderate extent respectively. Different from that was a group of 19 (54.3%), 9 (25.7%), and 6 (17.1%) respondents who stated that school feeding programs improved nutritional status of learners to a very great extent, great extent, and moderate extent respectively.

Pre-school that have feeding programs have high enrolments and retention rates. Learners benefitting from feeding programs do not suffer from malnutrition, they concentrate in class and record improved achievements. School feeding programs should not be left to parents:

> "The parents contribute money for running the feeding programme, pupils take porridge at 10.00 a.m. which is made of maize/millet flour, water and sugar, others with no sugar"

County Governments should support the program. Finally a large number of learners in Pre-school transit to class one without knowing how to read, write, spell words, and perform basic number activities.

The fourth objective sought to ascertain the influence of school feeding program on learning specifically on enrolment, retention, and nutritional status of learners. This section highlights responses related to feeding programs in E.C.D centers and the extent to which such program influence enrolment, retention, and nutritional status of learners.

From the results highlighted in table 4.28, it is clear that 33 (94.3%) of the respondents stated that their learning institutions were offering school feeding programs. From table 4.29, it is evident that the majority of respondents indicated that the school feeding program had a very great extent to which they influence learners' retention, enrolment rates, and nutritional status, represented by 18 out of 35, (51.4%) In another case, 16 (45.7%), respondents observed that school feeding programs enhanced learners enrolments to a very great extent. In addition, 19 (54.3%), of the respondents stated that school feeding programs improved nutritional status of learners to a very great extent.

The results from the interviews and observations indicated that the extent to which feeding program influences retention rates, nutritional status and enrolment rates on learners was very great. However, if nutrition of learners was improved, retention and enrolment rates improved then there should be another reason that explains the low

quality of learners, low literacy levels and low level of learning as elucidated by Early Childhood Education teachers, school heads and DICECE Program director.

The term school feeding program has been used over the years to mean the provision of meals /snacks at school to reduce children's hunger during school days. According to the World Food Program (2004) school feeding has become an effective strategy in increasing school enrolment. The report added that school feeding is a double edge sword which in addition to increasing school environment contributes to achievement of other developmental goals such as reducing child mortality through health and nutrition interventions. Nations and multinational organizations have committed a lot of resources to school feeding program .World Food Programme (WFP) was operative comprehensive on school feeding programme in sixty eight countries in 2008 (Bundy, Burbano Grosh, Gelli Jukes$Brake2009). In United States of America the school feeding programme is known as National school lunch programme covers 99% of public schools (Schanzenbach 2009).

Akwach (2008) noted that all public and community pre- schools, except those with school feeding program supported by Ministry of Education (MOE)/Word Food Program/UNICEF had no formal school based feeding program. Leave snack/hot enriched porridge. About 95% of parents did not pack any food for their children when they are going to school. This according to the study, was due to poverty /lack of food at home.

The study disagreed with the study done by, Akwach (2008), who observed that in most private pre-schools there was a formal feeding program comprising a balanced diet (enriched porridge, beans, meat, rice, fruit) such a program was expensive but optional. In addition, the finding also negates the finding of the study by Mbugua

(2013) who also found that feeding program were only available in private pre-schools. The program was financed by parents through the school fees paid to centres. This enhanced children's retention in the private Pre-schoolEs as the enrolment in such centres were either consistent or increasing.

The study agrees with Munyiri (2010) who sought to determine the impact of the school feeding program on enrolment and performance of pre-school children in Kikuyu, Kiambu County.

However, reviewed studies indicate that programs are not well implemented in pre-schools in Kenya. Habumuremyi (2015) in his study argued that parents income was very low which makes them unable to enroll children in pre-schools. Majority of school feeding programs are found in private schools. Contrary to the study in question on feeding program other researchers found that although parents incurred other costs in relation to their pre-school children's education, it did not seem to be a great hindrance to children's access to the centers as most parents were found to pay for their children's fees in time and in whole amounts. The previous studies show that there have been inconsistencies among researchers in establishing the predictors for pre-school enrollment.

