INFLUENCE OF LEARNING ENVIRONMENT ON PROVISION OF QUALITY EDUCATION IN PUBLIC EARLY CHILDHOOD EDUCATION CENTRES IN WEST POKOT COUNTY, KENYA

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A THESIS SUBMITTED TO THE SCHOOL OF EDUCATION IN PARTIAL FULFILMENT FOR THE REQUIREMENT OF THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY OF EDUCATION IN EARLY CHILDHOOD AND PRIMARY EDUCATION, UNIVERSITY OF ELDORET, KENYA

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DECLARATION

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

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DEDICATION

This work is dedicated to the Almighty God, my loving husband Reverend Samuel Chepkonga for financial and moral encouragement, my children Caroline Jepchumba, Sarah Jeptoo, Aaron Kibiwot and Titus Kirop for their support and prayers throughout my study period at University of Eldoret.

ABSTRACT

International organizations such as UNICEF and UNESCO are stressing the importance of providing quality early childhood education and care to all children, not only for those from less-advantaged backgrounds but for all children. However, statistics from West Pokot County show that learners' level of literacy and numeracy skills is low and this has largely been due to learning environment. The purpose of this study was to assess the influence of learning environment on provision of quality education in public ECDE centres in West Pokot County, Kenya. The objectives of the study were; to investigate the influence of learning facilities on provision of quality education in public ECDE centres, to establish the influence of indoor learning environment on provision of quality education in public ECDE centres, to determine the influence of instructional learning resources on provision of quality education in public ECDE centres and to assess the influence of outdoor classroom environment on provision of quality education in public ECDE centres in West Pokot County, Kenya. The study was guided by constructivism theory which proposes that for quality learning to be achieved, the learning environment in classroom should be conducive for pupils. The study methodology incorporated qualitative and quantitative methods of research. This study took pragmatism as its philosophical paradigm. The study used a descriptive survey research design. The target population for the research involved 365 head teachers, 682 teachers and 4 early childhood education field officers. The sample size for the study was arrived at by taking 10-30% of the target population to act as the sample size that is 10% for head teachers and 30% for ECDE teachers. Non-probability purposive method of sampling was used to select DICECE officers while head teachers and ECDE teachers were selected through use of probability proportionate stratified random sampling method. The research instruments used were; questionnaires, interview guides and observation checklists. All research instruments were tested for content validity and test retest technique for reliability. Data collected were analysed using qualitative and quantitative methods. Quantitative data was analysed using descriptive statistics such as frequencies, percentages, means and standard deviation and Pearson correlations testing at 0.01 (99%) significant level. Statistical Package for Social Science (Version 20.0) helped in coding, entry and analysis. Qualitative data was analysed using content analysis method. Analysed data was presented in tables and narrations. The study found out that provision of quality education was at average level (M=2.87 and SD=1.13). There existed significant relationship between learning facilities, indoor classroom environment setting, learning resources and outdoor learning environment and provision of quality education. The study concluded that learning environment was critical factor influencing provision of quality education for ECDE pupils in West Pokot County public centres. The study recommends that a stakeholder approach (involvement of teachers, parents and head teachers) should be utilised to ensure that learning environment in ECDE classroom is safe and secure. Teachers need to improvise locally available materials to improve on classroom learning environment. It is expected that the results of the study will be beneficial to stakeholders in early childhood education.

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ABBREVIATIONS AND ACRONYMS

CATs	Continuous Assessment Tests
CSG	Community Support Grants
ECD	Early Childhood Development
ECDE	Early Childhood Development Education
ECE	Early Childhood Education
EFA	Education For All
ELs	English Learners
HIV/AIDS	Human Immuno Virus / Acquired Immune Deficiency Syndrome
ICT	Information Communication Technology
LDCs	Least Developed Countries
MKUKUTA	Mkakati wa Kukuza na Kupunguza Umasikini Tanzania
NACECE	National Centre for Early Childhood Education
NACOSTI	National Commission for Science, Technology and Innovation
NGO	Non Governmental Organisation
OECD	Organisation for Economic, Cooperation and Development
PA	Parents Association
PTA	Parents Teachers Association
QASOs	Quality Assurance and Standards Officers
ROK	Republic of Kenya
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Sciences
TSC	Teachers Service Commission
UNESCO	United Nations Education, Scientific and Cultural Organisation
UNICEF	United Nations Children's Emergency Fund

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Overview

This chapter presents the preliminaries of the study. It specifically presents the background to the study, research problem, and purpose of the study, objectives, research questions, justification and significance of the study. The chapter also examines study scope, assumptions, and limitations of the study, theoretical and conceptual framework. At the end operational definition of key terms and chapter summary are given.

1.2 Background to the Study

In every modern society it is believed that education is the key to national development and there is a need to maintain every level of education especially the pre-primary stage (Assefa, 2014), because it is the bedrock upon which all other educational levels build (Obiweluozor, 2015). Once a child misses that early stage it is usually difficult for the learner to get back to the basics. Early Childhood Development Education (ECDE) is a common practice in most societies (Haile, 2010; Macharia, 2012). Early Childhood Education (ECE) is important in every nation's endeavour to meet the targets for Education For All (EFA) that are: quality early childhood education and care, free and compulsory primary education, life skill and training for youth, adult literacy, girls education and relevant basic education (Muthoni, 2013). It stretches from Pre-Primary 1 to 2 and then Grade 1 to 3 in primary level.

Early Childhood Development (ECD) is a foundation on which our education for all and especially basic education should be founded (Nyamwange, 2012). Early

childhood education can promote positive developmental experiences and independence while also optimizing learning and development. The objective of early childhood education is to provide developmental support and care for children in their formative years so that they can acquire the skills necessary for future learning and academic performance in school (Agbenyega & Klibthong, 2015).

During the past fifteen years (2000-2015), efforts have been done globally to provide quality basic education for children, in response to the obligation for the Convention on the Rights of the Child, Education for All, Millennium Development Goals (United Nations Children's Emergency Fund [UNICEF], 2010). In all aspects of the school, the rights of the whole child, and all children, to survival, protection, development and participation are at the centre (Odhiambo, 2008). This means that the focus is on learning which strengthens the capacities of children to act progressively on their own behalf through the acquisition of relevant knowledge, useful skills and appropriate attitudes; and which creates for children, and helps them create for themselves and others, places of safety, security and healthy interaction (Bernard van Leer Foundation, 2009).

So far, there is no common agreement on the appropriate definition of quality education (Redan, Marlina & Betaubun, 2014). Various definitions reflect the complexity and multifaceted nature of the concept. According to the 2000 World Education Forum, quality can be viewed from various perspectives namely: in terms of input of process and in terms of results (UNESCO, 2013). Quality education refers to how much and how well children learn and the extent to which their education translates into a range of personal, social, and developmental benefits (Grimo, 2008; Ngware, Oketch & Ezeh, 2011). In another view, UNICEF (2010) observed that

quality education in ECDE will be provided when pupils are healthy, nourished, and ready to participate in learning and supported by their parents and other community members. The report also noted that the learning environment to support quality ECDE education should be healthy, protective, gender sensitive, safe and with adequate instructional, infrastructural and other material resources.

Provision of quality education is also seen through content that is reflected in relevant curricula and materials for the acquisition of basic skills, especially in the areas of literacy, numeracy and skills for life, and knowledge in such areas as gender, health, nutrition, HIV/AIDS prevention and peace (Mwende, 2014). Quality is a relatively value based concept that is wholly constructed and subjective; hence there is no single model of early childhood education that is effective in all settings (Olaleye & Omotayo, 2009). However there is a general acceptance that programmes that benefit young children must be of quality that is embedded within their families' cultures and values. Quality early childhood education is characterised by appropriate child teacher ratios and group sizes, appropriately qualified and trained teachers and education workers, and enriching, well equipped, caring and secure environments in approved and accredited locations, all of which should be defined and enforced by regulation.

Provision of quality education also involves processes through which trained teachers use child-centred teaching approaches in well-managed classrooms and skilful assessment to facilitate learning and reduce disparities and outcomes that encompass knowledge, skills and attitudes (Sifuna & Sawamura, 2010).Quality education is directly connected to the quality of teaching and learning process in the classrooms and the learning environments are considered as the most important factors in teaching and learning process.

Duruji, Azuh and Oviasogie (2014) observed that the learning environment remains an important area that should be studied and well managed to enhance learners' academic performance in schools. The learning environment is one in which the students learn such as classrooms, libraries, workshops, laboratories, play grounds, conveniences, sanitation, maintenance culture, aesthetics among others. These environments are categorised into four; infrastructural resources (facilities), indoor classroom environmental setting, instructional resources and outdoor classroom environment. However, Duruji et al. (2014) established that very little attention has been given to the learning environment. According to Hannah (2013), indoor Classroom Environmental setting on how a teacher organizes his/her class and control may yield positive or negative consequences for their learners in terms of provision of quality education. The author suggests that when teachers are not motivated, this may affect quality instruction in the classroom.

In contrast, when teachers are motivated they may have a positive impact on learners' acquisition of competency skills required in ECDE level. Seating arrangements are important classroom setting events because they have the potential to help prevent problem behaviours that decrease learners' attention and diminish available instructional time (Wannarka & Ruhl, 2010). It is important for a teacher to understand this cause and effect in order to understand how to organize their classroom to create a better learning environment (Hannah, 2013).

ECDE learning can occur anywhere (indoor & outdoor classroom) but the positive learning outcomes generally sought by educational systems happen in quality learning environments (Worthington, 2008). Learning environments are made up of physical, psychosocial and service provision elements (Mwamba, 2013; Muthoni, 2013; OECD,

2013). A supportive ECDE learning environment promotes the development of children's critical thinking skills (Maxwell, Mitchell & Evans, 2008). It also fosters awareness of diversity and multiculturalism; and supports enthusiasm and engagement as the cornerstones of approaches to learning (Miske & Dowd, 2008). The environment must nurture children's capacity to engage deeply in individual and group activities and projects (Fuller, 2009). Such learning environment is created through interactions with indoor and outdoor activities that offer opportunities for children to set goals and persist in following through with their plans while acquiring new knowledge and skills through purposeful play (Ngode, 2014).

An extensive range of interpersonal relationships must complement carefully planned instruction, materials, furnishings, and daily routines (Semmar, & Al-Thani, 2015). In this setting, each child's optimal development across every domain like language, social, physical, cognitive, and social-emotional will be supported, sustained, extended and enhanced (Olaleye, 2009; Osborne, 2013). ECDE classroom learning resources reflect the characteristics, values, and practices of diverse cultural groups (Redan, Marlina & Betaubun, 2014). Physical learning environments, in which formal learning occurs, range from relatively modern and well-equipped buildings to open-air gathering places (UNICEF, 2010; OECD, 2013). For instance, Mabatuk (2016) report from Tiaty Sub County found out one primary school children were learning outside in the open due to lack of adequate classrooms. The quality of school facilities seems to have an indirect effect on learning, an effect that is hard to measure.

Empirical evidence from past studies inconclusive (Worthington, 2008; Fuller, 2009) as to whether the condition of school buildings is related to higher learner achievement after taking into account learner's background. However, a study by

Carron and Chau (2006) in 59 schools found that, only 49 of schools had buildings, only 25 had a toilet, 20 had electricity, 10 had a school library and only 4 had a television. This shows that majority of pre-schools do not have adequate physical environment infrastructure not only in Kenya but other countries like India as well. The study found out the quality of the learning environment was strongly correlated with pupils' achievement in Hindi and mathematics. In Latin America, a study by Wilms (2000) involving pupils in class three and four established that schools that had inadequate learning materials in classrooms and inadequate libraries which significantly resulted to poor performance, higher repetition compared to schools that were found to be well equipped. Other studies, carried out in Botswana, Nigeria and Papua New Guinea, concur with these later findings (Pennycuick, 2008). Hailu and Biyabeyen (2014) indicated that to ensure the quality of education, students should have quality textbooks, instructional materials and other school facilities in sufficient quantity and quality.

The quality of school infrastructure resources like buildings structures may affect provision of quality education in ECDE (Fuller, 2009). Moreover, provision of adequate instructional resources and textbooks and conducive learning conditions for learners and teachers, and the ability of teachers to undertake certain instructional approaches (Simatwa, 2010; Sattar, 2013) may influence provision of quality education. Such learning environmental factors as on site availability of latrines and a clean water supply, classroom maintenance, space and furniture availability all have an impact on the critical learning factor of time on task (Hailu & Biyabeyen, 2014). When pupils have to leave school and walk significant distances for clean drinking water, for example, they may not always return to class (Miske & Dowd, 2008).

Even when schools have adequate infrastructure resources, some parents are reluctant to send their children especially girls to schools on regular basis. This was observed by Mabatuk (2016) who found out that schools that were located too far away from children's homes in Tiaty Sub County, Baringo County, most school girls were advised by their parents not go to school for fear of being attacked or assaulted on the way due to insecurity issues. In general, research report by UNICEF shows that some parents often consider the location and condition of learning environments when assessing school quality and this can influence school participation and therefore affect quality of ECDE education (UNICEF, 2010).

Many countries significantly expanded access to primary education during 2000-2010, but the building of new schools has often not kept pace with the increase in the learner population (Sattar, 2013). In these cases, schools have often had to expand class sizes, as well as the ratio of learners to teachers, to accommodate large numbers of new learners (Mwamba, 2013). A combined UNICEF and UNESCO research conducted in 14 Least Developed Countries (LDCs) established that class sizes ranged from fewer than 30 learners in rural and urban Bhutan, Madagascar, and the Maldives, to 73 in rural Nepal and 118 in Equatorial Guinea (Postlewaithe, 2008). This research investigated whether class sizes influenced quality education provision in public ECDE centres in West Pokot County.

Moreover, researchers have debated the relationship between class size and learner learning at length. Willms 2000 as cited in Khan and Iqbal (2012) argued that class size has not consistently been linked to learner achievement and quality education. This may be because many schools and classrooms have not yet adopted the more demanding but higher quality learner-centred learning practices (Pennycuick, 2008).

Moreover, quantitative relationships between class sizes and academic achievement rarely consider other key quality factors, such as teachers' perceptions of working conditions.

Coming to Kenya, the government policy framework (Republic of Kenya [RoK], 2012) observed that pre-primary facilities (infrastructure) are mostly semi-permanent, local or church halls or any other building that the local communities accept as suitable. However, few premises have been inspected and the consensus view is that many pre-primary premises fail to meet minimum education standards (Mabatuk, 2016). The sector generally lacks adequate learning and teaching materials, especially books for use at the early age, whilst no standard curriculum is followed.

Abiero (2013) observed that most pre-primary education programs suffer from poor quality services. Mutuma (2015) noted that early childhood education has, for a long time, been at the periphery of the education programming in Kenya. It was formerly considered as social rather than an education activity. There are no specific budget allocations for ECDE, except for school inspection and minimal amounts for teacher training. This has led to majority of pre-primary children to learn in deplorable conditions (Boke, 2014).

After the government failed to support ECDE, parents and the community, therefore, have to provide learning facilities and materials, somehow take care of the teacher, and generally run the programme (Jepleting, 2013). All these factors (learning facilities and resource) have serious implications for the cognitive development of the child at this foundational level (Agbenyega & Klibthong, 2015). The importance of building ECDE for children needs to be reflected in adequate government allocation for ECD teacher payments and continuous training. If this happens, then our country

(Kenya) would be taking significant step towards provision of quality education in public ECDE centres. As indicated in the EFA Global Report of 2012, the extent of Early Childhood Care and Education (ECCE) is still relatively not developed (UNESCO, 2013). However, it was not known whether the county government or national government adequately supported provision of infrastructure and instructional resources to ensure success of ECDE in public centres in West Pokot County.

Wangari (2003) noted that comparative research data needed to be collected on the status of learning environment in ECDE centres from different areas of the country that have got different social and demographic characteristics. This is because the situation of early childhood development programme is worsening day by day as majority of pre-school children in northern Kenya counties are learning in deplorable conditions. The Kenyan government has so far developed a guideline on early childhood development quality service standards through NACECE. This is meant to guide on effective and efficient provision of Education in both public and private ECD Institutions (RoK, 2012). However, the implementation of these guidelines has been a problem due to many challenges that ECDEs are facing in Kenya. Very few of ECDE centres have attained full implementation of such services (Mutuma, 2015). Many have not especially in West Pokot County and other northern Kenyan counties.

A report appearing in the Standard Newspaper on 16th January 2016 found out that pupils of Nachururu primary school in Tiaty, Baringo County were learning under trees (Mabatuk, 2016). The report found out that the primary school had only two teachers employed by Teachers Service Commission (TSC), they had no classes, desks, blackboards, chairs and the biggest problem they had was attack by snakes.

The problem of poor learning environment in counties of northern Kenya has been there for long for some time (Uwezo Kenya, 2012).

West Pokot County being the focus of this study faces challenges related to quality education provision for pre-primary, primary and secondary education due to; food insecurity, cultural nomadism, insecurity along the borders, aridity and low socio-economic development (Mutuma, 2015). For instance, Uwezo (2012) report on West Pokot County found out that there was notable decrease in learning levels of children in the county. Only half of the children in class three were able to read a paragraph or do subtraction. The number of pre-school children attending school decreased.

Moreover, provision of quality education in early childhood development education remains a significant challenge for educators and policy makers in Kenya and West Pokot County in particular. The Uwezo Kenya (2012) report noted that 41.31% of pupils in class three were able to read Hadithi (story) while more than half 68.69% were not able to read and write. It was also established that 15.04% of children aged 3-5 years were out of school. This shows that there exist challenges in the provision of early childhood education in the West Pokot County. The study therefore investigated the influence of learning environment on provision of quality education in public ECDE centres in West Pokot County, Kenya.

1.3 Statement of the Problem

The learning environment is critical to provision of quality education. Chebitwey report from North Pokot Sub County shows that majority of learning facilities in primary and secondary schools are in deplorable condition (Chebitwey, 2013). This had affected primary curriculum in the area. This showed that poor learning environment reduces accessibility of ECDE centres; since it could not accommodate

activities like plays, there was evidence of large class sizes where teachers find it difficult to differentiate their instructional methods, that is, cater for the needs of individual pupils thereby affecting the quality of education.

Research studies have inadequately covered how ECDE indoor environmental settings influence provision of quality education in West Pokot County. For instance, Jepleting (2013) looked at how classroom environment influenced children acquisition of mathematics competencies in Uasin Gishu County whose literacy rate was 76.56% is higher than that of West Pokot which was 53.27%. This shows that quality of learning is higher in Uasin Gishu than West Pokot which the study seeks to determine whether learning environment influence provision of quality education.

Moreover, in the neighbouring county Baringo, a report by Mabatuk (2016) found out that learners in one of the Tiaty sub county primary schools were learning under trees with no desks, classrooms, chalkboard and even latrine. The same problem could be experienced in the study area although it has not been empirically verified since it was a survey of one school. Chebitwey (2013) research found out that learning and pupils participation in primary curriculum was poor in North Pokot Sub County. This showed that implementation of education curriculum in the study area was faced with a myriad of challenges stretching from classroom facilities, indoor classroom setting, learning resources and outdoor classroom environment.

It is in line with this that this matter and factors concerning provision of quality education in the county that the researcher sought to determine whether learning environment influenced provision of quality education in public ECDE centres in West Pokot County. Therefore, this study conducted an investigation on influence of

learning environment on provision of quality education in early childhood education centres in West Pokot County, Kenya.

1.4 Purpose of the Study

The purpose of the study was to investigate the influence of learning environment on provision of quality of education in public ECDE centres in West Pokot County, Kenya.

1.5 Objectives of the Study

The main objective of the study was to investigate influence of learning environment on provision of quality education; the specific objectives will be to:

1. Investigate the influence of learning facilities on provision of quality education in public ECDE centres in West Pokot County
2. Establish the influence of indoor classroom environment setting on provision of quality education in public ECDE centres in West Pokot County
3. Determine the influence of instructional learning resources on provision of quality education in public ECDE centres in West Pokot County
4. Assess the influence of outdoor classroom environment on provision of quality education in public ECDE centres in West Pokot County

1.6 Research Questions

The following were research question for this study:

1. How do learning facilities in public ECDE centres influence provision of quality education in West Pokot County?
2. What is the influence of indoor classroom environment setting on provision of quality education in public ECDE centres in West Pokot County?

3. To what extent do instructional learning resources in public ECDE centres influence provision of quality education in West Pokot County?
4. What is the influence of outdoor classroom environment in public ECDE centres on provision of quality education in West Pokot County?

1.7 Justification of the Study

The importance of Early Childhood Development Education is not just in setting the foundations for cognitive, social, emotional, physical, and language development of children. It is often essential in terms of the detection of impediments to quality learning in public schools which if not addressed could affect country's national goals of education, bill of rights, education for all objectives and vision 2030 social pillar goal. Provision of quality education is one of the goals identified in the new United Nations Sustainable Development Goals (SDGs) (UN, 2015). To achieve quality education, learning environment is an important variable. Quality environment is defined by availability of facilities, infrastructure and resources.

These resources have been found to be a major determinant of the school learning environments. They have also been found to be positively related to good academic achievement by learners. Pupils whose formal learning is taking place under trees may not be expected to do well as their counterparts studying under modern and well-equipped classrooms according to past studies. Therefore, conducting a research on the influence of school learning environment on provision of quality education is important.

Hannah (2013) indicates that a large amount of a child's time is spent sitting in a school classroom. This place is where they will learn the various skills deemed necessary and proper for them to achieve success in the global society. The classroom

is where they will gain an understanding of their place in the world and the gifts that they have to offer it. It is where the student develops what they want their future to look like, as well as knowledge of the skills needed to reach that goal.

With the classroom being such an important place in the growth of a child, it was important for the researcher to investigate how school and classroom environmental features affected provision of quality education in public ECDE centres in West Pokot County. This was because schools play a significant role in ensuring the next generation becomes successful in their lives by contributing to social, political and economic development of their nations. Therefore, learning environmental features should be taken with seriousness to ensure quality ECDE education is provided.