The study concluded that the program improved the attendance, active participation in class and enrolment of pre-scholars, good performance was also reflected. The study also found that school meals are a good way to channel vital nourishment to children which in turn helps to promote the children‘s performance.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusion and recommendations of the study objectives. It also gives areas for further research based on research objectives. Further, conclusion drawn from the findings and recommendations arrived from the findings features in this section. Specifically, policy implications and recommendations based on further research.

The study sought to establish factors affecting children's learning in early years in pre –primary schools in Waitaluk zone Kiminini Sub-County. A sample of 52 respondents comprising of 16 head teachers 35 teachers and 1 Pre-school program director. A survey research gathered data with the intention of describing the nature of the existing conditions and determining the relationship that existed within the conditions (Orodho, 2009).Both qualitative and quantitative data analysis methods were used to analyze the collected information .Responses were organized descriptively and the findings were discussed based on research questions. The study comprised a sample that was representative of the target population. That is school heads, teachers and a program officer.

5.2 Summary of the Findings

This section describes the summary of findings with respect to factors that affect children's learning in early years: the learning environment, utilization of learning/teaching resources, the influence of classroom organization and feeding program on learning within Waitaluk zone in Kiminini Sub-County.

5.2.1 The learning environment in Pre-school

The first objective was to establish the learning environment and its influence on learning in Early Childhood Education in pre-primary schools in Waitaluk zone in Kiminini Sub- County.

Quite a large number of the respondents confirmed that their Pre-school were connected to electricity, had access to safe and clean water, had toilets and adequate playgrounds. However, school heads indicated that toilets were there, but not in good condition, centers were connected to piped water, but was not reliable, electricity kept fluctuating and some classes had not been linked to the main power connection. DICECE Program Officer reiterated the observations given by school heads in saying that toilets were not structured to for Pre-school learners, water was not reliable and that some centers relied on borehole water, and electricity was not reliable too. The unreliability, inadequacy, and low quality situational services attributed to the low quality of learning, low literacy levels and low transition rates from Early Childhood Education centers to primary schools.

5.2.2 Level of Utilization of Teaching/ Learning resources in Pre-school

The second objective was to determine the level of utilization of teaching/ learning resources and its influence on learning. More than three quarters of teachers stated that classroom population of learners was increasing and the numbers were unmanageable. The teachers observed that the increasing number of learners required increased teaching and learning resources in order to ensure quality learning. However, the results in the observation checklist, indicated that averagely there was inadequacy and utilization of teaching and learning resources. Teachers do not have adequate teaching and learning resources to enable them to implement Pre-schoolE curriculum effectively.The equipment should be child size to avoid unnecessary

difficulty when use ,sliding is one activity that many young children enjoy and lack of slides deprives them of the happiness and the physical development skills offered by slides ,the balls were too big for the learners, not forgetting that balls give children to engage in running ,throwing and catching activities which promote the development and strengthening of leg and hand muscles. Soil was also available, soil allow children to learn how it supports plants the animals that can be found in the soil and that soil can be mixed with water to make models children to acquire knowledge through contact with soil. Vygotsky (2004) supports learning in the natural environment and argues that children affinity for the natural environment is connected to the child's development and his way of knowing (Clement,2004) Hirst-pasek, K. Golinkoff R.M(2003) E. Instein never used flash cards how our children really learn why they need to play more and memorize less Rodale. Most teachers are not competent and use wrong teaching methodologies hence making them fail to improve literacy levels and increase transition level of learners from Early Childhood Education centers to primary school level according to DICECE Program director and school heads.

5.2.3 Classroom organization and learning in Pre-school

The third objective was to examine the classroom organization on learning in pre-primary schools in Waitaluk Zone Kiminini Sub- County; averagely respondents observed that classroom sizes were not enough to accommodate the increasing number of learners who were estimated by most of the respondents that classes had between 41-50 learners per class. Even though respondents stated that classroom walls were cemented floors were also cemented and roofs made of iron sheets, results from observation checklist, responses from school heads and DICECE program director observed that some of the classrooms were still under construction, they had

no door and window shutters. This explained poor quality of learning, low literacy levels, and low transition levels according to teachers, school heads, and DICECE program director.