1.8 Significance of the Study

Early Childhood Development Education programme has the potential for producing positive and lasting effects on children, but this potential will not be achieved unless more attention is paid to ensuring that all learning environment is conducive for provision of quality ECDE programme. The study findings are helpful to the following stakeholders like ECDE centres, ECDE teachers, county and national governments, parents, future researchers and other scholars. The study recommends and suggests learning environment that encourages children's engagement, curiosity, problem solving, independent exploration and appropriate risk taking. This will ensure that quality early childhood education is provided to ECDE learners. ECDE teachers may benefit from the study findings in that better approaches in classroom setting, external environment and instructional resources are recommended for improving early childhood quality education. The findings of the research also

provide information that can be applied directly to instructional planning in ECDE centres.

To national and county government, recommendations will be made on how they may assist in improvement of facilities, resources and curriculum in enhancing the goals of early childhood education are realised. To parents, suggestions will be made on ways through which they can support their children learning through payment of levies, monitoring their children progress and communicating regularly with teachers. To future researchers, it is expected that the results of the study will add value to the understanding of the child's growth and development.

1.9 Assumptions of the Study

The study made the following assumptions;

(i) That quality of learning in ECDE centres is influenced by the nature of classroom and physical environment within the school.

(ii) All ECDE centres have qualified instructors paid by the county government.

(iii) All respondents participated in the study

1.10 Scope of the Study

The study sets to assess the influence of learning environment on provision of quality education in ECDE centres in West Pokot County. The study targeted public ECDE centres managed by public primary schools head teachers and those under county governments. The study concentrated on physical and classroom environmental features that have significant influence on provision of quality education in ECDE centres. These environmental features studied are; learning facilities, indoor classroom environmental setting (classroom arrangement), instructional resources and outdoor classroom environment.

The study focused on provision of quality education as opposed to performance because there are no common examinations for all ECDE centres. The data collected in this study were from primary (questionnaires, checklists and interview guide) and secondary sources (data from education office, past research and online articles). Primary data was the data collected from the field while secondary was mainly used to develop the study.

1.11 Limitations of the Study

The researcher encountered the following problems: Lack of cooperation from the teachers and administrators in providing relevant information necessary in arriving at the right conclusion for this research study. To counter this, the researcher informed the respondents that the research was for academic purposes only. Moreover, due to insecurity along the border with neighbouring counties, some ECDE centres were inaccessible by the researcher. To overcome this limitation, data collection was carried to those schools that were not in security risk areas.

1.12 Theoretical Framework

The research was guided by constructivism theory. Constructivism theory was developed by Piaget (1896-1979). This theory suggests that human (child) construct knowledge, morals and even intelligence and morality through various stages and in collaboration with others in an environment that is suitable for their development (Rich & Drummond, 2006). Piaget believed that all children pass through a series of developmental stages before they construct the ability to understand and reason in rational terms. The focus of this research is on pre-operational stage when children start to speak. It is also the stage for cognitive development.

According to Piaget theory, teaching and learning is a continual process of meaning making in ECDE children development. The advantage of constructivist teaching places more emphasis on sensory input, something that has long been overlooked by many teachers. In the past, learners were expected to go through teachers notes and tests (Daws, 2005) while some of this still occurs in classrooms, more teachers are learning that pupils need to be fully involved in the learning process, using all their senses and not just their eyes and ears. Pupils are not just passive participants in the classroom; they need to be involved in the bigger picture of the world around them (Ngode, 2014).

The weakness of Piaget's theory is due to its lack of structure. Some pupils require highly structured environments in order to be able to excel (Simatwa, 2010). Constructivism calls for the teachers to discard standardised curriculum in favour of a more personalised course of study based on what the pupil already know. This could lead some pupils to fail behind others (Semmar & Al-Thani, 2015). Piaget argues that classrooms must be constructivist environments. Constructivism theory has been used by various scholars across the world and in the discipline of teaching and learning in classroom. Daws (2005) used constructivism theory to describe the use of Reggio Emilia approach in upper classrooms.

Semmar and Al-Thani (2015) used Piagetian approach to determine cognitive development in the kindergarten classroom in Qatar. They argued that children do not internalise knowledge directly from outside but they mentally construct information from inside their heads through interacting with their environment. Blake and Pope (2008) looked at how Piaget theory was applied in classroom. They argued that the use of constructivism theory increased pupil learning in elementary classrooms. This

is because learners are provided with more opportunities to play and learn with their peers. From the above studies, it is evident that constructivism theory is important for pre-school children learning.

The study found use of constructivism theory useful because it is understood that the teacher is a facilitator of knowledge and provider of experiences from which pupils in ECDE learn. Similarly pupils are not absorbers of knowledge but active participants in constructing their own meaning based on strongly held preconceptions. This promotes use of learner-centered classroom. Quality environment can be achieved in classrooms where learning environments promotes use of child-centered learning approaches. In order to ensure quality education provided in ECDE centres, it would be indispensable to assess how learning facilities, indoor learning environment setting, instructional learning resources and outdoor classroom environment influence teaching and learning in constructivist classroom in West Pokot County.

1.13 Conceptual Framework

The conceptual framework model depicts the relationship between independent and dependent variable as shown in Figure 1.1.

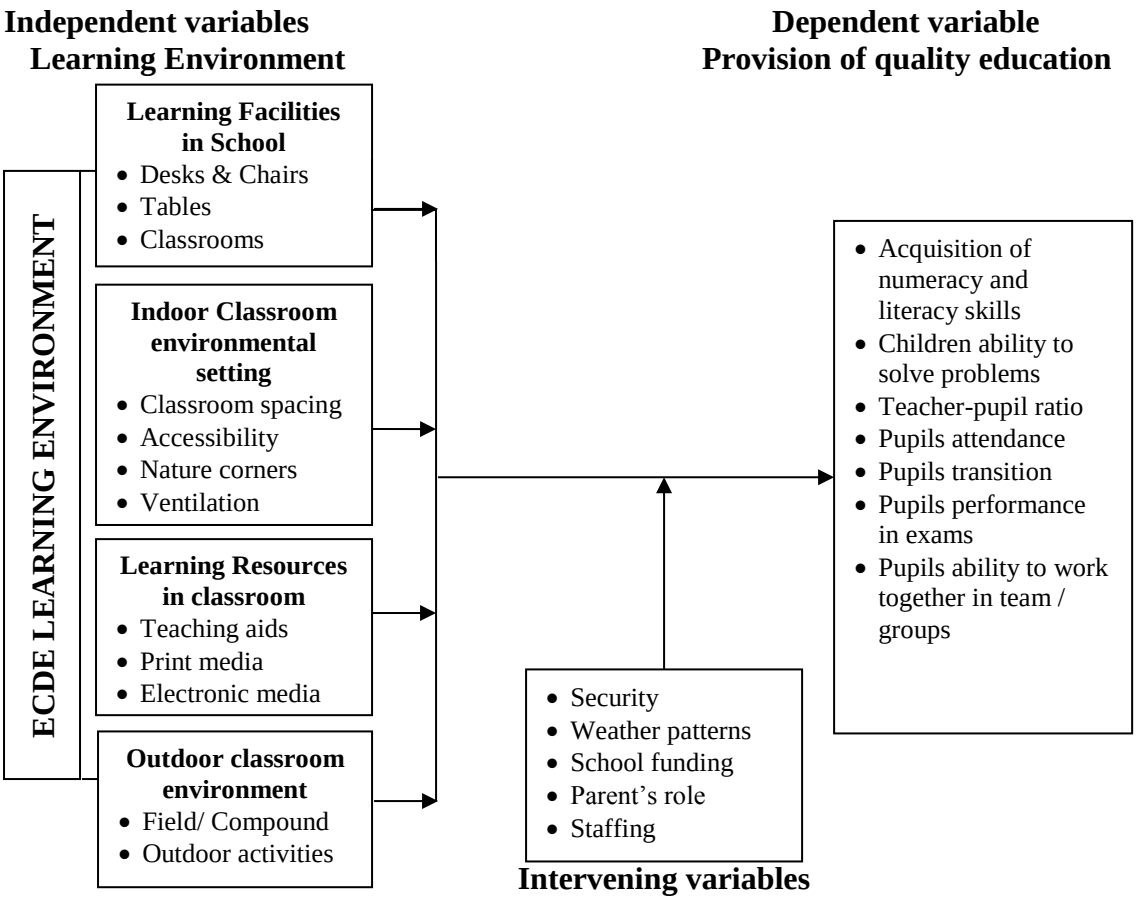

Figure 1.1 Conceptual Framework Model of the Study

Source: Author's development (2015)

Figure 1.1 shows the relationship between ECDE learning environment and provision of quality education. The independent variable for the study is represented by learning environment in ECDE centres. In the model, the learning environment is viewed through the following; facilities in classrooms, Indoor Classroom Environmental Setting, instructional resources and outdoor classroom environment. The study checked the adequacy and availability of physical facilities required for learning in ECDE like; desks, chairs, tables, classrooms, toilets, offices and even stores.

Secondly, the indoor classroom environment setting refers to the size of the classroom, desks and tables arrangements, accessibility of classroom by ECDE learners, availability of space for nature corner activities and ventilation (windows). Thirdly, the researcher investigated the availability of learning resources in classrooms; these learning resources aid in classroom instruction. The study checked on the availability and adequacy of teaching aids, print media resources and electronic media resources.

Fourthly, the research determined the outdoor environmental characteristics in the school. Government has set standards (objectives of early childhood education) through which ECDE classroom environment should be structured. Therefore, the research looked at the state and size of the compound, playing field and pupils' involvement in various outdoor activities like games, physical exercises and even studying of environment. The dependent variables involves measurements of provision of quality education in pre-schools through; ECDE children acquisition of numeracy and literacy skills, ability to solve problems on their own, teacher-pupil ratio, pupils attendance, pupil transition performance and pupils ability to work together in team or groups.

The model also shows the intervening variables which comprises of; weather pattern changes, security situation, school administration factors and parental role in the school, school staffing and funding factors. The research assumed that the intervening variables have minimal impact on the results of the study. The researcher tried as much to administer questionnaires in peaceful and calm environments that ensure the respondents respond well to the research questions without interference from insecurity and adverse weather patterns (heavy rainfall). Moreover, the study was

conducted in public ECDE centres that have similar patterns of funding, staffing and parental involvement.

1.14 Operational Definition of Terms

ECDE: is the pre-primary education programme intended to introduce young children (age 3-6 years old) to the school environment. It is the foundation for learning and that basic attitudes are laid down during this stage.

ECDE teacher: is a person who is trained to teach children in a pre-school set up.

Indoor classroom environmental setting: refers to internal environment inside the classrooms based on classroom ventilation, classroom space, existence of nature corners, seating arrangement flexible teaching and learning resources.

Influence: is the capacity to have an effect on something. In this study it refers to the capacity of learning environment to affect provision of quality education in ECDE centre.

Learning environment: is a combination of physical and service provision elements that facilitate provision of quality education in ECDE centres. The features of learning environment includes; learning facilities in classroom; indoor classroom environment setting, learning resources in classroom and outdoor learning environment.

Learning facilities: refers to the infrastructural structures to facilitate provision of quality education in ECDE centres. The school facilities consist of all types of buildings for academic and non-academic activities, equipment for academic and non-academic activities, areas for sports and games, landscape, farms and gardens including trees, roads and paths.

Learning resources: are instructional materials used by the ECDE teachers to aid them in the teaching and learning process for quality education improvement in ECDE.

Outdoor classroom environmental setting: includes the outside learning environment situation in schools defined by existence of smooth compound, adequate playing surfaces, security and even playing equipments.

Provision of quality education: is the delivery of curriculum content materials through teaching and learning process in ECDE classrooms. It is to provide learning environment for pupils that is; healthy, safe, protective, gender-sensitive with adequate resources and facilities.

1.15 Chapter Summary

This chapter presented the background information to the study with regard to how learning environment affects provision of quality education. The study showed that the foundation of learning begins at early childhood and therefore appropriate environment is critical to ensure early childhood education is provided. The problem of the statement showed that there exist challenges in early childhood competency skills in reading, writing and even communication. This made the researcher to investigate how various learning environmental features; Learning facilities, indoor classroom environment setting, instructional resources and outdoor classroom environment affected provision of quality education. The chapter also discussed the justification, significance of the study, assumptions, scope, limitations, theoretical and conceptual framework and operational definition of key terms being used in this research. The next chapter presents the review of related literature to the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviews literature from journals, research papers, books and websites of academics. This was done in the following subsection; quality of education, ECDE education in Kenya, ECDE learning environments; learning facilities, indoor classroom environmental setting, classroom learning resources and outdoor classroom environmental. Empirical review of related studies is also presented. Summary and a research gap are presented at the end of the chapter.

2.2 Concept of Quality Education

The quality of education is an important issue all over the World (Sattar, 2013; Mwende, 2014). The term quality has been used interchangeably with the following nouns: efficiency, effectiveness, equity and quality have often been used interchangeably. Okebukola (2005) defines quality as fitness of purpose. Sattar (2013) viewed quality as appropriateness of resources available to education. It is also known that quality was the baseline standard in education that can be measured on a scale of reference. It was an expression of standard by which set standard in ECDE education can be achieved. Quality refers to the degree of excellence as measured against agreed upon standards (Mwende, 2014).

Ngware, Oketch and Ezeh (2011) contend that quality education comprises three interrelated aspects: Quality of human and material resources available for teaching (inputs); quality of teaching practice (process); and the quality of results (outputs and outcomes). On his part, Odhiambo (2008) opined that quality education is determined by the inputs such as curriculum content, instructional materials and equipment,

school culture, teacher pupil ratio, costs and guiding policies, quality assurance, learning duration and above all the quality of the teachers and management functions. Quality education may also be defined as the degree or grade of excellence in matters of learning and instruction reflected through the academic achievement.

According to Kenya Sessional Paper No. 14 of (2012), the focus of quality in education was found in the learners admitted, the learning adopted and the academic staff in an institution (RoK, 2012). From these definitions, there was no consensus on the appropriate definition of quality education. However, there exists substantial agreement on dimensions of quality education. According to UNICEF (2000) this include: healthy, well- nourished and supporting learning facilities, environmental factors must be safe, protective and gender sensitive, trained teachers and good methods for imparting knowledge and skill and adequate classroom and content, relevant curricula and skilful assessment.

In terms of goodness in performance, quality of education refers to excellence in performance through established acceptable criteria and standards of good performance (Mosha, 2000 as cited by Mwamba, 2013). However, standards are social and dynamic, they change with time and societies and hence they become value-laden (Sallis, 2002). In schools, achievements in examinations (Malekela, 2000) and learners' capabilities (Haki Elimu, 2007) are used as standards to assess quality of education. High achievements refer to excellence in a program, a school or individual learners improve (Manyanga, 2007). In other words, high achievements are used as standards to improve or upgrade the performance of individuals, both teachers and students in an institution (Lomas, 2007). This is evidenced in empirical studies.

Abiero's (2013) study was to establish the overall parents' satisfaction with the quality of pre-primary education provided to their children in Bondo district, Kenya. Expectancy- Disconfirmation Theory of Customer Satisfaction was used as the basic theory of the study. The study employed a descriptive survey design. Results showed that most parents were somewhat satisfied with the quality of pre-primary education. T-test of independent samples found no significant difference in parents' satisfaction with the quality of pre-primary education by school type and parents' gender. One way Analysis of Variance found a significant difference in parents' satisfaction with the quality of pre-primary education by various levels of parents' education and income. This research looked at how quality education was viewed in West Pokot County.

2.2.1 Early Childhood Development Education in Kenya

ECDE is the education given to younger children before the age of entering primary education (6 years) (Obiweluozor, 2015). At the ECDE stage, children learn to share and co-operate with others instead of developing the selfish tendencies. Pupils' exposure to ECDE goes a long way to teach them how to understand and manage their emotions. The provision of pre-primary education assists working class parents who have no relation or house help to take care of their children while they are at work. The children were exposed to reading and writing. Statistical research has shown that children who have experienced early childhood or pre-primary programs are more likely to excel, remain in primary school and achieve good results than other children who have not gone through the same (UNESCO, 2013).

Since independence in 1963, the Government of Kenya has made efforts to ensure provision of quality education to children from lower to upper levels of education.

This was because; education was seen as the primary means of economic and social mobility, national cohesion and economic development (RoK, 2012). The Constitution of Kenya (2010) (43.1f) (53.1b) makes education a right of every Kenyan while the Kenya Vision 2030 underscores the importance of education in ensuring relevant human and social capital for sustainable development (RoK, 2007).

The Constitution holds that every child has a right to free and compulsory basic education; and access to affordable tertiary education, training and skills development (RoK, 2010). At present basic education covers two years of ECDE, 8 years of primary education, 4 years of secondary education and 4 years of basic university degree (RoK, 2012). It was seen that ECDE education forms the foundation of education in Kenya, a focus of this study.

The existing system of providing for early childhood education has been community based, in the sense that it was managed and run by the communities through their committees (Mwamba, 2014). Before the year 2013, 75% of the ECDEs in Kenya were community owned. Kenyan communities are diversified, and therefore, so are the ECDEs. The Fourth Schedule, on the Distribution of Functions in the Constitution of Kenya (2010), allocated the responsibility of planning and development of pre-primary schools to county governments. According to the schedule, the National Government shall retain responsibilities for policy, standards and curriculum development, even where county governments (RoK, 2010) undertake implementation. The constitution requires that making of curriculum to be done at national level under KICD while implementation of ECDE curriculum to be done at county level.

Pre-Primary (4-5 years) which was part of basic education sub-sector require increased investment in infrastructure and personnel to cater for increased demand. Currently over 60 percent of the existing public primary schools share some facilities with their respective pre-primary units. Consequently, responsibility for financing this sub-sector as part of basic education shall be borne by both the Central and County governments (RoK, 2010). There are many different types of ECDEs in Kenya established by different groups or organizations, such as religious organizations, employers, estates or parastatal bodies, women's groups, voluntary organizations (Rotary Club, Lions, Red Cross) private communities and individual foundations, and local authorities. In Kenya, the construction of school infrastructure resources has always been boosted by the philosophy of pulling together commonly known as *'Harambee'* (Ngware et al., 2011). Through this philosophy, communities are strongly encouraged to establish more ECDEs to keep up with the rapidly growing demand for them. Although the majority of the community based and private ECDEs have no uniform curriculum, there are national guidelines that they can follow.

The Kenya Institute of Curriculum Development (KICD) issues the guideline for ECDE education in Kenya (Said, 1999 as cited by Waithanji et al., 2013) through its organ: National Centre for Early Childhood Education (NACECE). Within the Guidelines, NACECE has done a very good job of providing the basis for the ECDE course in the following ways: in defining the curriculum; in selecting what is to be learned and taught; in determining how instructional materials should be learned and taught in class; in developing guidance on how to implement the ECDE curriculum in various school contexts and in providing for types of pupils, social situations, and physical environments.

The main goal for Kenyan ECDEs is to prepare and equip the youth to be happy and useful members of Kenya society (RoK, 2012). The NACECE guiding principles requires that schools should enable children to develop physical skills, numeracy skills, cognitive skills, and knowledge of their environment, ability to express ideas in words (reading and writing) and to gain awareness of temporal and spatial relationships. The following are objectives for ECDE education in Kenya; provide education geared towards development of the child's mental and physical capabilities; enable the child enjoy living and learning through play. The other objective is to develop the child's self-awareness, self-esteem and self-confidence; enable the child develop understanding and appreciation of his/her culture and environment; foster the child's exploratory skills, creativity, self-expression and discovery; identify the child with special needs and align him/her with existing services; enable the child build good habits and acquire acceptable values and behaviour for effective living as an individual and member of society; foster the spiritual and moral growth of the child; improve the status of the child's health, care and nutritional needs, and link him/her with health promotion services.; enrich the child's experience to enable him/her cope better with primary school life and develop the child's aesthetic and artistic skills (RoK, 2006).

Government policy paper (2012) acknowledged that a major challenge facing pre-primary service provision is that most teachers are untrained. Where pre-primary teachers have been trained; they are employed on very low salaries. In the Sessional Paper No. 1 of 2005, the government was to have integrated Pre-Primary into basic education but this policy was not fully implemented, and most Pre-Primary development has come from private initiatives. Pre-primary structures are mostly semi-permanent, local or church halls or any other building that the local communities

accept as suitable. However, few schools have been inspected and the consensus view is that many ECDE centre buildings premises fail to meet minimum education standards thereby putting provision of quality education at risk. The government policy paper notes that the sector generally lack adequate learning and teaching materials, especially books for use at the early age, whilst no standard curriculum is followed. There was no evidence that operators of Pre-Primary centres consider the needs of children with disabilities (RoK, 2012).

Research by Sifuna and Sawamura (2010) observed that despite efforts to promote ECCE in Sub-Saharan countries, access continues to be a significant challenge. Enrolment rates in ECDEs in the region are often below 10 percent, mainly due to limited facilities being available and the effect of poverty. While there seems to be common agreement on the need to increase access to ECDEs, this is not without tensions and dilemmas, including who should provide pre-school and how it can be financed.

In many countries in the Sub-Saharan region, ECDE education is not part of the formal education system, governments do appreciate the value of ECDE education and the sector is contained in official policy documents (UNESCO, 2013). An examination of official policy documents from many countries reveals that goals and objectives are clearly stated and are generally similar. They define goals and objectives of ECCE centers as offering non-formal education that aim at not only providing an all-around development of children, but also to prepare them for formal education (Mutuma, 2015).

There is a compelling case for more and better ECDE programmes as they help to reduce existing and future disadvantages faced by many children, through addressing

their nutritional, health and educational needs. ECDE participation reduces the prevalence of malnutrition and stunting, improves cognitive development and contributes to increased school participation, completion and achievement. ECDE becomes the guarantor of children's rights and can open the achievement of EFA goals (Boke, 2014).

ECDE programmes in many countries have made considerable progress because of the policy strategies and guidelines; the quality of many programmes is still unsatisfactory, especially with community-based ECDE centers (Said, 1999). Among the key contributory factors to this situation was that the policy that makes parents and local communities responsible for the development and recurrent costs of ECCE centers, has led to the establishment of many unregistered institutions with very poor facilities. Many of them operate at sub-standard levels, especially with regard to physical facilities, teaching and learning materials as well as teachers (Sifuna & Sawamura, 2010). This research looked at the environment of most ECDE centres in West Pokot County, Kenya.