5.2.4 School Feeding Programs and Learning in Pre-schools

The fourth objective was to determine the influence of feeding program on learning in pre-primary schools in Waitaluk zone Kiminini Sub-County. A very high number of Pre-school teachers observed that school feeding programs were implemented in their centers. Numerous teachers indicated that the extent to which school-feeding programs influenced retention rates, nutritional status and enrolment rates of learners in Pre-school was great. DICECE program director and School heads indicated that parents whose socio-economic status was low supported school feeding programs. Even though schools had feeding programs, learners' achievement was low; quality of learning was low and was characterized by low literacy levels.

5.3 Conclusion of the Study

Based on the findings of this research the researcher concluded that: Most pre-primary schools have minimal amenities that include toilets, safety and cleanliness of water, and have increased number of learners per class. Early Childhood Education centers share resources with primary schools, exposing them to risks of diseases, failure to concentrate in class, and therefore low quality of learning. Play equipment materials and elements found in the outdoor play environment were not adapted to suit children with physical challenges..The study recommends that the M.O.E should make follow ups in all Pre-schools to ascertain the extent to which the special needs policy framework has been implemented. Play has been shown to instigate social, cognitive and emotional development in any child (Hughes, 2009;Vygotsky, 2004).Research have found a strong link between play and learning for young children especially in

the areas of problem solving, language acquisition, literacy ,numeracy and social, physical and emotional skills Welshet al, 2010, Hirsh-Pasek et al,2008. It has been revealed that these skills are better learned through play.

A significant number of teachers are not competent, they use wrong teaching methodologies, and do not have enough instructional resources to enhance their work. The low level of salaries paid to the teachers does not motivate them to work hard in terms of improving the quality of learning, and literacy levels of learners in Early Childhood Education centers. The sizes of classrooms occupied by Early Childhood Education learners are too small less than the normal size of classrooms. Enrolment of learners in Early Childhood Education centers continues to increase leading to congestion in classes. Leaking roofs, broken window pens, missing doors and unfinished walls interfered with learning in Early Childhood Education centers. The County and the national government inadequately fund infrastructural development of Early Childhood Education centers.

School feeding programs does not consider nutrition of learners and that was not consistent. The consistency might be because of failure to have better cooking places, enough food and sometimes lack of funds to sustain the program. Feeding programs referred to porridge that comprised of maize flour, water and sugar only, which was not nutritious. Headteachers and teachers should plan for space, equipment and materials and design outdoor environment to enable children engage fully in play. Outdoor play equipment should be assorted designed and organized to facilitate children’s optimum cognitive development.

5.4 Recommendation

5.4.1 Policy implication

A presidential circular (1980) mandated that education sector of government be responsible for the pre-school education. But since the promulgation of the new constitution in (2010) the responsibility was given to the County government.

i.) The government should include Pre-school into free primary education and financially support the school feeding program. This will significantly reduce the cost incurred by the parents, therefore encouraging high enrolment hence increased transition rate to primary school.

ii.) The County Government should therefore consider constructing specific toilets and latrines meant to serve Early Childhood Education learners to avoid sharing with primary schools. There is the need to repair, construct, and maintain classrooms meant for Early Childhood Education learners to ensure that they cater the required number of learners.

iii.) The Ministry of Education at both the County and Nation levels should enhance their supervision on activities of Early Childhood Education centers to ensure that teachers increase their utilization of teaching and learning resources for optimum learner performance. Further, the two levels of government should coordinate and distribute relevant teaching and learning resources to Early Childhood Education centers to improve the quality of learning.

iv.) There is no clear administration of Early Childhood Education centers, the Ministry of Education and its management, should formulate policies that define structure and administration of Early Childhood Education centers to avoid

confusion where parents, primary school administration and sometimes County Governments assume management.

v.) School feeding programs should be supported by the County Government and not parents who fail to support it consistently because of their low socio-economic status. Humanitarian institutions should support school feeding programs to ensure that food cooked is nutritious to enhance quality of learning in Early Childhood Education centers.

vi.) Schools should improve infrastructure on areas such as playing and learning materials. This can be done by having strong alumni organizations, where students who passed through the same school are encouraged to give back to their school by contributing financially or providing materials such as swings, slides books or desks to improve infrastructure and enhance pre- school enrolment.