2.3 Learning Environment in Early Childhood Education and Development

Learning environments are variables that can affect the provision of quality education provision in schools, including performance in examinations (Ajayi, Haastrup & Osalusi, 2010). Learning environment include classroom spaces planning, administrative places planning, circulation spaces planning, spaces for conveniences planning, general infrastructure planning, the teachers as well as the pupils themselves are essential in teaching-learning process (Okudo & Omutuyole, 2014). The extent to which pupils' learning could be enhanced depends on their location within the school

compound, the structure of their classroom, availability of instructional facilities and accessories (OECD, 2013).

It is believed that a school with adequate learning environment contributes to stir up expected outcomes of learning that will facilitate good academic performance, by encouraging effective teaching and learning (Duruji, Azuh& Oviasogie, 2014). As such learning environment remains an important area that should be studied and well managed to enhance quality education provision.The learning environment is an influential element determining provision of quality education. The learning environment is characterised by dynamics, interrelations and interactions between pupil, teacher, content (curriculum), infrastructure facilities like buildings and instructional resources (OECD, 2013).

Piaget (1966) observed that the sensory-motor stage of intellectual development is characterised by children (pupil) learning from their environment through their senses. Osborne (2013) indicated that many of the modern learning environments being built today promote and support a range of pedagogies including delivering, applying, creating, communicating and decision-making. They are often centred on pupil ‘home base’ where most of the teaching and learning processes usually occur and these bases provide access to a variety of other learning spaces (Chikutuma, 2013).

Modern ECDE classroom learning environment need to support strengths-based teaching and it is expected to offer teachers and learners’ flexibility, openness and access to resources to ensure effective provision of quality education (Waithanji, Ciera, Musyoka & Oketch, 2013). Providing ECDE teachers with open and flexible learning environment where inquiries are shared, interventions devised

collaboratively and reflections based on both self and peer observations may lead to effective provision of quality education to ECDE pupils (Osborne, 2013). For the purpose of this research, the learning environment is therefore defined as the physical spaces (including formal and informal spaces) in which learners, teachers, content, equipment and technologies interact (Waithanji et al., 2013). The study looked at how learning facilities, indoor learning environmental setting, learning resources and outdoor classroom learning environment influence provision of quality education in ECDE centres.

2.3.1 Influence of Learning Facilities on Provision of Quality Education

The main task of school is to provide education which involves a series of programmes and activities. For ECDE schools to provide quality education, availability of quality educational facilities and good infrastructure is necessary. The successful conduct of these programmes and activities depend mainly upon the availability of proper infrastructure in the school (Gichuki, 2013). School infrastructure includes buildings, grounds, furniture and apparatus along with equipment essential for imparting education (Imazeki, 2004).

ECDE infrastructure is an important indicator of quality to communities (Britto et al., 2013) and while building new infrastructure needs to be planned for the medium- to longer-term, the delivery of essential ECCE services can begin before special-purpose buildings are constructed. Existing community spaces can be used to deliver learning for children and their families in the short- to medium-term (Richter et al., 2014). These quality facilities have been found to be a major determinant of the school learning environments (Boakye-Boaten, 2015). They have also been found to be positively related to good academic achievement by learners (Wangari, 2003).

Physical facilities, teaching and learning resources are basic to the process of implementation of a new ECDE curriculum (Stevenson, 2007). The success or failure of the implementation of a programme may well depend on the availability or non availability of instructional materials and facilities (Higgins et al., 2005). Chepkorir et al. (2014) put it in a seminar paper that more attention is required for the provision of adequate facilities and resources and opportunities for teachers to share ideas on the use of available, accessible and appropriate resources in the solution of educational problems.

Pupils whose formal learning is taking place outside with no physical structure (like under trees) cannot be expected to do well as their counterparts studying under modern and well-equipped classrooms (Daws, 2005). School facilities consists of all types of buildings that are used for academic and non-academic purpose, equipment, classroom facilities, furniture, toilet, ICT, library and laboratory materials and others play a pivotal role to smoothly run teaching and learning process (Hailu & Biyabeyen, 2014). In an ideal school infrastructure programme, the school building should be well planned, spaciously, functionally and with pleasing architectural features. The rooms of the building should be spacious and ventilated with all facilities like fans etc (Wayne & Youngs, 2003). While constructing a school building one must keep in mind the school buildings should have different facilities such a library, different types of laboratories, workshops, art and craft rooms, staff room, principal's office, school office, multimedia room, conference room or theatre along with assembly ground, gymnasium among others (McCarthy & Guiney, 2004).

Buckley, Schneider and Shang (2004) cited by Hailu and Biyabeyen said that school facilities enabled the teacher to accomplish his/her task as well and help the learner to

learn and achieve effectively. Additionally, they emphasized that the availability and proper use of school facilities can affect the interest of the teacher to teach effectively and in turn positively affect learner's academic achievement. Therefore, the school facilities in the school needs proper attention as they have a great value in the support of teachers and learners morale, motivation and plays a significant role in improving the quality of education.

Khan and Iqbal (2012) observed that school physical facilities and infrastructures resources are provided to facilitate teaching learning process in ECDE. Physical learning environments range from relatively modern and well equipped classrooms to open-air gathering places (under tree or in the open) due to nature of ECDEs as some are owned and managed by; communities, government, private or even religious bodies. Researchers have argued that the quality of school physical facilities and infrastructures have an indirect effect on quality of learning in ECDEs.

Library is a counterpart of a school physical infrastructure programme. It plays a vital role in the learning process of the school. The library is an essential component of a good school (Gichuki, 2013). The library room should be located in such a place where students are not getting disturbed by noise. It is a place where a useful means of storing and communicable knowledge and one that teacher body cannot do without (Imazeki, 2004). A library is a repository of books and should have textbooks, workbooks, reference books, fiction, non-fiction books at various reading levels, reference books oil special topics and interests and related pamphlets, clippings, pictures, maps, charts, periodicals, etc. are placed in proper shelf (Mugweni, Mufanechiya & Dhlomo, 2011).

The school infrastructure programme should also envision a well planned administrative block. Leadership and service functions are done in the administrative block (OECD, 2013). The school office should be centrally located so as to serve as a good co-ordination centre, easily accessible to visitors, teachers and students. In the physical infrastructure, there must be a room where the teachers can meet and interact with each other, do corrections of home/school work of students and refer to books. This room should have lockers for teachers so that they can safeguard various reference books and instructional materials and answer books and their personal belongings (Gichuki, 2013).

Well maintained playgrounds are also important. Sports and games play so vital roles in education that they cannot be totally dispensed with (Olayeye, 2009). Playgrounds not only enable pupils to develop their physical but also help them to grow cognitively, socially and effectively (Osho et al., 2014). Any school that has its eye on the total development of children should have enough facilities for indoor as well as outdoor sports and games. Physical education is a subject to be taught so that it should be taught in playground only (McCarthy & Guiney, 2004).

Furniture and equipment should be appropriate for the size and age of the children. According to NACECE (2000), the type of furniture provided in a pre-school has a great influence on the physical development of children. It can affect their posture and the extent of fatigue they are exposed to. The furniture can also influence how they play and learn. According to Mugweni, Mufanechiya and Dhlomo (2011), all the ECD teachers noted that children were exposed to soil related infections because of the unavailability of adequate and age appropriate furniture and proper resting space in Zimbabwe. Dilapidated physical facilities at the training institutions, inadequate

ICT infrastructure, equipment and materials to incorporate ICT programme in the training of teachers have also contributed to the stagnation of enhancement of education (Chepkwesis, 2015). Teacher training colleges suffer from inadequate, old and poorly maintained transport facilities which affect teaching practice and by extension, the pre-service teacher training curriculum is yet to adopt modern trends in education for instance, ICT and other emerging and contemporary issues. To fully promote quality ECD education and care, the toilets, sinks, mirrors, tables and chairs are child-sized. In general, research concluded that ECD programmes with lasting effects on children are the most educationally intensive and expensive and hence have all the required material resources (Huntsman, 2008). Such quality material resources address the cognitive, physical, social and emotional concerns of children hence foundational to their holistic development.

Sanitary and hand-washing facilities are very important for the hygiene and health of the child as good hand-washing reduces transmission of diseases and infections. The RoK (2006) recommends that apart from a ratio 1:25 of toilets to pupils, every ECE centre should have at least one toilet for every 12 teachers. These facilities are very important without which the school cannot operate effectively. Majority of the public schools do not have separate sanitary facilities for the ECE children, posing a health hazard to the young children (Sitati et al, 2016). A study conducted by Willms (2000) cited in Redan, Marlina and Betaubun (2014) in South American (Latin America) found out that unavailability of adequate school physical facilities and infrastructures directly influenced teaching learning process either in the classrooms and, in turn, affect the learners academic achievement in schools. Willms (2000) observed that learners whose schools lacked adequate classroom materials together with inadequate library were more likely to show lower test scores and higher grade repetition than

schools which had adequate learning infrastructural resources (Khan & Iqbal, 2012). The study investigated how availability and adequacy of school facilities influence provision of quality education in ECDE centres in West Pokot County.

In Nigeria, Olaleye (2009) evaluated the status of learning environment in Osun State public primary schools. The areas that Olaleye focused on were related to; classroom environment, provision of infrastructural facilities and teacher-pupils relationship in the classroom. The target population consisted of all the teachers in the public primary schools in the state. The study utilised a descriptive research design. A questionnaire marked as child friendly environment was developed and used to get information from respondents. Research findings revealed that a quarter (25%) of the selected schools were not child friendly. The researcher found out that those schools had no infrastructural resources like; toilet (latrines, ablution facilities), chairs, desks and tables. Most classrooms were not friendly to pupils with disabilities. The result by Olaleye is different from what Olaleye and Omotayo (2009) found with regard to learning environment in Nigeria. This shows that even if studies have been conducted in Kenya, variation occurs in terms of spread of facilities based on region (s) to which the research has been conducted.

Cherotich (2012) investigated the impact of community support grants on ECD Centres infrastructure development in Kamariny Division, Keiyo District Kenya. The study adopted descriptive survey whereby stratified random, purposive and simple random samplings were used to sample the respondents. The study concluded that due to the availability of CSG grants; Kamariny Division has made great strides in resolving critical concerns in the ECD schools. At the same time, this has seen an improvement in enrolment of children in the schools.

Mwende (2014) investigated the school-based factors influencing the quality of education in public secondary schools in Kitui County. The study was guided by human capital theory developed by Schultz in 1960. The study employed descriptive survey design. The study findings indicated that physical facilities affect the quality of education. It was clear that majority of the head teachers (76.5%) said that their libraries were inadequate, 70.6% of the schools shared facilities. Not all the schools complied with fire and safety requirements on the toilets and classrooms, while the administration block was rated highly on compliance with the fire and safety requirements in majority of the schools followed by the laboratories, kitchen, and library.

According to Wangari (2003), for quality education to be provided in ECDE centres, infrastructure and learning materials should be accessible. Wangari found out that apart from those sponsored by Non-governmental Organisations, most early childhood Education, centres in Kisumu county lack adequate furniture. While some centres had no furniture at all, many more did not have enough for the number of enrolled pupils. Often times, the furniture did not match the physical size and stature of children. The researcher found out that most furniture that were poorly designed to the physical size of children as some of them were uncomfortable and this can result to future postural discomfort and pain among ECDE children. She also established that some ECDE centres had benches that were fixed too far from the table the children use. This strained the child's arm when writing. This study sought to find whether the observations made by Wangari are also happening in West Pokot County public ECDE centres.

2.3.2 Influence of Indoor Classroom Environmental Setting on Provision of Quality Education

It is generally accepted that richer and more pleasant pre-school environment provides more opportunities for a child to explore, experiment, plan, and make discussions for them, thereby enabling them to progress in their learning and development (Assefa, 2014). Recommendations have been made for setting up an appealing environment to promote learning and interaction between children and teachers in schools (DeBruin-Parecki, 2008; Greenberg & Rodriguez, 2007). Research suggests that environment be set up to provide many opportunities for learning and movement between the different areas in the classroom to reduce distractions rate and provides organization for the children's play opportunities (Greenberg & Rodriguez, 2007) hence provision of quality education in ECDE.

Okudo and Omutoyole (2014) indicated that a learning environment presents learning as a lifelong enterprise and enables pupils in ECDE to establish appropriate value system that can be their compass for self-awareness and national consciousness Olagboye (2004) suggested that existing buildings in ECDE need to be regularly maintained and made functional by providing proper lighting, ventilation and good temperature condition for their effective and efficient utilization to ensure good working condition hence provision of quality education.

The physical environment of classroom has a profound effect on all children. The physical environment includes the size of the room, the colour of the walls, the type of flooring, the number of windows (Assefa, 2014). Classroom environment includes organized space in the interest centers. This may include areas of art, science, blocks, books, dramatic play, sensory materials, music, woodworking, and manipulative toys

and games. In addition to these, library, discovery, sand and water, cooking and computers are components of classroom environment (Haile, 2010).

Classroom is the backbone of any school physical infrastructure. An ideal school infrastructure programme has adequate number of classrooms and every classroom has a pleasant look (Gichuki, 2013). Walls are painted using some light colours and rooms carefully decorated. New charts and paintings should be fixed on the walls. The front wall should have blackboard at appropriate height. The walls of the back should be having built-in cupboards for keeping books, tools, crafts materials, apparatus for experiments, maps and other teaching outs (Hawa, 2011). In a classroom where there arc movable seats and work tables, where varied resources for learning arc readily available in storage cabinets. The seating can be changed in a variety of activities simultaneously. The classroom should be well lighted so that students seated at different corners arc able to see the teacher and the blackboard.

Natural light, indoor air quality, temperature, cleanliness, acoustics, and classroom size can positively or negatively affect learning and productivity. Poor ventilation, dust, and mould in ceilings and walls all factors found in many older urban school buildings and portables can lead to respiratory infections, headaches, sleepiness, and absenteeism (Wayne & Youngs, 2003). Moreover the instructional resources and classrooms should be accessible to all pupils regardless of disability or language difference. Learning resources and areas like textbooks, books about people from various cultures and backgrounds; plastic play food could include items from various cultures-play rice and environment like posting pictures of people from multiple cultures and backgrounds should reflect the diversity of the children in the classroom (Worthington, 2008) to enable provision of quality education.

According to Jepleting (2013) persons (school management) involved in school planning and design see standardised environmental setting as an opportunity to enhance academic out comes by creating better learning environment, quiet, safe, comfortable and healthy environments for ECDE children in their acquisition of necessary skills during teaching and learning. There is a growing body of work linking educational achievement and learners performances to the quality of air they breathe in classes. A classroom with poor ventilation creates a high chance for the spread of air borne diseases such as tuberculosis according to the Ministry of Public Health and Sanitation (Jepleting, 2013).

Jepleting (2013) explained that the purpose of ventilating classrooms and school buildings, at minimum, is to remove or otherwise dilute contaminants that can build up inside the classrooms. Such contaminants come from people breathing, from their skin, clothes, perfumes, shampoos, deodorants, from building materials and cleaning agents, pathogens and from a host of other agents, which in sufficient concentration, be harmful. The classroom learning conditions describe both physical and social environments in the ECD centres. Qualities such as well-painted classrooms, adequate play area and clean compound facilitate teachers' contentment with the physical environment. Availability of equipment and the supply of teaching/learning materials also contribute to teachers' satisfaction with the physical environment (Ndani & Kimani, 2010).

According to Worthington (2008), overall classroom arrangement should be engaging and interesting to the children, providing the children with opportunities for learning and interaction, while simultaneously reflecting the children's diversity and needs. Another issue of environment is teachers' expression of value and acceptance of

diversity and of all pupils in class. Another important element is providing a consistent routine for the activities during the day. A final factor in the classroom environment is creating an environment that is rich in language (Worthington, 2008). Teachers practice of demonstrating acceptance and value for diversity of all the children in the classroom is important.

When a child feels valued, he or she is more likely to feel comfortable and be motivated to be involved and engaged in classroom activities (Gersten & Jimenez, 1998). Gersten and Jimenez suggested several ways teachers and adults can express acceptance of the children. They recommend the classroom environment contain and reflect an understanding of the linguistic and cultural backgrounds of the children. For example, having textbooks, books in different languages. In addition, having objects and events that occur in various cultures and locations across the world stationed in learning areas in the classroom.

Displaying the children's work, including artwork, shows that the teacher values the children and their work efforts. By displaying students' work, the teacher is expressing to the children and families that everyone contributed and that the students' contribution was a positive addition to the classroom environment. A final recommendation is to convey acceptance and value through frequent interactions with all the children. Through interactions, the teacher is expressing and demonstrating that everyone has something important to say and contribute to the entire class and to each other. Providing opportunities for the children to interact with other children and adults who speak the same first language, if possible, and with children who speak only English is another way of expressing value for the EL's first language (Restepo & Gray, 2007).

Another method of expressing value and acceptance of diversity is for teachers who do not speak the children's first languages to learn and use basic words from those languages (DeBriun-Parecki, 2008; Greenberg & Rodriguez, 2007). When teachers use basic words in the children's first languages, they are expressing to the children and the family that their culture is appreciated and valued (DeBruin-Parecki; Tabors, 2008).

Expressing value and respect of diversity is considered developmentally appropriate (Kostelnik, Soderman, & Whire, 2007); however, there has been no research tying the expressions of respect for other cultures to specific child outcomes. Kostelnik and colleagues state that children should learn about others when they are young, because even before the age of three, children begin to compare others in their environment to themselves. The authors provide several recommendations for incorporating diversity within the classroom. The first suggestion to support diversity is to present materials and activities that represent different cultures, ages, abilities, lifestyles, and non-stereotypical gender roles. The second suggestion is to help children realize the impact their words and actions have on others, such as discussing how a comment made another individual feel. They recommend the teacher and adults in the classroom need to model acceptance for diversity and differences (Worthington, 2008).

In United States of America, Worthington (2008) recommended the importance on how the elements of classroom environment, aspects of language development, and teaching strategies can best be used to teach English learners. Worthington argued that understanding the significance of effective learning environments is essential as the number of English learning children in the school system, especially in ECDEs, is

increasing. Several elements of ECDE environments that can promote and facilitate language acquisition and development in ECDE that have been researched and recommended by researchers and educational experts were discussed. Three elements are necessary for children to develop their language skills (Carron & Chau, 2006). The most basic element is the classroom environment that includes the arrangement of the room, creating different learning areas such as a quiet area and literacy area, creating and maintaining a consistent routine and expressing acceptance and value for all children (Justice, Pence & Wiggins, 2008).

According to Lewinski (2015) the tables and desks should be arranged properly to allow easy movements, group work, play and management of group behaviour. The arrangements should enable children to have a clear view of each other. For a teacher to organize the classroom, he/she should pay attention to the physical sitting arrangement (how the tables, chairs and benches have been arranged). Further, Lewinski (2015) stated that it is important to provide adequate and appropriate furniture. It should be borne in mind that young children are active, curious and cannot sit still for long periods. They are energetic and their bodies are growing fast. Therefore, the furniture and equipment provided should be designed in such a way that they support their healthy development, for children who are healthy perform better in school.

Schools environment and classroom facilities need to be designed to the appropriate standards. Desirable designs include having friendly and agreeable entrance areas (doors and gates), supervised private places for learners that foster a sense of community and with particular attention to the colour used to paint them (McGregor, 2004). ECDE centres need to have adequate spaces that pupils want to pass through to

ensure smooth movement with less or no blockades or distractions (Bunting, 2004). Research study by Higgins, Hall, Wall, Woolner and McCaughey (2005) found out that pupils achievement was poor dilapidated school buildings however, the research failed to show whether improvement in school infrastructure facilities resulted to improved pupils academic performance. This study determined the degree to which schools facilities influenced provision of quality education in public ECDE centres in West Pokot County, Kenya since Higgins study was carried out in Newcastle, United Kingdom

Consideration of the spaces where teachers meet and collaborate is an important as the design of the classroom. While there can often be a separation between the designer and user in school design, there was a growing movement towards involving users (pupils and teachers) during planning of teaching and learning spaces in classes, with benefits for pupils and teachers alike making meaning around what they want from education (McGregor, 2004). This act will spur provision of quality education.

Chepkwesis (2015) indicated that there is a volume of research that suggests less attentive and less successful pupils are particularly affected by the classroom desk arrangement, with their on - task behaviour increasing very significantly when seated in rows instead of tables. Scholars argue that teachers require a good knowledge of their pupils to implement an effective seating arrangement. Seating arrangements can be territorial (space organized by individual desk ownership) or functional (space organized for a specific activity) (Higgins, et al., 2005). This research determine whether the desks arrangement influenced provision of quality education in public

ECDE centres in West Pokot County, Kenya to see if there is similarity with what Higgins et al. (2005) established in UK.

Classroom arrangement and desks design and location may affect provision of quality education. Higgins et al. (2005) found out that there can often be an action zone where an increased involvement between teacher and pupils occurs across the front rows and down the middle rows of the classroom where as some favour a horseshoe formation to overcome the fact that often when clustering learners, group size and placement can be driven more by furniture and arrangement than pedagogy (Chepkwesis, 2015). It may be that a one size fits all models or solution is not possible. It seems that different arrangements are required for different teaching and learning contexts. What researchers do agree upon was that it was imperative for a school to have a clear vision in order to design facilities which can accommodate this (Stevenson, 2007; Higgin et al., 2005).

Still on desks arrangement in class, Hannah (2013) noted that when pupils' first steps into a classroom room, they will make a judgment about the type of class they are going to be taking. They will look to see how desks are arranged. They will notice what is hanging on the walls. The way in which a teacher sets up their class allows them to communicate with their students non-verbally. By adding various learning centres or activity centres the learners would know that this is a classroom that likes to do hands-on experiments. The arrangement of desks also conveys that they would not just sit and take notes, but they would act out what ever subject they are learning. The wall art would demonstrate to the learners that the teacher cares about their work enough to show it off. Learners would also gain an understanding of the social expectations of the teacher in the classroom based on how the desks are organized.

Each of these tools can be used in any classroom regardless of the content (Hannah, 2013).

ECDE children should be given the comfort they need within their learning environment. Desks and chairs should be detached so that the sitting arrangement can be varied to allow more interaction among and between children and the teacher (Sitati, Mwangi, Bota & Rapongo, 2016). RoK (2003) recommends that buildings and physical facilities for young children should meet the basic standards of space, comfort and safety. There are many studies that examine the effect of the physical conditions of teaching spaces (which includes seating, furnishings, spatial density, privacy, noise and acoustics, climate and thermal control, air quality, windowless classrooms, vandalism and play-yards, light and colour) on learners' engagement, attainment, attendance and wellbeing (Earthman, 2004; Higgins, et al., 2005). Some interesting contentions about the physical aspects of learning spaces include: temperature, heating and air quality are the most important individual elements for learners achievement (Earthman, 2004). Chronic noise exposure impairs cognitive functioning, with numbers of studies finding noise-related reading problems, deficiencies in pre-reading skills, and more general cognitive deficits (Higgins et al., 2005).

Schools and classrooms can be more than a place to inhabit: they can also acquire an emotional significance. One perspective is that educators play an important role in constructing classrooms and schools, and therefore learners' identities. An extension of this idea was that children's environments have an effect on their cognitive and behavioural development and on childhood vulnerability (Ellis, 2005). Looking at learning space is about more than the structures – it is about the social relationships

within the space. Space can be conceptualized as being an interaction between physical and social spaces. McGregor claims that the space is made by the social aspects (McGregor, 2004). This attitude is increasing in popularity as we move again towards creating more open spaces to improve social interactions and pupil learning opportunities.

If it is during English lesson, then the teacher may have a corner of the classroom set up like a theatre where the pupils could act out scenes from various plays that they are reading. There could be an area of the classroom with comfortable chairs and a small library where they could pick a book to silently read if they have finished all of their work for the day. This could be viewed as warm and inviting for a learner who does not like to read because now they see that English lesson can involve moving around. The small library will also allow them to choose what they want to read, rather than them having to read what was assigned (Hannah, 2013).

In a Social Studies classroom, Hannah (2013) said that ECDE teachers could use the concept of creating a separate learning centre in various ways throughout the curriculum. If the pupils were learning about World War I the teacher could organize the desks into trenches so when the pupils walked in they would pick a side and learn how battles were fought with this new strategy. The desks could be set in a continuous line where each learner will have to work on only one problem of an assignment to show the structure of an assembly line (Hannah, 2013). Science classrooms need to have set up areas to conduct various experiments. Math classrooms need to have an activity centre (corner) focused on real world applications of the content they are learning for that unit (Hannah, 2013). Music classrooms could have a corner where they can listen to audio clips of great musicians from the past. Every subject area can

utilize the concept of a centre of learning that is separate from the main structure of the class (Hannah, 2013).

Another method that can be utilized by ECDE teachers is how they organize their desks and instructional resources in class. A pupil will notice this rather quickly on how their teacher uses this tool can set the tone for the rest of the school year (Gaurdino & Fullerton, 2010). Many learners know that if they are disruptive they will get attention. Wanting attention does not have to be a bad thing (Hannah, 2013). However, a teacher can organize their classroom where pupils can interact with others and stay focused on the content at the same time. If the learner can meet their individual desires while staying engaged in the curriculum, then there would be likely less disruptive behaviour hence a pupil will learn. One way to do this is to organize desks into groups. This allows for pupils to do individual work if they are required, or they can work with their colleagues or peers on specific assignments given to them by their teachers. If learners are creating larger projects in class they can work as a whole table group to complete it, each with their own specific task (Gaurdino & Fullerton, 2010). This arrangement will ensure that they acquire related competencies to aid in their learning. The current study determined whether these kinds of arrangement were existing in West Pokot County public ECDE centres.

Another way to modify the classroom seating arrangement is to organize the desks in a circle around the classroom. This will work better with smaller class sizes, but can still be used occasionally in others. This strategy works well with promoting public speaking and classroom debate (Campbell, 2008). This arrangement engages learners because they all become one member of the same group. They are prone to listen more actively and make more eye contact with the person who is speaking (Grubaugh

& Houston, 1990 in Hannah, 2013). It also allows the person speaking to take more ownership of their ideas (Cornelius & Rupert, 2004). In this model the teacher has to make sure to create an environment where pupils feel invited to share their views without fear of judgment in class. In order to do this the teacher must make sure that the learners know the consequences of inappropriate behaviour. It is also a good teaching point on how to respect people who have different opinions than their own. To help pupils understand what is expected of them the teacher can clearly state the order in which the discussion will run. By letting the pupils know what is expected of them they will have clear guidelines to be held accountable to. The teacher can also vary the method of discussion to break routine for the pupils. One day they can take turns speaking clockwise. Another day they can call on people to speak next. There can even be days where the teacher draws names from a bowl at random until everyone has spoken (Hannah, 2013). The evidence above shows the significance of Indoor Classroom Environmental Setting towards improving provision of quality education in ECDE centres.

Teacher classroom organization may also play significant role in pupils' discipline. When a learner walks into a classroom and sees that there is a large mess on the teacher's desk and items scattered around the floor the pupil can get the idea that the teacher doesn't pay a lot of attention to detail. With this mind set, the pupil may begin to look at what other flaws the teacher might have. If a teacher does not show that they care about organization then a pupil will most likely develop that attitude as well (Hannah, 2013). A teacher can use this knowledge to their advantage, however, by structuring their classroom in an organized fashion. They can post the rules on the wall so that each pupil knows exactly what is expected of them and the consequences if they choose not follow them. They can keep resources in a single location that is

easily accessible to the pupils. They can have specific files where they turn in work or find missing assignments. These all will promote organization among pupils because the learners will now have a model after which to structure things in their own lives. Also, it will show the learners that the teacher cares about detail and will most likely catch the pupil trying to get away with things that are against the rules (Hannah, 2013).

Another aspect of the classroom that is difficult to control but can play a large part in keeping learners engaged is the classroom temperature (hotness / coldness / ventilation). This can become a complicated aspect to modify in the classroom since many ECDE schools do not have standardised ventilation. Too cold or too warm of a classroom can make pupils sluggish or inattentive. Also, poor circulation of air can create dust or air pollution that can affect learners' allergies. A classroom with fresh, warm air can create an atmosphere conducive to learning (Burke & Burke-Samide, 2004). Pupils will look for anything to distract them from the lesson, regardless of how trivial it may seem. Removing problems created by things such as temperature, light, or sound removes potential distractions for students (Hannah, 2013). This study determined whether public ECDE classrooms classes were ventilated in West Pokot County.

According to Worthington (2008), the second element is having an understanding of the elements of language acquisition and development that is indispensable when helping to nurture children's language development. This element includes the phonological skills, narrative skills, conversation skills, and the first language of the children and how these intertwine and facilitate during and for language development (Miske & Dowd, 2008). It is important to be able to use effectively teaching strategies

that can help facilitate communication between children in the classroom (Worthington, 2008). Professionals have heavily recommended the teaching strategies described and often the strategies lack a strong research basis that ties the use of the strategy to achievement or later academic skills and success (Grimo, 2008).

Creating a language rich classroom is an essential part of creating an overall environment that encourages and promotes learning (Gersten & Jimenez, 1998). De Atiles and Allexsaht-Snider (2002) suggested labelling objects and area around the classroom in the children's first languages and in the dominant language, usually English. Another recommendation for creating a language rich classroom is to have an assortment of print and language materials (in both the children's first languages and in English) available to the children, such as books, writing supplies, and books on tape or CD (Worthington, 2008). The language materials should provide engaging experiences for the children to use to experiment with the various modes of communication: listening, reading, writing and talking in English and in the first language (Worthington, 2008). Labelling areas and objects in the room is another way of incorporating written language in the environment (Kostelnic, Soderman & Whiren, 2007).

A language rich environment is also created when children have opportunities to have books read aloud. When children are read to, they are learning new vocabulary and print awareness (Gersten & Jimenez, 1998). Research has indicated when an adult and one child read a children's story together, the child comprehends more of the story than when the child is part of a group listening to a book being read (Wasik & Bond, 2001). It is possible the increased outcomes for one-on-one reading are because the adult is able to tailor the reading pace to meet the child's ability, point out and explain

what is happening in the pictures to help engage the child in story, and the adult is able to pause and explain unfamiliar words or to answer a question the child has about the story (Sattar, 2013). These researchers also found out that when an adult reads to a child, it leads to greater vocabulary retention, especially when the adult asks the child about the story using open-ended questions.

Incorporating rhymes, poetry, and chants are methods of encouraging children to experiment with language (Gersten & Jimenez, 1998). Using songs, poetry, rhymes, chants, and finger plays are recommended as developmentally appropriate practice (Kostelnik, Soderman, & Whiren, 2007). These activities support and enhance language and literacy acquisition in children (Kostelnic, Soderman & Whiren, 2007). In a research review, Restrepo and Gray (2007) state that the repetition often found in songs, rhymes, and finger plays facilitates children's awareness of the language structures being used. They note these activities also increase children's awareness of the components of meaning and sounds in the words being used. These skills are important as children begin to read as they sound out the letters in unfamiliar words (Kostelnic, Soderman & Whiren, 2007). However, they did not address how these activities can be used with children from diverse linguistic backgrounds and how these activities affect ELs' English acquisition and development.

Having a designated book area in the classroom is one method for providing children with opportunities to interact with books and printed language (Gersten & Jimenez, 1998). In this area, children are able to look at books on their own or have an adult read to them. Children learn new vocabulary and print awareness when an adult reads to them (Gersten & Jimenez, 1998). In a research review, Justice, Pence, and Wiggins (2008) discussed the important of multiple readings and exposure to the same books.

They noted when children experience multiple reading sessions of the same book, they are more likely to acquire and retain expressive and receptive vocabulary. It was also noted multiple readings or exposures to the same books provides children with a sense of familiarity of the book content, which creates a sense of confidence in their pre-reading skills and reinforces their confidence in their pre-reading skills. During reading activities with an adult, the adult is able to facilitate the children's awareness of print.

According to Justice, Pence and Wiggins (2008), adults provide instruction about print when they read to children and reference the print on the page, for example tracing the words with their finger. Helping the children developing confidence in their pre-reading skills is important as the children begin to understand the concept that words and letters carry meaning. It is suggested a "quiet area" be provided for children to have a place for them to go to rest and engage in a quiet activity, such as sitting and watching, looking at a book, or completing puzzles (Gordon & Browne, 2004) to get away from a more physically active activity.

Woolner and Hall (2010) reviewed the weight of evidence in relation to noise, considering what implications the results of empirical studies have for the design and use of learning spaces in schools. They found out that noise over a given level does appear to have a negative impact on learning. Secondly that beneath these levels noise may or may not be problematic, depending on the social, cultural and pedagogical expectations of the students and teachers. Thirdly they argue that when noise is deemed to be a difficulty, this finding cannot simply be translated into design prescriptions. The reasons for this indeterminacy include differing understandings of the routes through which noise produces learning deficits, as well as relationships

between noise and other elements of the environment, particularly the impacts of physical solutions to noise problems.

2.3.3 Instructional Resources and Provision of Quality Education

Materials are things that are needed in order to do a particular activity (Advanced oxford learners dictionary). Equipments and materials make the bones of pre-school education program. In Kenya pre-primary centres are the recipient of the innocent innate children as they transit from home to school (Were, 2014). As they move to school, they need to adapt to the new environment which they must meet a conducive atmosphere right from home to school.

Among the fears which tend to enhance children to like schooling are teaching and learning materials where children learn new experiences from (Rolleston, 2009). Learning resources gives children first-hand experience. Hence, to promote children's social, emotional, intellectual, and physical development, it is necessary to provide appropriate equipments and materials for variety of activities (Assefa, 2014). Research shows that having an appropriate level of basic school resources can greatly improve student achievement (Hanushek, 1995 in Benbow, Mizrachi, Oliver, & Said-Moshiro, 2007).

Teaching and learning aids enhance retention which makes learning more permanent (Chepkwesis, 2015). When ECDE children manipulate the instructional materials they remember thus leading to concept and skill acquisition. According to Mbiti (1974), teaching/learning aids provide first-hand experience with reality of teaching physical and social environment. Instructional resources help to overcome the limitation of the classroom and make-out what is accessible in class available. For example the use of films, slides, videos and photographs. Teaching/learning aids make it easier for the

teacher to explain the concept which might be difficult to him/her. This saves time as explanations are brief and precise.

Resources discourage rote learning and make abstract ideas more concrete. It makes learners to develop the powers of imagination, observation, reasoning and creativity. Teachers can acquire teaching/learning aids through improvisation by use of locally available materials, organizing for material development day where parents are invited to show their expertise, through buying; the government through community support grants (CSG) availed funds for purchase of materials and construction of functional classrooms for pre-school children (Mutahi, 2007).

The central role of teaching materials is to support teaching by making ideas and concepts clear and making learning interesting and vivid. Teaching/ materials can be invaluable in promoting motivation and retention (Chepsiror, 2012). The ECD teachers' ability to implement program, innovations is a function of the availability of tools for the job such as textbooks, dictionaries, chalkboards, workbooks and posters in the teaching. Teachers need suitable resources and facilities for them to effectively teach (Cherotich, 2012).

Ackerman and Barnett (2009) argued that in Colorado, the quality of ECD programmes for children of poor backgrounds was defined in terms of standards and adequacy of material resources to encourage cognitive and language development. Another resource needed to ensure provision of quality education is human resource. According to Chepkorir, Tonui, Chepsiror and Too (2014), teachers are important resources in the teaching and learning activity and need to be considered along other instructional resource materials. Teachers are the best recourses to be built into a particular teaching strategy designed to achieve a specific learning practice for

instance thematic approach, without which can be administrative problem to head-teachers. The implementation of ECDE curriculum may be affected by the inadequacy of teachers in schools as they are key facilitators or implementers.

Michaelowa (2001) found that the availability of books appears to be the most important factor in high-achieving, student learning. Additionally, she found out that having books available in students' homes can improve achievement scores by 2-3% and that having appropriate classroom equipment such as benches, blackboard, chalk, teacher's desk and chair can improve scores by two percent. One of the biggest problems faced by large classrooms, in developing countries is the quality and quantity of learning resources available to each student, such as desks, textbooks, and other teaching and learning supplies (Hanushek, 1995 in Benbow, Mizrachi, Pliver & Said-Moshiro, 2007).

Instructional materials, teaching resources, learning aids and audio visual aids are aids that teachers use to assist learning and increase interest of learners in the learning process. Teachers use resources to enhance learners' participation in class for effective learning (Jepleting, 2013).Textbooks deliver the curriculum and are the single most important instructional material that enhances learning. When textbooks are provided in class, the lesson time is not wasted while teachers and learners copy text on and off the blackboard (Lockheed *et al.*, 1991 in Jepleting, 2013). Availability of textbooks is critical to learning since there is a positive correlation between pupil's performance and availability of textbooks.

Bishop (1995) indicates that for effective and quality teaching and learning, there must be adequate resources. Basic to the success of any attempt at curriculum implementation and improvement is the preparation of suitable textbooks, teachers'

guides and other teaching and learning materials. These teaching/learning materials support the teacher in delivering his information. When the teacher has to hand tools for the job, his confidence, his effectiveness, his productivity will increase significantly. With adequate and standardised resources, teachers' professional competencies are more fully utilised and he accomplishes larger and better results. This research determined whether the availability of enough teachers affected provision of quality education in public ECDE centres in West Pokot County.

The availability of material resources contributes towards the quality of ECD learning environments. Availability of material resources is likely to result in children's concerns being addressed in totality (Chikutuma, 2013). A study done by Ackerman and Barnett (2009), of head start programmes in Colorado, on the impact of ECD programmes whose quality was defined in terms of standards of material resources offered to those from poor backgrounds, concluded that children who had good material resources gained in cognitive and language development.

According to KIE (2008), these are several varieties of teaching learning resources that can be used like audiovisual aids (television, videos) audio aids such as radio, visual aids such as, flash cards, tactile aids like dolls and toys. All these dusters of teaching learning resources can assist the child to learn and acquire new knowledge. Aids such as charts, pictures can enable a child to learn and remember concepts learnt (RoK, 2008). The classroom should be well organized and be spacious for the free movement of children and teachers to access materials and enable the teacher to pass round assessing children's activities and motivate them. KIE (2008) informs that these equipment need to be installed and fixed in stationed place where children can access them. Examples of these include climbing bars where children can use this equipment

to play by climbing up and down the bars or ladders. It is fun for children to move upwards and downwards in turns. As a children get fun by playing in turns, their tension and other emotions such as fear are got rid of and they refresh for the next activity.

Government policy on pupil-textbook ratio stipulates that lower primary (grades 1-4) should have a ratio of at most 3:1 while upper primary should have a ratio of at most 2:1 in all main subjects. The pupil-textbook ratios in Science, Mathematics and English in both lower and upper primary grades were examined in all schools. Results showed that most government, private religious and private NGO owned schools had almost attained required (minimum standards) of pupil textbook ratio in lower and upper primary school while other schools had relatively higher pupil-textbook ratios. For example, in the three subjects, the private individual owned schools had a mean ratio of 2:5 and 7:6 in lower and upper primary, respectively, while the community owned schools had mean ratios of 5:4 and 2:3 at the same levels (Ngware, Oketch & Ezeh, 2011).

Resources (physical and human) are significant to provision of quality early childhood development education (Chepkorir et al., 2014). Instructional resources support quality teaching and learning. Planting an indoor classroom garden all year round provides pre-primary children with lots of science experience. Montessori (1907) in Chepkorir et al, (2014) advocated for the prepared environment by providing a range of physical objects that were organized, and made available for free, independent use, to stimulate the children's instinct.

Research done by Mwonga and Wanyama (2012) revealed that teaching and learning materials not only enhances a Child's acquisition of music and movement skills but

also ensures that the transition from pre primary to primary school is smooth. This therefore means that all the education stakeholders should ensure that the teaching and learning materials are available in pre-primary centres. According to ECDE policy framework (2006), it is noted that these should be improved efficiency in resource allocation to enhance quality education provided to young children. To achieve this, efforts should be placed to enrich ECDE centres as they are the focal point where this should start. This will depend on how much the teachers are involved in using the resources which enhances quality education required by the government. A teacher with the above vision at heart can readily use all the available resources at their disposal to improve the quality of education in ECDE centres. The plan outlines the need for ECDE centres as an area where basic knowledge is obtained by the young children.

Studies conducted in Kenya have 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; Ng'asike, 2004).

Ciumwari (2010) noted that teaching materials in ECD centres were not always available and thus learning was done rather by saying than by doing. The study further revealed that the schools did not have the capacity to furnish the ECD classrooms with age-appropriate and adequate material resources. The ECD teachers

in the study, however, argued that the school heads were not forthcoming in purchasing age-appropriate and adequate play equipment for ECD children. This study sought to establish the views of respondents with regard to provision and utilisation of sports equipments in provision of quality education in West Pokot County and make comparisons with findings made by Ciumari (2010).

2.3.4 Outdoor Classroom Learning Environment and Provision of Quality Education

Haile (2010) stated that the physical organization of the indoor space is important but no pre-school environment is complete without taking in to account the outdoor area. The two make total learning environment, which caters for every child's interests and provides materials that will be appropriate for the level of development of each child. It is important to consider the classroom environment as children spend a considerable portion of their day in a classroom (Worthington, 2008). Four factors; classroom arrangement, expressing the value and acceptance of diversity of all children, routine activities and language rich environment have been suggested as key to a quality environment for young children, especially ELs (De Bruin-Parecki, 2008; Greenberg & Rodriguez, 2007).

Curtis (1998) suggested the main requirements of outdoor play area to facilitate, learning primarily it must be safe and secure with ample space for the children to play freely, preferably with trees, flat grass areas and bushes where children can hide-and-seek and play in the mud. If the pre-school is attached to a primary or secondary school then it is important that the play area is separated from the older children. The outdoor equipments should provide children with a wide variety of opportunities for

active physical experience; wood, boxes, crates, planks, and so on will enable children to build interesting structures which will serve as triggers to imaginative play.

To ensure the safety of children in ECDE Centres, Chowdhury and Choudhury (2002) recommended a nursery school or pre-school which must have a playground close to the building. The outdoor play space and playground must be safe and secure for the children to play freely. It should be free from nails, rocks, broken parts, edges and glass places. The area should be well-fenced, drained, and surface materials should be appropriate for the activities in the area. Developmentally appropriate play grounds include a variety of equipments and materials selected on the basis of the age characteristics and individual differences in abilities of the users selected materials and equipment must support the types of play we observe in children (Haile, 2010). Moreover, outside play allows for more active play with fewer restrictions on noise and movement, and greater freedom with natural materials like water, sand, snow, and soil. Also children revel in the variety inherent in the seasonal changes.

Contemporary playgrounds also foster dramatic play. These outside learning settings have large, multi-stationed equipments that may include; house-type enclosures, nets, poles, slides, tire swings, bridges, and stairs. Since a number of children can use these types of equipments concurrently, social interaction is likely and children often develop dramatic play themes. Children sometimes have the opportunity to bring loose parts to contemporary playground settings, thereby increasing play themes (Maxwell, Mitchell & Evans, 2008).

Broekhuizen, Scholten and de Vries (2014) indicated that pre-primary environment is an important setting to improve children's health. Especially, the pre-school playground provides a major opportunity to intervene. The researchers presented an

overview of the existing evidence on the value of both school and pre-primary playgrounds on children's health in terms of physical activity, cognitive and social outcomes. The study indicated that among ECDE children, mainly hardware and orgware playground characteristics like increased playground size, decreased playground density, and increased recess duration were associated with an increase in physical activity level during recess.

Providing a quiet area can be recommended as a developmentally appropriate practice (Kostelnik, Soderman, & White, 2007) activity that are more active can be emotionally and physically demanding and quiet areas provide children with the option and opportunity to take a break. It is also recommended that areas should be created to provide EL children with a safe haven, an area that the children may engage in a quiet activity that does not require interacting with others (Tabors, 2008). Tabors suggests safe havens include items such as small construction activities, puzzles, and play dough, that will provide learners with a sense of independence, and feeling comfortable and competent, and engaged. Assefa (2014) adds that many of the skills and competencies which develop during those early years are learned from the outdoor natural environment. Children will gain more from digging in the garden and watching worms and insects than they will form looking at pictures.

Maxwell, Mitchell and Evans (2008) investigated (in two stages), ways in which playground equipment and the addition of loose parts to a playground contributed to ECDE children's dramatic and constructive play behaviours. For 10 months they observed that children attending a lab ECDE as they played on large, multi-station outdoor play structures in order to identify design features of outdoor play equipment that encourage particular play behaviours and social interaction. The environmental

design features that buoyed imagination play were enclosed spaces with visibility to other areas of the playing ground, nodes and connector spaces, and stage-type spaces. Boys engaged in more useful play while girls engaged in more imagination play. The second study, conducted with the same lab pre-primary but different children, tested the effects of a design intervention on the playground.