5.4.2 Suggestions for Further Research

i.) Apart from school-based factors influencing learning in Early Childhood Education centers, scholars should consider researching on teacher preparedness and competencies.

ii.) The extent to which the government may include pre-schools in to free primary education.

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APPENDICES

Appendix I: Research Introductory Letter

Dear Respondent,

I am a student undertaking masters of philosophy in early childhood and primary education. The title of the research is factors affecting children's learning in their early years in Waitaluk Zone, Kiminini Sub- County, Trans-Nzoia County, Kenya.

The information collected will be used to make recommendation for the improvement of the first few years of child's school life as time of adaptation for children, their families, and school.

You are among those who have been selected to participate in this study and that your cooperation and assistance will he highly appreciated the information obtained as a result of response of this questionnaire will be used only for the purpose of this study and will be treated confidentially.

Let me take this opportunity to appreciate your efforts as you endeavor to make this study a success.

Yours sincerely

Jeruto Rael

Appendix II: Questionnaire for Pre-School Teachers

Part A: BACK GROUND INFORMATION

A. Pre-school details

1. Name of the Pre-school.....
2. School population
    a. Staff – teaching……. and non teaching .....
    b. Learners .....

B. Teacher Bio data

1. Gender Male [ ] Female [ ]
2. Age
    a. 21-30 years [ ]
    b. 31-40 years [ ]
    c. 41-50 years [ ]
    d. Above 50 years [ ]
3. a) Teaching experience in this school
    a. Less than 1 year [ ] b. 1-5 years [ ]
    c. 6-10 years [ ] d. over 10 years [ ]

    b) Terms of employment a. permanent [ ] b. BOM[ ]
4. Highest level of Education
    a. Certificate [ ] b. Diploma [ ]
    c. Degree [ ] d. Masters [ ]

C. Situational services and learning in Pre-school

1. Do you find class population increasing per year? Yes [ ] No [ ]
2. How many pupils do you teach per class?

    a. below 20 [ ] b. 21- 30 [ ] c. 31-40 [ ]

d. 41- 50 [ ] e. 51-60 [ ] f. Above 61 [ ]

3. Is the number of pupils per class still manageable by the available Teachers?

Yes [ ] No [ ]

If YES or No give a reason .....

4. What do you think has been the pros and cons of teaching these new numbers?

……

5. Which mode of teaching do you normally apply?

a. Lecture [ ] b. Discussion [ ]

c. demonstration [ ] d. Group work [ ]

D. Level of utilization of Learning/Teaching materials

1) Key Very Adequate (VA), Fairly Adequate (FA), Inadequate (I), Very Inadequate (VI) and No Service (NS)

Rate the adequacy of learning materials to facilitate learning in early years	**5. VA**	**4. F.A**	**3. I**	**2. VI**	**1. NS**
(i) Learners share learning materials?					
(ii) There are blackboards and pieces of chalk in every class					
(iii) There are enough exercise books, pens, erasers, sharpeners etc					
(iv) The school provides learners with specified course content					
(v) The learners in my school are periodically given assignments to evaluate their class progress					
(vi) My school provides learning materials like books and play materials to the learners (vii)					
(viii) The teachers in my school periodically hand in their schemes, lesson plans and progress records.					