Maxwell et al. (2008) added loose parts suitable for constructing spaces to the playground and they observed pupil's play behaviour before, during and after the intervention. It was found out that constructive play behaviour increased in the areas of the playground to which they had added the loose parts. Children used the places they constructed for dramatic play activities. The second study confirmed findings from the first study indicated that young pupils liked to act out dramatic play themes in small, enclosed spaces. In the second study, children were able to construct their own spaces, which not only encouraged dramatic play but also communication and negotiation skills. The result by Maxwell et al. (2008) was experimental study while this research was descriptive determining the influence of playing grounds on provision of quality education in pre-schools.

Sitati et al. (2016) argues that children learn better through play, discovery and imitating. This is only possible if the appropriate and adequate play equipment and materials are provided to the children. Facilities that meet the needs and interest of the child should be provided and the learning environment and materials should be child-friendly, brightly coloured and suitable for the age of the child. This makes learning interesting and fun, motivating the child to love learning. This research determined whether the available facilities in schools for outdoor activities enhanced provision of quality education in public ECDE centres in West Pokot County.

2.4 Related Studies

This section presents the review of empirical studies conducted around the world on the influence of learning environment on provision of quality education in ECDE centres.

2.4.1 Learning Facilities and Provision of Quality Education

In Zimbabwe, Mawere and Muguti (2015) conducted a research on availability, adequacy of infrastructure in ECD centres in Bindura District. The population of the study consisted of all ECD teachers who were randomly selected (60). They found out that infrastructure such as classrooms and toilets were inadequate and unsuitable for use by ECDE children. Furniture too was not in most ECD centres suited for young children and this affected provision of quality education.

Runyowa, Podzo and Kanyume (2014) study explored the experiences of ECD centres in Masvingo district in terms of the quality of meals with regards to diversity and size of portions and WASH provisions. One school was purposively sampled. The research adopted a qualitative paradigm and used one ECD centre in Masvingo district as a case study. Data were gathered through observations, interviews and document analysis. Findings revealed that the centre has tapped water. The taps were not running during time of visit. Three dirty water storage containers were seen of which two of them were covered while one was not covered. This exposed learners to health risks which is components which negatively influenced provision of quality education.

In Ethiopia, Hailu and Biyabeyen (2014) conducted research on availability of school facilities and their impacts on quality of education. The research was carried out in 24 primary schools in Eastern Hararge zone and 12 primary schools in Harari regional

state, Ethiopia. Research result showed that the availability of school facilities and instructional materials were unavailable, less in quantity and quality that created a great challenge on teaching and learning activities that in turn had a negative impact on the improvement of the quality of education. Early rounds of Young Lives data indicate that, prior to recent expansion; a main barrier to accessing ECCE in Ethiopia had been lack of infrastructure. Surveyed in 2006, many Young Lives caregivers did not send their children to pre-primary education because there was no service close by (Orkin et al., 2012).

Olaleye and Omotayo (2009) examined the concept of provision of quality in ECDE in Ekiti State in Nigeria. The study used descriptive research design of survey type, which assessed quality of early-child-hood education programme in 12 (twelve) randomly selected private nursery schools in Ado-Ekiti Local Government area of Ekiti State. Data for their research was collected using 20-item structured questionnaire administered to 120 respondents consisting of teachers and head teachers. Data was analysed using means and percentages. Research results revealed that quality of ECDE was averagely good, learning activities were found to be fair while the learning environment of some ECDE schools were found to be good. They also established that qualities of ECDE teachers was found to be low and parents' participation in schools' management was also found to be low. The findings of the study showed that there had been significant improvement in ECDE education in Nigeria while this study looked at whether the situation in West Pokot County public ECDE centres recorded such significant improvements.

Duruji, Azuh and Oviasogie (2014) examined the impact of learning environment on learners' performance in external examination in secondary schools in Ota a major

industrial town in Nigeria. Factors such as school facilities, class size, school location and school plant planning, aesthetics, maintenance culture, sanitation, conveniences were examined to determine their impact on learning and performance of secondary school learners. The research result showed that learning environment in secondary schools in Nigeria had significant relationship with academic performance of secondary school learners. It was also concluded in the study that private secondary schools in Ota within the scope of the study provided better learning environment than their public sector counterpart, more so the public secondary school which accommodated more learner population, suffered from infrastructural neglect as the principal do not control any budget even to maintain the existing structure. The study by Duruji et al. was conducted in Nigeria secondary schools on examination performance while this research looked at the learning environment and provision of quality education in public ECDE centres in West Pokot County, Kenya.

A study by Gunhu, Mugweni and Dhlomo (2011) concluded that the quality of ECDE education and care in Masvingo, Zimbabwe, was affected as children were exposed to soil-related infections because of the unavailability of adequate and age-appropriate furniture and proper resting places. Gunhu et al. (2011) argued that the inadequacy of sanitary facilities, clean water supply, classroom maintenance and disinfectants in Zimbabwean schools had an impact on the quality of ECD education and care.

In Tanzania, Nkyabonaki and Mkunde (2013) study findings showed that most schools were doing better in ensuring students sanitation through increasing the minimum ratio of students and toilets. In two districts, the students' toilet holes ratio was between 1:30 minimum and 1:48 maximum. According to the Ministry of Education and Vocational Training, the ratio should stand at one toilet per 20 girls

and one toilet per 25 boys. However, given the establishment of the new Ward government schools and burning concerns to stabilize, the ratio was still satisfactorily conducive for students to learn and grasp. Moreover, starting from 2006 some schools have been enduring expansion programmes in construction of classroom without endeavoring the increase number of toilets. This would result in a serious overwhelming of present structures for sanitation.

In Kenya, Nyamwange (2012) investigated how home background influenced academic performance of children in ECDEs in Embakasi Nairobi Kenya. The respondents of the study were twenty ECDE children, two ECDE teachers, one head teacher and twenty parents of the ECDE children who were also respondents. Many ECDE children were found to be lacking essential facilities such as textbooks, playground at homes that made learning difficult and more abstract. Children covered long distance to and from school. Children were given homework to do at home in the morning and evenings thus they arrived school tired and could not carry out their academic work to the expectation. The study was hinged towards home environmental factors while the current study seeks to determine how learning environmental factors in school influence provision of quality early childhood development education in West Pokot County.

Chepkwesis (2015) study was to establish factors influencing pre-school teachers' classroom performance in Kwanza Sub County, Trans-Nzoia County. The study was guided by the Two-Factor Theory advanced by F. Herzberg who postulates that there are two sets of factors influencing motivation thus high performance. The study adopted a survey design. The target population consisted of all the seventy (70) ECD centres in Kwanza Sub County with 140 Early Childhood and Development (ECD)

teachers, 70 managers of ECD centres and four DICECE officers. The researcher established that ECD enrolment, the physical conditions of classrooms and school, supply of teaching/ learning materials, the number of children and hours worked as well as the parents expectation, type of school, size of class handled, examination stress and library resources influenced performance in class.

Gichuki (2013) investigated influence of immediate pre-primary enrolment on curriculum implementation in public pre-primary schools in Mirangine district, Nyandarua County. The study methodology was survey design with a sample of twenty parents and twenty teachers respondents derived from a population of 1543 parents and 73 teachers, through cluster and simple random sampling technique. The researcher established that where schools lacked adequate play infrastructure for example swings, merry go round, seesaws, skill of sharing and waiting for ones turn was enhanced. This study sought to determine whether the above mentioned resources identified by Gichuki (2013) were available and utilised in provision of quality education in public ECDE centres in West Pokot County.

2.4.2 Indoor Classroom Environment Setting and Provision of Quality Education

Minchen (2007) studied the effects of a learner's location in the classroom versus their retention and application of newly learned material. The study's participants were learners taking Regents Chemistry in a suburban school located in Upstate New York. Through a teacher administered questionnaire, students answered three questions regarding the lesson that was just presented. Results showed that learners who sat in the front of the classroom, defined as the first two seats in each row, consistently did better than those towards the back of the classroom. Various

distractions such as windows, ventilators and other learners were also taken into consideration.

Simmons, Carpenter, Crenshaw and Hinton (2015) study determined if a specific classroom seating arrangement contributed to learners being on or off-task while completing independent work within the general education setting of an inclusive second grade class in South East United States. Three classroom seating arrangements were compared in a second grade classroom. These seating arrangements were cluster seating, horseshoe seating, and row seating. There were specific targeted off-task behaviors that were observed: inappropriate talking, learners out of their seats without permission, learners not following directions, and learners not starting independent work promptly. Data was collected using three methods: observation/ anecdotal record, teacher behavior checklist, and a behavior tally sheet. The data revealed the number of pupils who displayed off-task behaviors as well as the specific amount of times, these behaviors happened during each seating arrangement. They found out that row seating had the fewest off-task behaviors for this particular second grade class. It was also evident that inappropriate talking was the most frequent occurring off-task behavior and not following directions was the least off-task behavior observed. For this particular classroom, row seating was the best classroom arrangement.

Wannarka and Ruhl (2010) determined which arrangements of desks best facilitated positive academic and behavioural outcomes for primary through secondary high school learners with a range of characteristics. Eight studies that investigated at least two of three common arrangements (like rows, groups or semi-circles) were considered. Results indicate that teachers should let the nature of the task dictate

seating arrangements. Evidence supports the idea that students display higher levels of appropriate behavior during individual tasks when they are seated in rows, with disruptive students benefiting the most. The study by Wannarka and Ruhl collected secondary data while this study collected mainly primary data to determine the influence of seating arrangements on provision of quality education in ECDE.

Assefa (2014) assessed the practices and challenges of Early Childhood Care and Education in Addis Ababa by looking at Arada Sub-City government kindergartens. The research used a descriptive survey method which combined both quantitative and qualitative approaches, however more emphasis to quantitative approach. Data for the research was collected from 11 nursery schools through various means from 11 head teachers (1 not responded), 77 teachers (2 not responded), 44 parents/guardians and 2 ECDE education experts. Findings showed that sample kindergartens were not that much conducive for all children. They had narrow classes, they had great number of children in the classes (overcrowded), and there was low participation of parents and stakeholders. There was lack of training school head teachers, teachers, experts and parents and guardians were found to be great barriers to implement Early Childhood Care and Education in the country. Absences of experience sharing of kindergartens, limited support system of supervision and collaboration of stakeholders are the other barriers of the kindergartens. The study by Assefa (2014) was in Ethiopia while this study looked to see whether the environment of public ECDE centres in West Pokot County were similar with those in Ethiopia.

Waithanji, Ciera, Musyoka and Moses Oketch (2013) examined the contribution of classroom pupils' seating positions to learning gains. Data was gathered from a sample of 1907 standard six pupils who sat for the same seat twice over an interval of

about 10 months. They were drawn from a random selection of 72 low and high performing primary schools. Results of a multi-level regression showed that seating in the front row in a classroom led to higher learning gains of between 5 percent and 27 percent compared to seating in other rows that are farther away from the chalkboard. The policy implication to education was that learner's seating position can be manipulated in a way that it optimizes learning gains for slow learners. The study by Waithanji et al, focused on seating arrangement on learners gains in primary schools while this study looked at the influence of seating arrangement and provision of quality education in public ECDE centres in West Pokot County.

2.4.3 Learning Resources and Provision of Quality Education

Osho, Aliyu, Okolie and Onifade (2014) assessed the level of implementation of ECE in Chanchaga local government area, a local government in one of the north-central states in Nigeria. The sample size for the research comprised of 32 teachers, selected from 10 schools (out of 31 in the local government area). They found out that while the enrolment level was high, there were teachers who specialized in ECDE, basic teaching and learning and other basic resources were found to be sparsely available and most of the ECDE centers were overpopulated. The study verified whether the situation observed by Osho et al. (2014) was similar to public ECDE centres in West Pokot County.

In Tanzania, Kyabonaki and Mkunde (2013) study revealed that the books-students ratio was very high: it was 1:39 in 2006 and 1:14 in 2010 comparatively. The Mkakati wa Kukuza na Kupunguza Umasikini Tanzania (MKUKUTA) standard ratio was set to be 1:5, that is a book per five students, but the actual situation was very different. In the year 2010, the two districts' schools had a book-student ratio of 1:12. This was

another blow in achieving MKUKUTA goals (quality education), which can contribute to the economic growth of the nation and reduce poverty. The results further showed that the ratio of reference/syllabus books to students gets lower and lower.

In Kenya, a research conducted by UBS Optimum foundation (2013) found out that there was no shortage of very basic learning materials with an average of 100 exercise books per class (generally blank notebooks). However, materials with additional content such as text books, storybooks, activity books, art materials or toys were generally limited or absent. Mwamba (2013) investigated the role of school-based factors on quality of education in public secondary schools in Nyamira North District, Kenya. Four research questions were formulated to guide the study. Descriptive survey research design was adopted in this study. The sample for the study was 38 principals, 234 teachers, 357 form three and four students. Data were collected by use of questionnaires and was analysed by use of qualitative and quantitative techniques. Findings revealed that learning environment influenced quality of education. Findings also revealed that instructional resources and physical facilities affected quality education. Research result showed that secondary schools did not have the required instructional resource which affected quality education provision. Moreover, physical facilities influenced quality education.

Assessment materials influence quality education. Based on the findings, the study concluded that learning environment influenced quality education. It was found out that secondary schools did not have adequate number of trained teachers. The classrooms were overcrowded which made it difficult for the available teachers to

handle. The research by Mwamba was in secondary schools while this research focused on public ECDE centres in West Pokot County, Kenya.

Regarding the classroom environment and provision of learning materials, Jepleting (2013) investigated the effect of classroom environment on academic performance in mathematics of ECDE children in pioneer zone, Uasin Gishu County, Kenya. In carrying out her study, the researcher used the survey design method to gather data required to perform the research project. The research findings established that pupil's textbook ratio and the classroom size were the major contributors to poor performance in mathematics within pioneer zone. This study was conducted in Uasin Gishu that has different geographical features and developmental index as opposed to West Pokot County.

Chepsiror (2012) investigated if Teachers Advisory Centres (TACs) in Wareng District, Kenya were equipped with learning materials useful for ECDE. Chepsiror work was based on Chris Argyris' intervention theory. A total of 40 headteachers, 111 ECDE teachers and 125 lower primary school teachers were the respondents in the research. Descriptive survey research design was adapted for the study. It was found out that although the provision of learning instructional materials was key to the mission of the TACs, the officers were found to be equipped with very few materials which were neither well organized nor sufficient to be borrowed by teachers. The study by Chepsiror focused on TAC tutors while this research involved head teachers and ECDE teachers.

Bosibori, Ngao, Rop and Wesonga (2015) study aimed at finding out whether availability of teaching and learning resources influenced implementation of inclusive education in pre-school Centers in Nyamira North sub-county. The study employed

descriptive survey research design. The target population was 134 head teachers in 134 pre-school centers, 402 pre-school teachers, 12 Education officers and 938 pre-school parents in Nyamira North Sub-county. Findings revealed that there were inadequate teaching and learning resources at pre-school centers in Nyamira North sub-county. 78 percent of the respondents revealed that inadequate resources affected the implementation of inclusive education.

Chepkorir, Tonui, Chepsiror and Too (2014) investigated resource capacities of ECDE centres in supporting thematic approach in teaching in early childhood development centres in Eldoret Municipality. The research was steered by Lewin Three Stages of Change Model. A descriptive survey research design was used. The target population consisted of 164 ECDE teachers, 82 head teachers and 20 Education Officers. It was found out that majority of the ECDEs had inadequate resources and capacities (physical and human) needed to support the implementation of thematic approach in teaching ECD children in Eldoret. It was also found out that head teachers who were internal curriculum supervisors in their schools were not ECDE compliant and were therefore not in a position to advice the teachers concerning the approach appropriately. Chepkorir et al (2015) study focused on provision of resources for thematic teaching in ECDE while the current study focused on determining how provision of resources (instructional) influence provision of quality education in public ECDE centres in West Pokot County.

Boke (2014) study sought to establish the level of implementation of Early Childhood Development service standards in educational institutions as outlined by the government of Kenya Sessional paper No. 1 of 2005 on a policy framework on Education, Training and Research in Ntimaru Division of Kuria East district, Migori

County. The sample comprised of 20 Head teachers, 40 ECD teachers, 40 parents and 60 pupils in the sampled schools. The research main instruments of data collection were questionnaire and oral interviews tagged on the established services to these institution. The level of implementation of quality service standards in ECD institution affect the performance at ECD levels where monitoring and evaluation of quality service is done, the performance is high compared to where there is no clear policy on instructional resources supervision of ECD curriculum at Ntimaru division.

Murage and Serem (2013) assessed the impacts of the two government kitties on public Early Childhood Development and Education centres in Kenya. The study was carried out in Nyahururu District in 2010. The study revealed that while the kitties led to rising enrolment in primary, secondary school and private Early Childhood Development and Education centres, enrolment declined in public centres. The two have lowered the quality of education in public Early Childhood Development and Education centres since parents were unwilling to raise finances enough to employ and motivate teachers, buy teaching/learning resources, school facilities and school feeding program. High enrolment after Free Primary Education also took up classrooms meant for Early Childhood Development and Education in public centres.

Ngode (2014) assessed the impact of supervision on the implementation of early childhood education curriculum in selected public ECDEs in Lang'ata District, Nairobi County, Kenya. The study targeted 8 public ECDE the sample comprised of 4 divisions in the district, 4 divisional QASOs, 3 DICECE officers, all primary head teachers and ECDE teachers in the sampled schools. The research was done because there was inefficient and inadequate supervision of ECDE curriculum implementation, which had engraved the education in the public ECDEs. The study

established that actual supervisory activities carries out by QASOs have greater impacts on curriculum implementation. For instance, it helps identify under staffed ECDEs and therefore triggers recruitment and staffing of the schools. Further, it initiate in-service and development programmes for the teachers and schools, and also teachers are guided and advised on curriculum implementation so that they do not deviate, in the course of their instruction.

Kombo and Gogo (2012) sought to establish the role of Christian churches in the provision of early childhood education in Nairobi Province, that is, as an alternative source to supplement the efforts of parents and local communities. The main challenge in the provision of early childhood education was inadequate finance. This has resulted in lack of provisions in the schools which was manifested in low payment for teachers, lack of adequate textbooks, permanent classrooms, transport, recreational facilities, clean sanitation and sports activities.

Ngigi, Wakahiu and Karanja (2015) assessed early childhood development policy implementation in Kenya, case study of Ruiru District. A mixed method approach is applied to study the implementation. Data were collected through interviews, questionnaires and observations at ECD centers. They found out that some curriculum materials including: some but few, children's books and writing materials for children. There were teachers' books available, but these were very few, and belonged to the teacher.

Were (2014) explored the relationship between teaching and learning resources on pre-primary learners in transition to class in Rachuonyo South Sub County using case study research design. The study was anchored on the Piaget's theory of cognitive development that appreciates the critical role played by education resource provisions

in the development of a child's schemas. The research found out that teaching and learning materials when appropriately acquired, used and stored increases the transition rate of the pre-primary learners. The research by Were was on transition while this study looked at quality education provision in ECDE.

2.4.4 Outdoor Classroom Environment and Provision of Quality Education

This section presents the review of empirical literature with regard to outdoor classroom environmental features and their influence on provision of quality education. A study conducted in Ghana by Kofi (2012) compared pre-school provision in public and private schools with a focus on Ayigya MA and the KNUST nursery schools as a case study. Data gathered revealed that pupils who were able to write the full set of the 26 English alphabets in the written test conducted constituted 8% in Ayigya MA School as against 40% in KNUST Nursery School. There was significant disparity in the experiences of the children, teacher expertise and experience, academic and play facilities coupled with differences in the social and economic backgrounds of children from Ayigya MA and KNUST Nursery schools.

In Nigeria, Okudo and Omotuyole (2014) investigated the impact of enhanced learning environment and its implications on the language development and achievement of the pre-school children. Questionnaire was the instrument used to elicit data from one hundred and fifty five pre- school teachers. Findings of the study depicted that the environment of the pre-school children should provide nourishment for the children's language and overall development and that the content and their learning styles should be quite different from those of the adults.

Chikutuma (2013) study sought to establish the quality of Early Childhood Development (ECD) programmes. The qualitative design methodology was used in

this study. Self-constructed observation checklists and in-depth interview guides were used. Findings revealed that material, financial and human resources were scarce. It was concluded that the quality of ECD programmes in Harare primary schools was compromised. It was further observed that the playgrounds were well maintained by the majority of schools while the minority was neglecting the ECD playgrounds and equipment. Chikutuma (2013) found out that majority of schools did not have play equipment like puzzles, beads for fine motor development, paints and scissors among others.

Macharia (2012) examined the influence of school playground safety on the participation of pre-primary children in outdoor activities in Central Division, Naivasha District, Kenya. The study adopted a descriptive survey design to explore how playground space safety, developmentally-appropriate playground equipment, playground surfacing, playgrounds maintenance inspection and the supervision of children in the playground influence the participation of pre-school children in outdoor activities. The results of the study showed that despite the many constraints that make it impossible to ensure total playground safety, children continue to use the playgrounds for outdoor activities. The results also revealed that a combination of adequate, orderly and well organized playground spaces, developmentally-appropriate play equipment, proper playground surfacing, regular and adequate playgrounds maintenance inspection and properly organised supervision of children in the playground enables pre-primary children to effectively participate in outdoor activities.

Sitati, Mwangi, Kennedy and Rapongo (2016) investigated the implementation of the ECDE service standard guidelines on provision of physical facilities in ECE centres in

Kakamega County. A descriptive survey design was adopted. Head teachers and ECE teacher were the study subjects. Structured questionnaires were used to collect data. The instruments were validated through expert judgement and pilot testing. The findings revealed that there were no significant differences in adherence to the government guidelines in provision of classrooms and furniture. Nonetheless, significant differences existed between the two categories in adherence to the government guidelines in provision of water and sanitary and play facilities.