3. Do some have personal text books? a. YES [ ] b. NO [ ]

4. Which kind of books are available in class?

a. Course books [ ] b. Supplementary books [ ]

5. Which materials are available and in use by Pre-school Teachers?

a. Teachers Guide [ ] b. learning areas [ ] c. Play materials and facilities [ ]

6. What are other additional learning materials in class?

a. Objects [ ] b. Chats [ ] c. posters [ ] d. Any other…….....

E. School feeding program

1. Is the school offering a school feeding program for Pre-school?

a. YES [ ] b. NO [ ].

2. In your own experience, give your reactions to the following statements as they relate to school feeding programs

Statement	Very great extent	Great extent	Moderate extent	Low extent	No extent at all
School feeding programs enhance learners retention rates					
School feeding program increases enrolment rates					
School feeding programs improves nutritional status of learners					

F. Classroom organization and learning

1. Do you think the classrooms are spacious enough to accommodate the number of pupils?

a. YES [ ] b. NO [ ]

2. What do you think is the condition of the classes?

a. Well ventilate and lit [ ] b. Earthen floor [ ] c. Cemented [ ]

3. Is the school connected to Electricity? a. YES [ ] b. NO [ ]

4. Does the school have access to available clean and safe water?

A. YES [ ] B. NO [ ]

5. Is the school accessing adequate toilets/pit latrines a. YES [ ] b. NO [ ]

6. Do the school have adequate play ground a. YES [ ] b. NO [ ]

7. Rate the following responses by ticking your reason on preparedness of children from Pre-schoolE to primary school.

Key

Very Adequate (VA), Fairly Adequate (FA), Inadequate (I), Very Inadequate (VI) and No Service (NS)

Rate the adequacy of services provided to learners to facilitate learning		**5**	**4**	**3**	**2**	**1**
i.	Learners in my school are provided with play materials like ropes, balls and swings					
ii.	Learners are provided with adequate instructional materials in the learning areas like sand, water, clay charts e.t.c					
iii.	My school provides adequate classroom to enable learners to move freely and interact freely with the other learners.					
iv.	The learners in my school are given a chance to participate in music activities to express their feelings and talents					

Appendix III: Interview Schedule For Head Teachers

Instructions for the researcher*: After brief introductions with the respondents, introduce the statement of the problem and the purpose of the study before introducing the interview session.*

Comment on the state of situational services such as toilets, classrooms, water, electricity, playground, and other facilities

How are teaching and learning resources utilized? What are the challenges related to utilization of said resources? What do you think should be done?

Share your views on organization of classrooms and their influence to learning

What can you say about learners' retention rates, enrolment rates and nutritional status; is there a relationship with school feeding programs?

What are your comments on the literacy levels of learning in your center?

Appendix IV: Interview Schedule For Diocese Program Officer

Instructions for the researcher*: After brief introductions with the respondents, introduce the statement of the problem and the purpose of the study before introducing the interview session.*

What is the state of situational services such as toilets, classroom, water, electricity, and the surrounding environment in pre-schools? What is the Government doing about it?

In your own opinion, what can you say about the level of utilization of teaching and learning resources in pre-schools?

How are classes organized in most pre-schools? What ought to be done?

What is your take on school feeding programs as they relate to retention, enrolments rates, and nutritional status of learners? Is there any support from government?

How would you rate literacy levels and quality of learning in Pre-school?