2.5 Research Gap

Creating a stimulating classroom environment is important as children spend a considerable portion of their day in a classroom. The significance of setting of a conducive and prepared environment is to make the best possible use of time, space and equipment so that children will be able to make use of the resources available hence provision of quality education. It is important that the learning environment presents the ECDE children with an attractive, challenging and safe environment to ensure the achievement of ECDE goals and objectives. Four factors; school learning facilities, indoor classroom environmental setting, instructional resources and outdoor classroom learning environment have been recommended to create a quality environment for young children, and especially ECDE learners to receive education (De Bruin-Parecki, 2008; Greenberg & Rodriguez, 2007). The review of related literature has shown the importance of positive school environment that fosters provision of quality education. The overall classroom arrangement should be engaging and appealing to the children providing them with opportunities for learning and interaction, while reflecting and valuing the children's diversity and needs. It is important to have a consistent routine during the day. In the literature review, the study has noted some conceptual and methodological gaps presented in Table 2.1.

Table 2.1 Knowledge Gap

Author(s)	Title	Methods	Findings	Gaps
Mwamba (2013)	Role of school based factors on quality of education in public secondary schools in Nyamira North district, Kenya	The study was conducted in secondary schools by involving principals, teachers and form 3 & 4 students	The study established that school based factors affected quality education	The study was conducted in secondary schools while this study was in ECDE. The study used one research instrument while this study employed triangulation methods
Mwende (2014)	School based factors influencing quality of education in public secondary schools in Kitui county, Kenya	Utilised a descriptive survey design, Teachers and principals were the target respondents	The study findings indicated that physical facilities affect the quality of education	Sampling design was purposive only , while the current study uses both purposive and random sampling
Khan & Iqbal (2012)	Role of Physical Facilities In Teaching Learning Process	Sample included 15 public girls' secondary schools that were randomly selected.	There was a strong need for creating an excellent learning environment	The study was conducted in a different geographical environment
Mutuma (2015)	Effectiveness of MOE Efforts to Strengthen ECE and Its Effect on Formal Education in Kenya.	Conceptual paper utilizing secondary data information sources	Various Factors Influence The Provision Of ECDE Curriculum In Kenya	The study was more based on desktop analysis while current study use primary data.
Jepleting (2013)	Effect of classroom environment on academic performance in mathematics of pre-primary children in pioneer zone, Uasin Gishu	Survey design was used	Pupil's text book ratio and classroom size were contributors to poor performance in mathematics	The dependent variable was mathematics performance while the current study measures provision of quality education. This study used questionnaire, interviews and observation check list
Gichuki (2013)	Influence of immediate pre-primary enrolment on curriculum implementation	Used survey research design	Schools lacked adequate play infrastructure.	Looked at enrolment on implementation of curriculum, while the current looked at learning environment in ECDE centres
Chikutuma (2013)	Quality of Early Childhood Development (ECD) programmes	Used qualitative research design	Quality of ECD in Harare primary schools was compromised	The study was qualitative while this was a mixed method research

From the above Table 2.1, the identified research gaps propelled the researcher to conduct an assessment on the influence of classroom environment on provision of quality education in public ECDE centres in West Pokot County, Kenya.

2.6 Chapter Summary

This chapter reviewed literature studies on the influence of learning environment on provision of quality education in ECDE. The chapter covered; concept of quality education and how learning environmental features; learning facilities, indoor classroom environment setting, instructional resources and outdoor classroom environment. A research gap outlining how the study filled them has been undertaken. The next chapter presents the research design and methodological procedures followed during collection of data from the field.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter has the following subsections: study area, research design, philosophical paradigms, target population, sampling design, sampling procedure, sample size, and research instruments. The chapter also gives validity and reliability of research instruments, piloting, data collection procedures, data analysis techniques, ethical considerations for the study and finally chapter summary.

3.2 Study Area

The study was conducted in West Pokot County, Kenya. It is one of the counties in North Rift Region which is inhabited mostly by members of Pokot community although other communities also reside in various parts of the county. Large part of county land area is semi-arid with livestock keeping forming the major economic activity of the residents. Farming and irrigation is practiced in several parts of the county.

The county has several public institutions; hospitals, education facilities, market centres and museums. The researcher chose the study area to investigate the effect of learning environment on learning process due to report by Uwezo Kenya (2012) that showed that more than 68.9% of learners joining class four were not able to read and write in West Pokot County. This showed that there existed challenges in pre-school education and therefore prompted the researcher to conduct investigation.

3.3 Research Design

A research design is a strategy for planning and conducting a study. According to this understanding, research designs are blueprints that guide the planning and implementation of the research (Ogula, 2009). The research adopted a descriptive survey research design. A descriptive survey is a research study of a large number of subjects drawn from a defined population (Ogula, 2009). This study was a descriptive survey because the population is large covered in four sub-counties. Descriptive surveys are normally intended to describe and report the way things are. Typical descriptive studies are concerned with assessment of attitudes towards the school curriculum, analysis of the state of the curriculum and demographic information.

The purpose of descriptive survey research is to describe specific characteristics of a large group of persons, objects or institutions (Oso & Onen, 2009). Kothari (2004) explain that descriptive statistics include measures of central tendency which describe a sample or a group of individuals. They describe what is and what happened. Descriptive survey research was intended to produce statistical information about aspects of education that interests policy makers and educators.

The design helped to establish the nature, the state and the current condition of the phenomenon. The study investigated how learning environment influence provision of quality education in ECDE centres in West Pokot County. Data are collected from the members of a given population for estimating one or more population parameters. The descriptive survey procedure is characterised by a systematic collection of data from members of a given population through questionnaires, interview guide and document checklist. Descriptive surveys are either sample surveys or census surveys.

3.4 Philosophical Paradigm

The study followed a pragmatism research paradigm. According to Bryman (2007), paradigm refers to a cluster of beliefs and dictates which for scientists in a particular discipline influence what should be studied, how research should be done and how results should be interpreted. Paradigms are opposing worldviews or belief systems that are a reflection of and guide the decisions that researchers make (Tashakkori & Teddlie 2003). Pragmatism emerged from the debate of mixed methods. According to Creswell and Plano Clark (2007), pragmatists link the choice of approach directly to the purpose of and the nature of the research questions posed.

Johnson, Onwuegbuzie and Turner (2007) notes that pragmatism is a deconstructive paradigm that advocates the use of mixed methods in research, that sidesteps the contentious issues of truth and reality and focuses instead on what works as the truth regarding the research questions under investigation (Tashakkori & Teddlie, 2003). In that sense, pragmatism rejects a position between the two opposing viewpoints. In other words, it rejects the choice associated with the paradigm wars. The pragmatic paradigm has what Tashakkori and Creswell (2007) see as intuitive appeal, permission to study areas that are of interest, embracing methods that are appropriate and using findings in a positive manner in harmony with the value system held by the researcher (Creswell and Plano Clark (2007). It is seen that pragmatic research philosophical paradigm can be adopted for the purpose of social educational research as this is congruent with the mixed quantitative and qualitative approach taken within the predisposition of practitioner-based research.

The characteristics of the mixed methods approach involve its use of quantitative and qualitative methods within the same research project (herein looking at the influence

of learning environment on provision of quality education in ECDE); a research design that clearly specifies the sequencing and priority that is given to the quantitative and qualitative elements of data collection and analysis; an explicit account of the manner in which the quantitative and qualitative aspects of the research relate to each other, with heightened emphasis on the manner in which triangulation is used and pragmatism as the philosophical underpinning for the research.

The researcher considered to use this approach to improve the accuracy of their data, to produce a more complete picture by combining information from complementary kinds of data or sources (observation, questionnaire, interview and checklist), to avoid biases intrinsic to single-method approaches - as a way of compensating specific strengths and weaknesses associated with particular methods. This approach was also used as a way of developing the analysis and building upon initial findings using contrasting kinds of data or methods.

Pragmatism is the most appropriate epistemology for social research. As constructivist often are confined to a critical perspective by deconstructing hegemonic interpretations pragmatism looks at the way different worldviews derive from lived-experiences (Onwuegbuzie & Leech, 2005). In the course of socialisation and every-day life people develop experiences which are not only individual but also a way to become socially experienced. On a societal level experiences integrate common knowledge, conventionalised practices and emotional processes. Truth in pragmatism is thus constructed but is non-arbitrary because it has a trajectory and is rooted in practice. This gives an idea why contingent knowledge is so binding to individuals (Tashakkori, & Creswell, 2007).

The study adopted a pragmatism research paradigm because the study collected quantitative and qualitative data on the influence of learning environment on provision of quality education in public ECDE centres in West Pokot County. Considering the study largely is based on quantitative and qualitative analysis of data collected from the field, this study fits pragmatism approach. The use of this approach was also due to its ability to use mixed method approach in collecting data.

3.5 Target Population

A population is a group of individuals, persons, objects, or items from which samples are taken for measurement (Kombo & Tromp, 2006). The target population included all pubic primary head teachers, ECDE teachers of all public pre-primary schools and Sub County Early Childhood Education Development officers in West Pokot County, Kenya. The ECDE teachers were included in the study because they are the implementers of the curriculum. The headteachers are the supervisors of the curriculum while the Educational Officers are the overall supervisors of the curriculum implementation as shown in Table 3.1.

Table 3.1 Target Population for the Study

Sub-counties	Head teachers	ECDE teachers	ECDE officers
Central Pokot	67	134	1
South Pokot	128	213	1
West Pokot	128	256	1
North Pokot	42	79	1
Total	**365**	**682**	**4**

Source: County Director of Education (2015)

According to Table 3.1 the statistics from County Education Office, majority of ECDE centres are located in the West (128) and Pokot South (128) Sub Counties. This is because the Sub-Counties are well developed, have good climate and do not

experience cross-border conflict as opposed to Central Pokot Sub County that has 67 ECDE centres and North Pokot that has 42 ECDE centres.

3.6 Sampling Design, Procedures and Sample Size

Sampling means selecting a given number of subjects from a defined population as representative of that population. Any statements made about the sample should also be true of the population (Orodho, 2005).

3.6.1 Sampling Design

The study used probability and non-probability sampling methods in selecting the respondents for the study. The main difference between probability and non-probability sampling is that non probability is not associated with any kind of random selection, while probability sampling does. Probability methods are those that ensure each person has a chance of being selected while non-probability sampling methods are those that respondents do not have an equal chance of being selected.

3.6.2 Sampling Procedures

Probability sampling technique included use of stratified random sampling. This method was used to select head teachers and ECDE teachers in each Sub County. At first, the population of teachers from each sub-county was grouped into four stratas; West, South, Central and North Pokot. This method involved dividing the population into homogenous groups with each group containing subjects with similar characteristics (Cohen, Manion & Morrison, 2011). After categorising the teachers into four stratas, simple random sampling methods were used to select the final respondents to be included in the sample. Cohen, Manion and Morrison (2011) assert that in simple random sampling, each member of the population under study has an equal chance of being selected. Random selection or random sampling, each

individual has an equal probability of being selected from the population, ensuring that the sample was representative of the population (Creswell, 2011).

The lottery method of simple random sampling was used to select the final sample for the study. This was through creating a number list in each Sub-County and then selecting the respondents to be involved in the study using randomisation method (Cohen et al, 2011). The code of each teacher based on the schools they came from was written on a slip of paper. The slips of paper were inserted into different containers according to Sub County: mixed thoroughly and then drawn one after the other until the required number of teachers was selected.

The same procedure was repeated for head teachers until the required sample size was selected. The use of stratified random sampling method in selection of head teachers and teachers ensured that each person had an equal chance of participating in the study based on the population of their stratas which in this study refers to sub-counties. In addition, this method reduces bias in sample selection and provides the basis of making statistical inferences to the population from which the representative sample is drawn (Chandran, 2004).

For ECDE officers, non-probability sampling method of purposive sampling method was used since they are the ones involved in supervising and evaluating the provision of ECDE education programme in their respective areas. The purposive sampling is very much useful in a situation where we need to target the population much more quickly (Lohr, 2010).

3.6.3 Sample Size

According to Oso and Onen (2009), a sample is part of the target population that has been selected as a representative sample. Considering the population of head teachers and ECDE teachers is large, a sample was taken to be a representative of the whole. According to Oso and Onen (2009), 10-30% of the population is an adequate sample size if the population is homogenous. Mugenda and Mugenda (2009) also support this view by Oso and Onen. Therefore 10% of the head teachers were selected to participate in the study while 30% of ECDE teachers were selected to participate. All ECDE Sub County officers fully participated in the research. Table 3.2 shows the sample size for the study.

Table 3.2 Sample Size for the Study

Sub-counties	**Head teachers**			**ECDE teachers**			**ECDE**	
	N	**formula**	**n**	**N**	**formula**	**n**	**officers**	**Total**
Central Pokot	67	*0.1	7	134	*0.3	40	1	48
Pokot South	128	*0.1	13	213	*0.3	64	1	78
West Pokot	128	*0.1	13	256	*0.3	77	1	91
North Pokot	42	*0.1	4	79	*0.3	24	1	29
Total	**365**		**37**	**682**		**205**	**4**	**246**

Key: N-target population, n-sample size, *-Multiplication
Source: County Director of Education (2015)

Table 3.2 shows that the sample size for the research involved 7 head teachers and 40 ECDE teachers from South Pokot, 13 heads and 64 teachers from South, 13 heads and 77 teachers from West and 4 heads and 24 teachers from North Pokot sub counties. The total sample size for the research is 246 which comprises of 37 head teachers, 205 teachers and 4 DICECE officers from the four sub-counties in the county. This is adequate and was a representative of the whole population.

3.7 Data Collection Instruments

Data collection was done using a questionnaire, interview and observation checklist. A questionnaire is preferred because it permits collection of data from a large population (Ogula, 2009). A document observation checklist was used to ascertain and determine the availability of various learning resources and facilities in ECDE. The selection of these tools was guided by the nature of data to be collected, the time available as well as the objectives of the study.

3.7.1 Questionnaire for ECDE Teachers

A questionnaire is a research tool that gathers data over a large sample (Kombo & Tromp, 2006). Gay (2003) maintains that questionnaires give respondents freedom to express their views or opinion and also to make suggestions. The researcher prepared a questionnaire for ECDE teachers. A questionnaire was structured with open and closed ended questions. Many of the closed-ended questions were constructed based on a Likert scale response system offering five alternative responses. This Likert scale was used more frequently in an attempt to capture data on respondents' perceptions, views and opinion on learning environment and its influence on provision of quality education in ECDEs.

The five-point Likert type scale questionnaire used in the current study was represented by the following terms; *strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) strongly* Disagree (SD). Also a scale measuring the utilisation of instructional resources in learning was also used; *Never (N), Rare (R), Sometimes (S), Often (O) and Always (A).*

The questionnaire was divided into sections. Each of the sections investigated a different variable of the study. Section A of the questionnaire covered demographic

information of respondents, Section B had questions on provision of quality education in ECDE, Section C has questions on the influence of learning facilities on provision of quality education, Section D contained questions on influence of indoor classroom setting and provision of quality education and Section E contains questions on influence of instructional learning resources on provision of quality education.

Section F contained questions on influence of outdoor classroom environment on provision of quality education. The advantage of using questionnaire is due to the fact that it was the most appropriate research tool as it allows the researcher to collect information from a large sample with diverse background. The finding remained confidential, saves time and since they are presented in paper format there is no opportunity for bias. The questionnaire is placed in Appendix II.

3.7.2 Interview Guide for Head Teachers

According to Gay, Mills and Airasian (2011), an interview is a purposeful interaction in which one person obtains information from another. The study used interview guide for head teachers in all four sub-counties in West Pokot. The interview guide was semi-structured capturing the main variables of the study. A total of ten questions for head teachers are provided in the Appendix III. The advantage of using the interview schedule was that it provided more in depth information to complement information obtained from questionnaires.

3.7.3 Interview Guide for Sub County ECDE Officers

The study also utilised interview guide to obtain information from Sub County ECDE officers in charge of quality assurance in ECDE centres. Interviews permit researchers to obtain important data that they cannot acquire from observation alone (Silverman, 2006). In this study, interviews were follow-ups to the observations that the researcher

made of ECDE programmes and for triangulation purposes. The researcher also gave the interviewees a chance to speak their minds and to dwell on those aspects they found significant. Each participant was interviewed for 45 minutes. The interview for the DICECE officers centered on the objectives of the study as shown in Appendix IV.

3.7.4 Observation Checklist

Observation checklist is a form which is written to look for specific information required for a particular purpose (Cohen et al., 2011). The study used observation checklists to record availability and adequacy of various learning environment facilities and resources in ECDE centres. The study checklist outline is given in Appendix V. This instrument enabled the researcher to ascertain the availability and adequacy of various facilities and instructional resources in ECDE centres in West Pokot County.

3.8 Validity, Piloting and Reliability of Research Instruments

It is important for any research study to consider issues of precision and accuracy of the results obtained to be relied on for any decision making and policy formulation. This was attained through consideration of validity and reliability of the research instruments.

3.8.1 Validity

According to Patton (2002), validity is the degree to which a test or an instrument measures the phenomenon under study. In this study, validity is taken to mean the extent to which the instruments cover the research questions. The validity of research instruments for the study were measured using content and face validity. To determine the content validity of the instruments, research experts from University of

Eldoret and the research supervisors were consulted to provide expert judgement. They verified the adequacy in coverage of the topic and ensured the questions were logically arranged and all the aspects were well covered. This ensured the instruments yielded both face and content valid data. The same experts assisted in ensuring content and face validity.

Advice given by these experts helped the researcher to determine the validity of the research instruments. In this case, the experts and supervisors were given the research instrument to which they gave their scores on the validity of the research instruments based on the four sections as; Very good (4), good (3), average (2) and poor (1). A content validation was computed to check on the overall validity score of the research instruments as either valid, moderate valid and not valid. The reviewers were also asked to make amendments on the research instruments so that they conform to the study objectives. These comments to be gathered from them were used in making necessary changes in the research instruments.

In addition, to improve on the validity of the instruments the researcher used methodological triangulation where three different instruments of data collection were used that is observation checklist, interview and a questionnaire. Triangulation is the use of multiple data collection devices and data sources to understand the phenomenon under study very well. This was facilitated by use of three data collection instruments; questionnaire, interview and observation checklist. For testing face validity of the data collection instruments, colleagues who we were undertaking the course were consulted.

The study further quantified content validity using the Content Validity Index (CVI) (Ogula, 2009). The study selected 4 experts panel purposefully from the department.

The four were selected based on high level of expertise with self-management support. Content validity was assessed by rating each item on a point rating scale (1=very good, 2= Average and 3 =very poor). The ratings was analysed by computing an item-level CVI (I-CVI) and a scale-level CVI (S-CVI). The 1-CVI was computed by dividing the number of experts, who rated the goodness of an item with 3, 4 or 5, by the total number of experts. The following was the formula used

$$CVI = \frac{Total\ Number\ of\ Valid\ Questions}{Total\ Number\ of\ questions\ in\ the\ questionnaire}$$

Table 3.3 shows the content validation table.

Table 3.3 Content Validity Result

	Total No. of questions	**Exp 1**	**Exp 2**	**Exp 3**	**Exp 4**	**CVI**		**Decision**
Section B	8	7	8	6	7	7	0.8750	Valid
Section C	9	8	7	9	7	7.75	0.8611	Valid
Section D	7	6	7	5	6	6	0.8571	Valid
Section E	10	9	10	9	8	9	0.9000	Valid
Section F	7	7	7	6	5	6.25	0.8928	Valid
Total	**41**	**37**	**39**	**35**	**33**	**36**	**0.8780**	**Valid**

Key: *Exp-Expert (there were a total of four experts)*

Findings from Table 3.3 showed that the average CVI obtained in the study was 0.878 for 41 items measured in the questionnaire. From the table section E and F had the highest validation index while section D had the lowest validation index. Based on the figures above, the research instruments were deemed valid. According to Shi, Mo and Sun (2012), when the total number of experts is ten an item must achieve the minimum agreement of eight experts. The S-CVI was computed by averaging the I-

CVIs. In addition, according to Polit and Beck (2014), the S-CVI should be 0.90 or higher. A copy of content validity index rating scale appears in Appendix VIII.

3.8.2 Piloting

The questionnaires were piloted in ECDE centres in the neighbouring county (Elgeyo-Marakwet) in Marakwet East Sub County. A locality similar to the study area but not involved on the study. This study took 10% of the sample size to participate during the pilot process. Twenty one ECDE teachers from 11 public ECDE centres in Marakwet East Sub County were asked to complete the questionnaire. According to Mugenda and Mugenda (2003), normally the pilot sample is between 1% and 10% the larger the sample the smaller the percentage. Piloting was important, as it enabled the researcher to assess the willingness of the respondents to co-operate in the study.

3.8.3 Reliability

Kerlinger (1986) describes reliability as the accuracy or precision of a measuring instrument. The questionnaire was designed carefully to ensure no ambiguity and that all respondents understand and respond to all issues in exactly the same way as expected by the researcher. A pilot test was conducted in a neighbouring county (Elgeyo-Marakwet County) involving 11 public ECDE centres in Marakwet East Sub County. Test re–test method was employed to test the reliability of questionnaires.

The questionnaires were given first (pre-test) to 21 teachers in 11 ECDE centres in Marakwet East for the first time. Thereafter, the same questionnaire was returned (post-test) to the same number of teachers (21) from the same number of schools with questionnaires (21) after an interval of one week from the first test. After collecting the questionnaires for the first (pre-test) and the second test (post-test), the Pearson correlation coefficient was computed to check whether the research questionnaires

(items) are reliable or not. This was facilitated by coding the two sets of data in a singular file with the help of Statistical Package for Social Sciences Computer software.

The two sets of scores were correlated based on the four objectives of the study. In interpreting the correlation index, a correlation coefficient of 0.6 or more was considered appropriate to ascertain as proposed by Kothari (2014) who said that r-value index of 0.6 and above is good measure of reliability. The study obtained an average Cronbach's Alpha value of 0.8262 making the instruments reliable. These findings were in line with the benchmark suggested by Hair, *et al*. (2010) where coefficient of 0.60 is regarded to have an average reliability while coefficient of 0.70 and above indicates that the instrument has a high reliability standard. Although most researchers generally consider an alpha value of 0.70 as the acceptable level of reliability coefficient, lower coefficient is also acceptable (Sekaran & Bougie, 2010).

Table 3.4 Reliability Values for the Research Instruments

	Cronbach's Alpha	**No. of items**
Section B	0.761	8
Section C	0.822	9
Section D	0.971	7
Section E	0.833	10
Section F	0.744	7
Total	**0.8262**	**41**

Source: field data (2016)

3.9 Data Collection Procedures

Kombo and Tromp (2006) suggest that a researcher requires a research permit before embarking on the study. The study sought recommendation letter from University of Eldoret to facilitate acquisition of research permit. The researcher applied for a

research permit from the National Commission for Science, Technology and Innovation (NACOSTI). On receiving a permit, a covering letter requesting the respondents' participation was prepared by the researcher and attached to the questionnaires. A copy of the permit was forwarded to the director of education and county commissioner to be informed of the study. Also the head-teachers of the sampled ECDEs were approached and informed about the study.

The researcher then proceeded to collect data. The questionnaires were left with the respondents to fill and they were picked after one week after making arrangements with the respondents. The researcher then checked the questionnaires if they were fully filled. If not fully filled the corresponding respondent was requested to fill the gaps as the researcher waited. This procedure took a maximum of two hours in a centre and proceeded until all the sampled centres were covered. This ensured 100% return rate as the researcher left with all the required data.

Interview sessions of 45 minutes each were organised according to the convenience of head teachers and DICECE officers. While interviewing, the researcher took notes to capture details of the interview. When administering questionnaires, the researcher also recorded and filled in the details of document checklist in each school visited. During data collection, the researcher observed and recorded the type of furniture the children used and classroom organization, the classroom ventilation, size of the classroom and classroom learning resources. The information and data obtained under this method was analyzed, collated and summarized.

3.10 Data Analysis

According to Kothari (2014), this step is essential in scientific and social science research in ensuring that all relevant data are captured for making comparison and

analysis. Field data for this research was analysed through use of two methods; quantitative and qualitative methods of research. Quantitative methods were concerned with aggregates, general trends, averages and proportions. On the other hand, qualitative data analysis endeavoured to make general statements on how categories or themes of the data collected were related (Robson, 2002).

Quantitative data collected was coded, entered and analyzed through use of statistical package for social sciences (SPSS) computer software program (Version 22.0). Data was edited, organized in line with demographic aspects, groups and research questions and coded accordingly. The core function of coding was to create codes and scale from the responses which could be summarized and analyzed in various ways (Kombo & Tromp, 2006). Quantitative data results from closed ended questions were analysed by use of means; frequencies, percentages, means and standard deviation. Data was presented using tables. Karl Pearson Product Moment correlation coefficient was used to test the relationship between classroom environment and provision of quality ECDE education in public ECDE centre sat 0.01 significance level (99%).

As observed by Gray (2004), qualitative data provides rich descriptions and explanations that demonstrate the chronological flow of events as well as often leading to chance findings. The qualitative data from the interview guide was transcribed first, coded using numerals. The act of giving the qualitative numbers is due to the philosophical paradigm that guides this research. Themes were merged with quantitative data in chapter four as per research objectives. This is through content analysis method. Also, data from observation schedule was analyzed thematically. Data generated from qualitative and quantitative sources was presented

as per the research objectives jointly to obtain comparison and relationships amongst them. Table 3.5 shows the research matrix for data analysis.

Table 3.5 Data Analysis Matrix

Objective	Independent variable	Dependent Variable	Tools for data collection	Method of Analysis
Influence of learning facilities on provision of quality education	- Number of classes - Number of toilets - Number of tables / desks	- Numeracy skills - Writing skills -Teacher-pupil ratio - Reading skills	- Questionnaire - Interview guide - Observation check-list	- Quantitative (frequencies, percentages, mean, standard deviation, and correlations) - Qualitative
Influence of indoor classroom environment setting on provision of quality education	- Classroom spacing - Ventilation - Lighting - Nature corners	- Numeracy skills - Writing skills - Reading skills -Teacher-pupil ratio	- Questionnaire - Interview guide - Observation check-list	- Quantitative (frequencies, percentages, mean, standard deviation, and correlations) - Qualitative
Influence of instructional learning resources on provision of quality education	- Number of teaching aids - Number of textbooks - Number of sports resources	- Numeracy skills - Writing skills - Teacher-pupil ratio - Reading skills	- Questionnaire - Interview guide - Observation check-list	- Quantitative (frequencies, percentages, mean, standard deviation, and correlations) - Qualitative
Influence of outdoor classroom environment on provision of quality education	- Availability of compound - Participation in co-curricular activities	- Numeracy skills - Writing skills - Teacher-pupil ratio - Reading skills	- Questionnaire - Interview guide - Observation check-list	- Quantitative (frequencies, percentages, mean, standard deviation, and correlations) - Qualitative

3.11 Ethical Considerations

The issue of ethics is very important in research (Oso &Onen, 2009). Furthermore, Ogula (2009) informed that ethics is concerned with right and wrong. The major ethical issues of concern are: informed consent, privacy and confidentiality, anonymity and researchers responsibility. Researcher process of seeking permission to carry out a study makes the research authentic and makes it possible to collect data well (Christians, 2005). The researcher took the letter seeking permission to carry out this study to the NACOSTI. The letter granting permission to carry out the study was taken County Director of Education and County Commissioner in West Pokot County. The researcher then took all the letters of permission to the schools personally seeking an audience first with the school head of each school under study whom they were handed a letter directed to him/her requesting permission to use his/her school in the study.

Patton (2002) talks of informed consent as a process whereby participants give their consent to participate in a research study after getting honest information about its procedures, risks and benefits. To ensure this, the researcher informed her respondents about the purpose of the study as well as making them aware of the risks they may face in participating in the study. The researcher also made sure that the participants were free to make decisions about whether they wanted to participate or not at any point in the study.

Patton (2002) contends that confidentiality means that no one has access to the participants' data or names in the possession of the researcher and that no one can match research information with that of a participant. Confidentiality of the participants was also taken into consideration by making sure that they remained

anonymous. Names were not used for the schools, DICECE, teachers and school heads. A participant of a study has a right to have his or her identity remain anonymous. Christians (2005) suggests that it is the researcher's obligation to keep then respondents' identity and responses private. The researcher ensured that anonymity of participants was respected when reporting on the interviews carried out and the observations made.

Tedlock (2005) suggests that a respondent's anonymity is guaranteed when a given response cannot be matched with a given participant. The researcher respected the respondents' privacy. The participants were expected not to write their names on the questionnaire, but each questionnaire had a code number for reference. The participants were then assured that the information given was to be treated confidentially and for the purpose intended only. After the study the instruments were securely kept. The document was checked for degree of plagiarism using anti-plagiarism software to test originality.

In any research, participants must be protected from physical, social, emotional and spiritual harm or from potential harm of any nature (Patton, 2002). In this study, the researcher ensured that none of the participants were exposed to any harm by not asking private and sensitive questions. The respondents were also assured of getting the feedback from the researcher if they needed it after the study. This was aimed at securing cooperation from them. The researcher also established a rapport with the respondents which facilitated the collection of data.

3.12 Chapter Summary

This chapter has presented the research methodological procedures followed during respondents' selection, data collection and analysis. The chapter has presented the

scope of the research with regard to description of the study area, research methodological underpinnings, research philosophy and also research design procedures.

The chapter also has described how participants of the study were identified, selected and given the instruments to answer them. The chapter has also described how various instruments of data collection were validated, tested for reliability and how they were analysed. Lastly, ethical considerations pertaining the research have also been presented. The next chapter presents the data analysis, presentation, interpretation and discussion of the findings.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION OF THE FINDINGS

4.1 Introduction

This chapter presents the results of data analysis on the influence of learning environment on provision of quality education in public ECDE centres in West Pokot County, Kenya. The results presented in this chapter was collected from questionnaires administered to ECDE teachers, interview guide conducted with head teachers, education officers, and researchers own observation checklist on the learning environment situation in public ECDE centres. The analysis of data was done using descriptive and inferential statistics in order to make deductions. The presentation and discussion of the findings of the research are in accordance with the objectives of the research which sought to:

1. Investigate the influence of learning facilities on provision of quality education in public ECDE centres in West Pokot County,
2. Establish the influence of indoor classroom environment setting on provision of quality education in public ECDE centres in West Pokot County,
3. Determine the influence of instructional learning resources on provision of quality education in public ECDE centres in West Pokot County,
4. Assess the influence of outdoor classroom environment on provision of quality education in public ECDE centres in West Pokot County

4.1.1 Data Collection Instruments' Return Rate

The study issued questionnaires to ECDE teachers and conducted interviews with head teachers and sub county early childhood education officers. The following table

4.1 shows the response rate for the research instruments based on the sample size selected.

Table 4.1 Instrument's Return Rate

Respondents	Instrument	Sample	Returned	Return rate (%)
(i) Teachers	Questionnaire	205	205	100.0%
(ii) Head teachers	Interview guide	37	25	67.6%
(ii) Education officers	Interview guide	4	4	100.0%
Total		**246**	**234**	

Source: Field Data (2016)

Table 4.1 shows that 100% return rate was achieved for ECDE teachers and sub county education officers. This was because they were accessible from their sub county offices and researcher had made earlier contact with them on the appropriate time for interview session, 25 out of 37 of head teachers are the ones who participated in the interview (67.6%). The return rate of more than 50% of the sample is acceptable in social science research as proposed by Saunders et al. (2007). In addition, Mugenda and Mugenda (2009) agreed that an instrument return rate of more than 50% is accepted in descriptive research studies.

4.1.2 Demographic Details of Teachers

The demographic information entails respondents' gender, age category, highest level of education and working experience. They help the researcher to understand the kind of people that responded to the research items. At first the respondents were asked to indicate their gender, age bracket, level of education and working experience. Their responses are given in Table 4.2.

Table 4.2 ECDE Teachers Demographic Details

Variable	Item	Frequency	Percent
Gender	Male	71	34.6
	Female	134	65.4
	Total	**205**	**100.0**
Age bracket	20-30yrs	109	53.1
	31-40yrs	59	28.8
	41-50yrs	33	16.1
	Above 51 years	4	2.0
	Total	**205**	**100.0**
Education level	Form Four	26	12.7
	Certificate	69	33.7
	Diploma	70	34.1
	Bachelors degree	40	19.5
	Total	**205**	**100.0**
Working experience	0-5yrs	78	38.1
	6-10yrs	54	26.3
	11-15yrs	52	25.4
	16-20yrs	14	6.8
	Above 21 years	7	3.4
	Total	**205**	**100.0**

Source: Field Data (2016)

On gender, results show that majority 134 (65.4%) of ECDE teachers were female and 71 (34.6%) were male. The result coincides with Boke (2014) research that found out that majority teachers of ECD institutions in Ntimaru, Migori County, Kenya were of female gender as opposed to male. Similarly, Bosibori et al. (2015) established that there was gender disparity among the people concerned with ECDE; since in total there were 230 female participants and 104 were male. In contrast to research result a study conducted in Ethiopia by Assefa (2014) found out all pre-school teachers were female. The result from the study implies that majority of ECDE teachers are female.

There is need to sensitize the education stakeholders about equity in education so as to enhance quality education delivery in ECDE.

The respondents were also asked to indicate their age bracket. Result (Table 4.2) show that more than half 109 (53.1%) of ECDE teachers were between 20-30 years, 59 (28.8%) were between 31-40 years, 33 (16.1%) were between 41-50 years and 4 (2.0%) were above 51 years. From the results it is seen that most teachers teaching in public ECDE centres in West Pokot County are young (below 30 years). The result coincides with Boke (2014) findings that showed that majority of teachers 46.7% are aged between (26-34) years and are female. None was aged 45 years and above. Jepleting (2013) also found out that 76% of the pre-primary teachers are in the age brackets of between 21-40 years. This implies that most teachers are experienced in caring and handling of young children as majority of these teachers are also parents.

Moreover, the age bracket depicts that most teachers are energetic and able to facilitate playing with the children and other demanding learning activities in ECDE centres. Research has shown that the quality of a certain educational service especially practices of teaching are highly influenced by the qualification of teachers which later impact on provision of quality education.

The study also asked the respondents to indicate their level of education. Professional training of the Early Childhood teacher was of paramount importance in this study. Table 4.2 show that 70 (34.1%) of ECDE teachers had diploma level of education followed by 69 (33.7%) who had certificate level of education, 40 (19.5%) had degree level of education and only 26 (12.7%) indicated that they had form four level of education.

The results therefore show that majority (87.3%) of public ECDE centres had trained ECDE teachers and therefore understood the environmental requirements for effective delivery of quality education. However, the findings shows that some schools (12.7%) had Form Four levels as teachers and this was mainly due to inability for some public ECDE centres (through county government of West Pokot) to hire trained teachers opting to employ form fours who in most cases were not adequately remunerated while others volunteered (Interview with Sub County ECD Officer).

The result is in contrast to Boke (2014) research in Kuria that showed that only 13(36.7%) held a certificate in ECDE as opposed to 33.7% of this study. No one had degree or diploma level of education. The result suggests that there has been an improvement in motivating most ECDE teachers to further their training in order to improve their pedagogical skills. In addition, Abiero (2013) established that most teachers in Bondo Sub County had certificate in ECDE and only one possessed diploma in ECDE. The results are different to research conducted in Ethiopia by Asseffa (2014) who established that almost all 73(97.3%) of teachers were certificate holder and the remaining 2 (2.7%) of teachers were diploma holder. This shows that at least ECDE teachers in Kenya have higher education qualification compared to the ones in Ethiopia.

The study moreover asked respondents to indicate their working experience (Table 4.2). Result revealed that 78 (38.1%) had taught for less than five years, 54 (26.3%) had taught for 6-10 years, 52 (25.4%) had taught for 11-15 years, 14 (6.8%) had taught for 16-20 years and 7 (3.4%) had taught for more than 21 years. The results suggest that there is an evenly distribution of teachers based on their working experience in most public ECDE centres in West Pokot County. The result coincides

again with research done by Assefa (2014) in Ethiopia that showed that 20 (26.7%) of teachers have worked in below three years. This was followed by 21(28%) who gave service in area for the years between 2 and 4 and 14 (18.6 %) served between 4 and 6 years time and the rest 20 (26.7 %) worked for more than 6 years. The statistics depict existence of less experienced or beginners' teachers and as well as experienced teachers were equal in the system. In contrast to the study findings, Bosibori et al. (2015) found out that most of the respondents had worked for a reasonable period of time to have acquired the experience expected in handling the special needs learners. From the above, it is clear that ECDE teacher working experience is critical to provision of quality education in ECDE.

4.1.3 Provision of Quality Education in ECDE Centres

The main dependent variable for this study was provision of quality education in ECDE centres. Government of Kenya has a clear outlined policy framework based on ECD institutions. The policy has standards for quality and inclusive ECD services (Boke, 2014). It was important to determine how teachers rated the pupils' acquisition of several competencies in ECDE centres in West Pokot County in order to measure provision of quality education. The teachers were supposed to rate ECDE pupils competencies as: very high, average, low, and very low. The results of the analysis are presented in Table 4.3.

Table 4.3 Provision of Quality Education in ECDE Centres

Variable (n=205)		VH	H	A	L	VL	Mean	SD
Pupils acquisition of numeracy skills	F	5	21	56	92	31	2.4000	.94765
	%	2.4	10.2	27.3	44.9	15.1		
Pupils acquisition of reading and writing skills	F	23	64	90	15	13	2.9707	1.20827
	%	11.2	31.2	43.9	7.3	6.3		
Pupils ability to solve problems on their own	F	18	60	30	69	28	2.8585	1.23053
	%	8.8	29.3	14.6	33.7	13.7		
Teacher-Pupil ratio	F	9	18	32	79	67	2.1366	1.10297
	%	4.4	8.8	15.6	38.5	32.7		
Pupils attendance rate [coming to school daily]	F	50	76	39	18	22	3.5561	1.24972
	%	24.4	37.1	19.0	8.8	10.7		
Pupils transition rate from one level to another	F	7	19	97	58	24	2.6439	.92621
	%	3.4	9.3	47.3	28.3	11.7		
Pupils performance in exams and assessments	F	20	43	67	45	30	2.8927	1.18330
	%	9.8	21.0	32.7	22.0	14.6		
Pupils ability to work together in teams/groups	F	58	60	30	49	8	3.5415	1.23847
	%	28.3	29.3	14.6	23.9	3.9		
Composite mean							2.875	1.13589

Key: VH-Very High, H-High, A-Average, L-Low, VL-Very Low, f-frequency, %-percent and SD-Standard deviation
Source: Field Data (2016)

Findings on pupils' acquisition of numeracy skills from Table 4.3 shows that 92 (44.9%) teachers rated their pupils' numeracy skills as low and only 21 (10.2%) rated them as high. From the result, it is evident that ECDE pupils' level of acquisition of numeracy skills in additions, subtraction, counting and multiplication was low (M=2.4 and SD=0.94) in public ECDE centres in West Pokot County. The result coincides with Jepleting (2013) who found out that children performance in mathematics was low in ECDE centres. This result showed that pupils' level of arithmetic skills in the county is low.

On the pupils acquisition of reading and writing skills, 90 (43.9%) indicated pupils competency was average and only 64 (31.2%) said it was very high. From the findings, it can be deduced that pre-school children level of reading and writing was on average (M=2.97 and SD=1.20) in public ECDE centres in West Pokot County. The research findings are in agreement with a research by Abiero (2013) who established that parents in Bondo Sub County had confidence with the quality of their teachers, how children are taught and achievement; they were happier with the achievement of their children in reading than achievement in arithmetic and social skills.

The results obtained suggest that since Uwezo report (2012), there has been significant improvement in investments in ECDE by county government raising the literacy level in the county to average level for the past four years (2013-2016). Moreover the above statistics can be explained by the fact that the environment (climatic and development) of the four sub counties under study are not similar. West and Pokot South are less arid while North and Central Pokot are semi-arid regions and have less development.

When asked to indicate pupils' ability to solve problems on their own, 69 (33.7%) rated pupils' competency in problem solving as low and 60 (29.3%) rated them as high. From these it is seen that significant number of pupils in pre-school centres in West Pokot County cannot solve problems on their own while others can as evidenced by means = 2.85 and standard deviation of 1.23. This could be due to the environment they receive instruction. Findings also shows that 79 (38.5%) of teachers indicated that their teacher-pupil ratio was low and only 18 (8.8%) said it was high. From the findings, it can be deduced that teacher-pupil ratio was low (M=2.13 and SD=1.10).

This could be due the free primary education policy that resulted to increase in pupils' admission to schools with the government taking no initiative of increasing staffing levels in schools. The findings concur with Abiero (2013) research who established that the number of children to teachers was not appropriate in Bondo Sub County schools. In addition, Kofi (2012) research in Ghana revealed that private schools had more teachers compared to public ones thereby influencing provision of early childhood education. From the results, it is clear that teacher: pupil ratio influence provision of quality education as schools that have enough teachers provide quality education than ones which are understaffed.

On pupils school attendance resulting from their interest in learning, 76 (37.1%) teachers indicated that it was high and only 22 (10.7%) reported that school attendance was very low. This implies that majority of pupils in public ECDE centres interest in learning is high (M=3.55 and SD=1.24) and rarely miss coming to school. This is because most schools are classified as Arid and Semi-Arid Lands (ASAL) where government and other relief agencies have school feeding programmes for children in schools as a stopgap measure of improving access to ECDE education in West Pokot County. On the transition rate, 97 (47.3%) indicated average transition while 24 (11.7%) said it was very low. Based on findings, the transition rate of pupils from one level to another in ECDE centres is on average (M=2.64 and SD=0.92) suggesting that some schools experience transition of pupils while others do not experience transition challenges. The result coincides with responses made by some head teachers who gave different perceptions on Interview Question No. 2. For Instance, Head teacher (HT13) said that:

"The transition has been upward every year, there is an increase"

Another Head teacher (HT2) indicated that:

> *The transition rate has been fluctuating due to the upcoming schools in the neighbourhood.*

Similarly, another head teacher (HT25) also said that:

> *There has been a drop in transition over the years in my school.*

Still, another head teacher (HT10) had a different opinion compared to the other two (HT2&HT25) by indicating that:

> *There has been upward enrolment in the ECDE due to the urban centre around the school.*

On the education officers, they had this to say as mentioned by one from Central Pokot:

> *The movement of pupils in ECDE from one class to the other is not smooth as it is supposed to, there are various challenge influencing this trend.*

The responses made by head teachers and DICECE officers confirm that transition challenges are prevalent in majority of ECDE centres in West Pokot County. The transition challenges are mainly experienced when pupils enrol for standard one class. The method of instruction and environment is somehow different from what they used to experience in pre-school. For instance, desks and tables arrangement in pre-schools was round but in standard one, desks are arranged in rows. This setting in lower primary may affect pupils' transition from pre-school to standard one.

In addition, the availability of learning resources may also influence pupils' transition from pre-primary to primary school (Gray, 2004). With regard to academic performance in exams and assessments, 67 (32.7%) said the performance of pupils in public ECDE centres in West Pokot County was on average. It can be deduced that

the performance of pupils in examinations is on average (M=2.89 and SD=1.18) in majority of schools while others perform poorly (36.6%) and others (30.8%) said it was high (combined scores of very low and low and very high and high). The result coincides with study conducted by Mwamba (2013) that showed that performance was on average in schools which was as result of learners being dissatisfied with the administration of tests in their schools. This implies that irregular conduction of assessment tests (CATs) in their schools affected their learners' performance in examinations.

When asked the level at which pupils were able to work in teams and groups, 60 (29.3%) said it was high. The results show that teachers have made significant efforts to ensure cooperative learning takes place by allowing pupils to work together in teams and groups as evidenced by average scores obtained (M=3.54 and SD=1.23). The result therefore shows that on average, pupils work in groups in public ECDE centres in West Pokot County.

In general, findings on provision of quality education showed the composite mean was 2.87 while standard deviations was 1.13 which shows that provision of quality education in public ECDE centres was average based on the scale used in this study. This infers that provision of quality education in early childhood education centres in west Pokot County was not satisfactory .The findings concurs with study conducted by Abiero (2013) that showed that the level of parents' satisfaction with the quality of pre-primary education in Bondo District was low (M=1.86, SD=0.38). This implies that majority of pre-primary school parents in Pokot district were somewhat satisfied with the quality of pre-primary education provided to their children despite Uwezo (2016) report showing that majority of learners were not able to read and write.