Appendix V: Observation Schedule

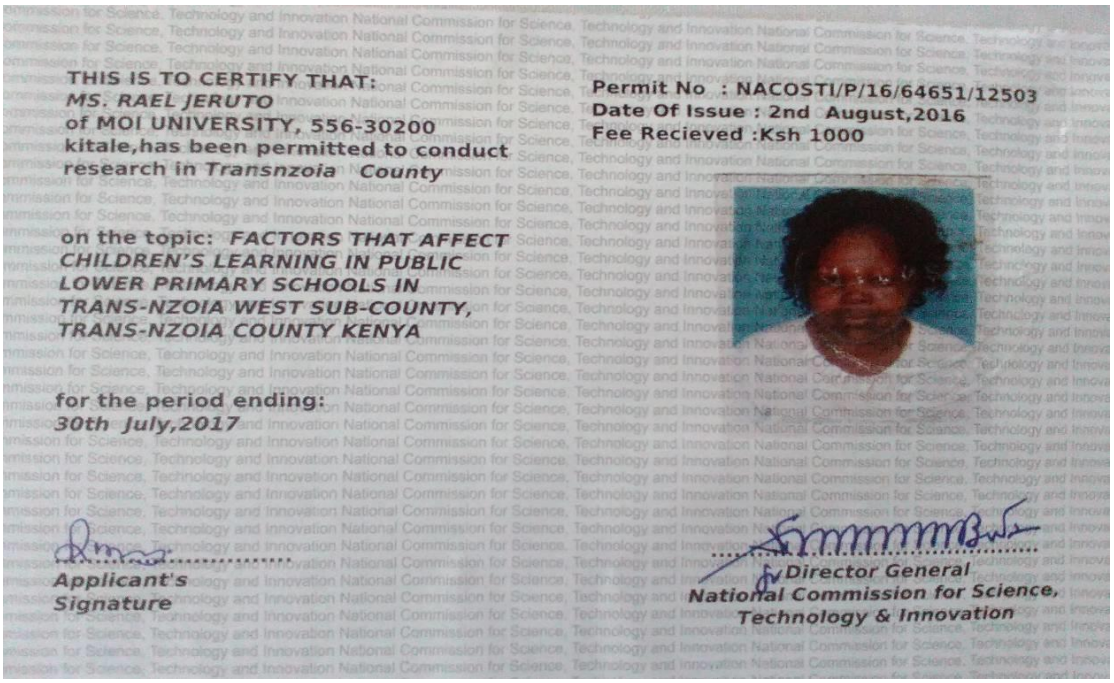
1. Establishment of situational services provided to children to facilitate learning

Key Very Adequate (VA), Fairly Adequate (FA), Inadequate (I), Very Inadequate (VI) and No Service (NS)

Adequacy of services provided to facilitate learning in early years	**5.V.A**	**4.F.A**	**3.I**	**2.V.I**	**1. N.S**
i. Spacious and well ventilated classrooms, equipped with appropriate furniture					
ii. Availability of play materials					
iii. Availability of clean water– Indoor activities are carried out as planned –variety of teaching /learning aids-Teachers are adhering to the recommended school routine					
iv. Growth and weight monitoring records					
v. Availability of healthy files					
vi. Evidence of feeding programe					
vii. Spacious playground with play facilities –evidence of learning areas with necessary materials					
viii. Availability of NACECE Guidelines					

2. My recommendation concerning the establishment of situational services provided to children to facilitate learning?

Appendix VI: Research Permit



THIS IS TO CERTIFY THAT:
MS. RAEL JERUTO
of MOI UNIVERSITY, 556-30200
kitale,has been permitted to conduct
research in *Transnzoia County*

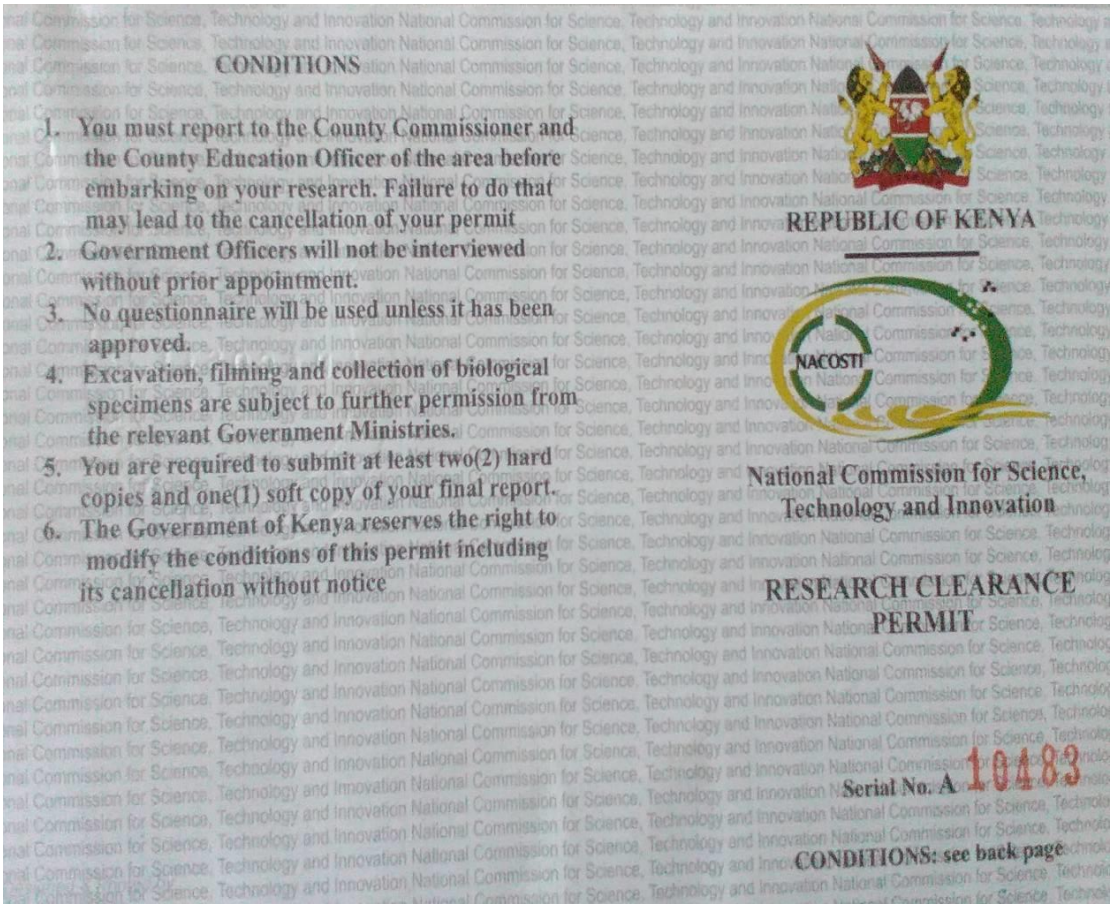
on the topic: *FACTORS THAT AFFECT CHILDREN'S LEARNING IN PUBLIC LOWER PRIMARY SCHOOLS IN TRANS-NZOIA WEST SUB-COUNTY, TRANS-NZOIA COUNTY KENYA*

for the period ending:
30th July,2017

Permit No : NACOSTI/P/16/64651/12503
Date Of Issue : 2nd August,2016
Fee Recieved :Ksh 1000

Applicant's Signature

Director General
National Commission for Science, Technology & Innovation



CONDITIONS

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

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 10483

CONDITIONS: see back page

Appendix VII: Letter of Authorization

THE PRESIDENCY

Telephone: 054 – 30020
Fax No: 054 – **30030**

MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

COUNTY COMMISSIONER'S OFFICE
TRANS NZOIA COUNTY
P.O BOX 11 - 30200
KITALE

E-mail: cctransnzoiacounty@yahoo.com
When replying please quote

TNZC/CONF/ED.12/2/VOL.II/164 20th February, 2017

TO WHOM IT MAY CONCERN

RESEARCH AUTHORIZATION

This is to inform you that **Rael Jeruto** of **Moi University** has been authorized by National Commission for Science, Technology and Innovation to carry out research on **"Factors that affect children's learning in Public Lower Primary Schools in (Kiminini Sub County)**in **Trans – Nzoia County, Kenya** for a period ending **30th July, 2017**

Kindly accord her the necessary assistance she may require.

COUNTY COMMISSIONER
TRANS-NZOIA COUNTY
P. O. Box 11 - 30200 KITALE

IRENE NDUNDA
FOR: COUNTY COMMISSIONER
TRANS NZOIA COUNTY