However, results are different from Olaleye and Omotayo (2009) study in Nigeria that showed that learning activities in the pre-primary schools selected was averagely high. This shows that disparity exists between Kenya and Nigeria in the provision of conducive learning environment for learning in ECDE where Nigeria is high and Kenya is low hence affecting provision of quality education.

4.2 Influence of Learning Facilities on Provision of Quality Education

The first objective of the research was to investigate the influence of learning facilities in ECDE schools on provision of quality education. The research sought respondents' opinions on the availability and adequacy of learning facilities in public ECDE centres in West Pokot County. School facilities consist of all types of infrastructure that are used for academic and non-academic purpose, equipment, classroom facilities, furniture, toilet, ICT, library and laboratory materials among others. According to Hailu and Biyabeyen (2014), learning facilities in ECDE centres play a pivotal role to smoothly run teaching and learning process. Therefore the teachers were asked to indicate the extent to which lists of learning facilities were available in their schools to support the learning process. The results of analysis are presented on Table 4.4.

Table 4.4 Availability of Learning Facilities

	Adequate		Inadequate		Not available			
Facility	**f**	**%**	**f**	**%**	**f**	**%**	**Mean**	**SD**
Classroom	13	6.3	117	57.1	75	36.6	2.3024	.58263
Kitchen	32	15.6	61	29.8	112	54.6	2.3902	.74354
Latrine	16	7.8	144	70.2	45	22.0	2.4885	.52812
Safe Playing field	57	27.8	77	37.6	71	34.6	2.0683	.78915
Tables	39	19.0	132	64.4	34	16.6	1.9756	.59770
Desks	28	13.7	120	58.5	57	27.8	21005	.62973
Chalkboards	21	10.2	134	65.4	50	24.4	2.1415	.57265
Store	22	10.7	58	28.3	125	61.0	2.5024	.68331
Offices	33	16.1	84	41.0	88	42.9	2.2683	.72167
Composite Mean							**2.2146**	**0.64983**

Key: f-frequency, %-Percent and SD=Standard Deviation

Source: Field Data (2016)

Results from Table 4.4 on the availability of classroom, majority 117 (57.1%) indicated that they were inadequate. This is confirmed by mean statistics that shows that classrooms for learning in public ECDE centres in West Pokot county were inadequate (M=2.30 and SD=0.58). The results coincide with researcher observation that showed that some schools located in the remote and interior parts of the county had no classrooms and learners were studying under shafts while others were under trees. See Plate 1 and 6 (Appendix IX) for ECDE classes being conducted under a tree. Plate 12 (Appendix IX) shows that some public ECDE centres classrooms were not complete and this could inhibit achievement of quality education.

Similar to observation responses, Mutuma (2015) found out that one classroom is one-half of a timber building with corrugated iron roof and no ceiling. In the research, Plate 8 shows an iron sheet (*mabati* classroom) in one of the schools in West Pokot Sub County. Similarly, Mwamba (2013) in his study in Nyamira North Sub County

established that more than 73.3% of classrooms were inadequate hence affecting the provision of quality education. However some head teachers interviewed through question No. 3 indicated that there has been significant progress in improving school classroom as noted by one head teacher (HT3):

> *There are several progresses in the school through construction of ECDE classrooms.*

One education officer from Pokot Central Sub County had this to say:

> *Majority of ECDE classrooms are old and dilapidated. The floors are dusty (not cemented) which make children to contract common cold frequently.*

The finding shows that the available classrooms are in sorry state as some of them are not cemented requiring water to be poured daily to prevent dust and control disease. This finding is supported by Abiero (2013) who established that classrooms in Bondo had not been improved. They were semi-permanent with protruding iron sheets, nails and timber. The study findings are contrary to universal principles of pre-school education which suggests that pre-schools should be accessible by having adequate building and facilities (Bernard Van Lee Foundation, 2009). In addition, Gichuki (2013) established that classrooms with inadequate space hindered the free choice activities unlike where space was adequate.

Sitati et al. (2016) showed that public ECE centres manifested compliance on standard size classroom (2.36), well-ventilated classrooms (2.02) and availability and adequacy of classrooms (1.89). Non-compliance was indicated on classrooms having proper roofing, windows, doors and floors (2.60) and classrooms being accessible for use by children with special needs (3.41). This shows that some significant steps have

been undertaken to improve the status of classrooms in other parts of the country but different from West Pokot.

On the availability of kitchen, most 112 (54.6%) said that they did not have kitchen to offer feeding programme to their children. The result shows that majority of ECDE centres in West Pokot County did not have kitchen and those that seemed to have were just the traditional ones (M=2.39 and SD=0.74). This made it difficult for the ECDE institutions to start feeding programmes and considering that majority of children come from poor backgrounds, their nutrition status was not good. However, an observation made by the researcher showed some ECDE had made iron sheets (*Mabati*) kitchens as given in Plate 2 (Appendix IX). The study coincides with a study done in Nairobi by Kombo and Gogo (2012) that showed that 30 schools out of 31 had no canteen where the pupils could buy snacks or resources for learning. On the availability of enough latrines to be used by learners, most 144 (70.2%) indicated that they had latrines but were inadequate. The obtained mean suggest that latrines were inadequate (M=2.14 and SD=0.52). In addition, Plate 3 (Appendix IX) shows one latrine which pupils have to queue in order to relieve themselves and they even do not have doors. Researcher's own observation showed that majority of public ECDE centres do not have adequate latrines and this is a risk to contamination and diseases spread.

An observation by the researcher showed that pupils in the higher classes in the primary schools were sharing the same latrines with the ECDE pupils creating incidences of contracting diseases and ailments associated with poor sanitation and unhygienic conditions in public ECDE centres. The findings corresponds to Olaleye (2009) study in Nigeria that showed that infrastructural facilities such as toilet facility

and library were not adequately provided. The lack of sanitary facilities influences provision of quality education in ECDE centres since incidents of disease outbreak and infections could be high. Similarly, Osho et al. (2014) found out that some very necessary facilities for the convenience of the children like toilets, bathrooms, beds/beddings, clean and safe water were not available. It is known fact that children of ages 0 to 5 years have little or no control over their need for using the toilet.

The finding of the present study is consistent with Gunhu et al. (2011) in Masvingo Zimbabwe who doubted the quality of ECD programmes when they revealed that toilet facilities were inadequate and not well cleaned. In Kenya, Mwamba (2013) data showed that students were not satisfied with the toilets in their schools. This therefore suggests that the toilets were not adequate hence affecting quality education. However a research by Sitati et al. (2016) found out that compliance by the private ECE centres on teachers having separate toilets, children's toilets being age-appropriate, the centre providing safe and clean water for use and the ECE centre having hand-washing facilities. In addition, Gichuki (2013) found out that the ratio of toilets to children in the pre-primary affected children in various ways; For example, while many children could control their bowels, it was sometimes impossible to some where the ratio of toilets to the children was more than 1:20. The ratio of toilet was also a factor in time management where a lot of time was spent when children wait for their turn. This shows that inadequacy of toilets and latrine facilities greatly affect provision of quality ECDE education.

The result also showed that 77 (37.6%) of teachers said their playing field was not adequate. This showed that most public ECDE centres lacked safe playing fields (M=2.06 and SD=0.78) despite their schools owning huge compounds. Lack of

adequate safe playing field for pupils in public ECDE centres denied them a chance of participating in extra-curricular activities which is a key requirement for their social and cognitive growth. Those who had safe playing field, they were not levelled meaning that children were at risk of getting injury while playing as shown in Plate 4 (Appendix IX).The result also showed that only 39 (19.0%) of teachers admitted that they had adequate tables for use in classrooms with majority 132 (64.4%) indicated that they had inadequate tables for use. Descriptive statistics showed that tables were inadequate (M=1.97 and SD=0.59) in public ECDE centres in West Pokot County.

Plate 5 (Appendix IX) show a classroom ongoing with pupils sitting on the rocks/stones. The inadequacy of tables and desks for use by teachers and learners in pre-school centres affected curriculum implementation and evaluation since there was no place the teacher was able to put instructional resources or direct learners in practical situations that required mounting of objects. The result coincides with Mutuma (2015) who found out that there were small tables that teachers used for using in class and staff room. Further in staff rooms, there were no shelves for placing instructional materials. There was one only round table and un-matching small chairs crowded around it which was used by all teachers in that particular institution.

With regard to desks, most 120 (58.5%) of teachers indicated that they were inadequate while 28 (13.7%) said that their schools had desks to be used by learners. The result show that desks were inadequate (M=2.14 and SD=0.62) in public ECDE centres in West Pokot county. For schools that did not have desks and chairs, pupils learned on the ground, others sat on logs while others used stones to sit while in class. This created an un-conducive environment for learning affecting provision of quality education for ECDE learners. The study is different from what Mwamba (2013)

established that furniture was not an issue in the schools hence could not affect quality education. The students were asked to indicate their levels of satisfaction with desks in the schools and most reported in Mwamba study that they were not available. This shows that majority of public ECDE in Kenya (including West Pokot) have no adequate desks and chairs.

The head teachers also had their own opinion on the adequacy of desks and chairs on Interview Question No. 3. For instance, one head teacher (HT17) remarked that:

> *The school has not improved the learning facilities like chairs and desks.*

This observation was also made by one DICECE officer from Pokot North Sub County who indicated that:

> *The desks and chairs are inadequate due to large number of pupils enrolled in schools.*

The responses made by DICECE officers and head teachers and teachers indicate the inadequacy of desks in public ECDE centres in West Pokot County. The unavailability of chairs and desk was found by Osho et al. (2014) who found out that only 30% of the schools had furniture suitable for ECE, and in these schools the classes were overpopulated. Similarly, Cherotich (2012) found out that some ECD centres lack desks or good sitting spaces. Some children are compelled to sit on stones or remain standing during lessons. This leads to demotivation of children with some eventually dropping out of school. Jepleting (2013) also found out that children shared seats due to high enrolment in Uasin Gishu County pre-schools and this limited their movement in participation in academic activities in schools thereby affecting provision of quality education.

Research result on chalkboards reveal that majority 134 (65.4%) of teachers indicated that the facilities were inadequate (mounted and movable) and 21 (10.2%) said that the facilities were adequate in their schools. The findings shows that chalkboards were also inadequate (M=2.14 and SD=0.57) in public ECDE centres in West Pokot County. Observation by the researcher showed that the status of chalkboards in some public ECDE centres were not in good condition as some of them were worn out and pupils at a far could not be able to read or differentiate letters or numbers during classroom time (Researchers own observation). With regard to availability of stores, only 22 (10.7%) had adequate store for storing school items, 58 (28.3%) had inadequate stores while majority 125 (61.0%) of ECDE centres were found not to have stores. The result implies that majority of public ECDE centres in West Pokot County did not have stores (M=2.50 and SD=0.68) for storing school items and this risked them to theft. The unavailability of stores was due to limited materials and items that were available in public ECDE centres.

On the availability of offices, 88 (42.9%) of teachers reported that they did not have offices, 84 (41.0%) said that their offices were not adequate while 33 (16.1%) of teachers are the ones who admitted that they had enough offices. The result showed that most public ECDE centres had inadequate (M=2.21 and SD=0.72) offices for teachers. Lack of offices to be used by ECDE teachers affected their lesson preparation roles as some of them relied on their classrooms as offices. This in one way or another that affected provision of quality education. The result coincides with Kombo and Gogo (2012) who showed out that most ECDE centres in Nairobi Province, Kenya lacked basic learning facilities like offices, pitches, toilets and classrooms.

Computed composite scores on learning facilities in public ECDE centres in West Pokot County showed that they did not have adequate learning facilities (M=2.21 and SD=0.64) to ensure the provision of quality education to pre-school pupils. As it is known, learning facilities have to be availed to ensure that the goals of ECDE curriculum are realised. However, their inadequacy and unavailability cast doubt of achieving national goals of education relating to early childhood in West Pokot County. The findings are in agreement with Abiero's (2013) who found out that most parents who were dissatisfied were more concerned with the inadequacy of the learning facilities, small compounds and poor safety and security measures in the school. It also means that if parents were to transfer their children to other pre-primary schools, they would do so due to poor physical infrastructure (school buildings and security measures). In addition, Ndani and Kimani (2010) found out that in 55% of the pre-primary, the physical environment was below average in suitability. The result coincides with Assefa (2014) study in Ethiopia that showed that availability of sufficient separate restroom, toilets with water, different children's book, first aid materials, classroom space per child in the sampled kindergartens and organization of activity centres/corners were claimed to be inadequate in Ethiopia. In addition, Duruji et al. (2014) established that effects of deteriorating condition and poor maintenance of school infrastructure are threats to the school and students' academic performance. The above findings confirm that inadequate and dilapidated school infrastructure results to poor provision of quality education in ECDE centres.

The researcher conducted observation on learning facilities situation in schools. The results are summarised for 37 schools in West Pokot County. The results are presented in Table 4.5.

Table 4.5 Researcher's Observation on Facilities in ECDE Centres

Facility	Type	Condition	Adequacy
Desks	Mostly wooden while others were using plastic chairs	Most of them were in deplorable state in schools available	Desks were inadequate while other pupils sat on logs and stones / blocks
Tables	Wooden, metallic and others plastic	Some were broken and not smooth	They were not adequate in most ECDE centres
Chalkboard	Moveable and inbuilt in classroom	Some were not legible to write on making learners not to be able to copy well	Compared to other facilities, they were found to be available and inadequate in a number of schools. However, they were not up to the standard
Latrines	Mud walled, thatched ones, (iron sheets) *mabati*, bricks and blocks one	They were not safely constructed. Most of them were unhygienic	Latrines were inadequate in most schools in relation to the number of pupils
Kitchen	Temporary structure	They were small and not roofed/enclosed	They were not available in majority of schools despite school feeding programme
Store	Used classes as stores	Not available in most schools	They were not available in more than 80% of schools
Water storage tanks	Pits, plastic tanks and concrete tanks	Some had leakages, some had no water while others had dirty particles /objects in them	They were inadequate in most schools because there was no piped water or gutters to collect rain water
Compound	Expansive	Had bushes in it	They were adequate in most schools

Source: Field Data (2016)

Researcher observation showed that only compound (school land) was available to majority of public ECDE centres in West Pokot County. Facilities like stores, kitchen and water storage reservoirs were found not to be available in majority of public ECDE centres while latrines, chalkboard, desks and tables were found to be available in most schools but they were not adequate in relation to pupils enrolled in schools. From the observation made by the researcher, learning facilities were inadequate in public ECDE centres in West Pokot County and this affected provision of quality education.

4.2.1 Relationship between Learning Facilities and Provision of Quality Education in Public ECDE Centres

A Pearson correlation was computed at 0.01 significance level by checking the combined statistics of adequacy and availability of learning facilities against provision of quality education as given in Table 4.6.

Table 4.6 Relationship between Learning Facilities and Provision of Quality Education in Public ECDE Centres

		Quality Education	Learning Facilities
Quality Education	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	205	
Learning Facilities	Pearson Correlation	.563**	1
	Sig. (2-tailed)	0.001	
	N	205	205

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

Source: Field Data (2016)

Table 4.6 shows that the computed value is r=563, p=0.001 which is less than 0.01 level of significance which led conclusion that there is significant relationship between learning facilities and provision of quality education in public ECDE centres

in West Pokot county. The results imply that with adequate learning facilities available there is likelihood of improvement in quality of education. Hence, ECDE centres with more adequate facilities were likely performing better than ECDE centres with less learning facilities (which is majority)

This could be due to geographical nature of the sub counties under study where two of them (West Pokot and Pokot South Sub Counties) are endowed with facilities more than the other two sub counties (North Pokot and Central Pokot Sub Counties). The result coincides with Sattar (2013) who found out that infrastructure and services were significant in affecting the quality of education. The results suggest that for quality education to be provided to pre-school children, learning facilities (infrastructure) need to be availed in public ECDE centres in West Pokot County. Hailu and Biyabeyen (2014) established that school facilities enable the teacher to accomplish his/her task as well and help the learner to learn and achieve effectively. They emphasized that the availability and proper use of school facilities can affect the interest of the teacher to teach effectively in turn that positively affects learners' academic achievement.

In addition, Boke (2014) and Ngode (2014) also established that inadequate physical facilities hindered effective curriculum implementation. The inadequacy of teaching and learning facilities is due to poor supervision and inspection by quality assurance and standard officers. Also, Duruji et al. (2014) study revealed combined influence of deteriorating conditions of building, pressures on teaching facilities and learning environment deficiencies impair on the quality of teaching and learning and also create health and safety problems for staff and students as well as the overall performance of pupils in general.

In addition, Sitati et al. (2016) established that a number of pre-schools do not have permanent building. Teaching and learning are held outdoors under trees or stones. The inadequacies of these physical facilities hampered the normal learning/teaching process. From the findings and studies, school facilities in the ECDE centres in West Pokot County are not adequate to ensure effective provision of quality education.

4.3 Influence of Indoor Classroom Environment Setting on Provision of Quality Education in Public ECDE Centres

The second objective of the research was to determine how indoor classroom environmental setting affected provision of quality education in public ECDE centres in West Pokot County. Indoor classroom environment setting has to be standardised and set in a way that teaching and learning is not disrupted. To answer the second research question, teachers were asked to indicate their perception on how indoor classroom environmental setting influenced provision of quality education on statements made in five point Likert type scale (SD-Strongly Disagree, D-Disagree, U-Undecided, A-Agree and SA-Strongly Agree). The results of the analysis are presented in Table 4.7.

Table 4.7 Indoor Classroom Environment Setting

Variable **(n**=205)		**SD**	**D**	**U**	**A**	**SA**	**Mean**	**SD**
The classroom is well ventilated and this ensures that there is adequate supply of air thereby minimising sleeping amongst learners	f	72	26	30	26	51	2.7951	1.62003
	%	35.1	12.7	14.6	12.7	24.9		
There is enough space in the classroom for easy movement	f	25	82	47	34	17	2.6878	1.13763
	%	12.2	40.0	22.9	16.6	8.3		
The classroom is easily accessible by all learners (even disabled)	f	37	73	21	51	23	2.7561	1.31322
	%	18.0	35.6	10.2	24.9	11.2		
Our classrooms have nature corners for enhancing teaching and learning	f	99	26	38	17	25	2.2341	1.43274
	%	48.3	12.7	18.5	8.3	12.2		
Our classrooms have proper lighting to ensure good condition in class	f	46	83	26	29	21	2.4927	1.26654
	%	22.4	40.5	12.7	14.1	10.2		
Pupils can be able to write their work well because the desks and tables are not high	f	30	83	26	54	12	2.6829	1.18071
	%	14.6	40.5	12.7	26.3	5.9		
I regularly ensure that physical sitting arrangement in orderly manner to ensure interaction between learners and I	f	15	19	25	97	49	3.7122	1.14622
	%	7.3	9.3	12.2	47.3	23.9		
Composite mean							2.7658	1.29958

Key: SD-Strongly Disagree, D-Disagree, U-Undecided, A-Agree and SA-Strongly Agree & SD- Standard Deviation

Source: Field Data (2016)

Results from Table 4.7 show that only 72 (35.1%) of teachers strongly disagreed that their classes were well ventilated to ensure that there was adequate supply of fresh air. The responses show that 47.8% of teachers disagreed and 37.6% agreed with the

statement which suggested respondents were undecided (M=2.79 and SD=1.62) as standard deviation scores are far away from the mean. This showed that only 47.8% of ECDE classrooms in west Pokot County are not well ventilated and limits adequate supply of fresh air which increases sleeping among learners due to the climatic conditions of the area associated with high temperature and low humidity.

Moreover, the undecided result could be due to the fact that some ECDE centres had no classroom making classes to be conducted on outside. The results are similar to study by Olaleye and Omoyayo (2009) that established that in 60% of schools ventilation was average. In addition, Chikutuma (2013) observation results also indicated that the majority of the schools had well ventilated ECD rooms. Poorly ventilated rooms could be caused by the conversion of a garage or a storeroom for ECD classrooms as indicated during the interviews. This had a negative impact on the quality of ECD programmes.

Secondly, 82 (40.0%) of teachers disagreed that their classes had enough space for easy movement. From the findings, some of the respondents were undecided (M=2.68 and SD=1.13) on the statement. Therefore, teachers find it difficult to move around and assess learners while teaching because the classes available were small. The results coincide with UBS Optimum foundation (2013) who found very few cases where students had insufficient seating space in Nairobi pre-schools. Some head teachers supported the responses by teachers while others did not. For instance, one head teacher (HT4) had this to say during interview on Question 4:

> *The room is spacious, enough and adequate for learning. This influenced learning positively.*

Similarly, another head teacher (HT13) also shared the same response:

The nature of ECDE classroom is modern with enough space for learners.

However another head teacher (HT6) sided with teachers responses by indicating that:

The classrooms are available though they are not spacious because of the number of pupils who have been enrolled.

Another head teacher (HT17) also supported the less spacious classes by indicating that:

The class is less improved; it requires more resources to be modern.

On their part, the DICECE officers had also their view with regard to classroom learning environment. The one from Pokot South Sub County indicated that:

Classroom learning environment is not conducive in most ECDE centres due to high number of pupils in class leaving less space for movement of teachers and pupils in the classrooms.

The responses shows that majority of ECDE classes have limited space to accommodate and allow movement of learners and teachers in West Pokot County. To solve the problem, some head teachers said that there are plans through the support of county government to expand the facilities. Similar to the study findings, Jepleting (2013) established that majority of pre-primary classrooms were smaller than the recommended classroom size of 8mx8m. Due to this, learning corners are unavailable in most of the schools in the zone.

However, findings are inconsistent with Olaleye and Omoyayo (2009) who found out that the learning environment of the pre-schools using the subscale scores is fairly good (62.5. %) in Nigerian pre-schools. From the above findings and discussions, it can be seen that small classrooms size characterise provision of poor quality

education in public ECDE centres in Kenya. The crowded classrooms also limit pupils' concentration and learning.

When asked as to whether the classrooms were easily accessible by all learners irrespective of their disability status, 73 (35.6%) of teachers disagreed with the statement. The responses shows that the respondents were undecided on the statement (M=2.75 and SD=1.31). This implies that some classrooms are inaccessible by learners with disabilities against the government policy of ensuring inclusion in public primary schools. This point to poor workmanship during construction of classes by the school management. The study coincides with Ngigi et al. (2015) who established that schools lacked ramps for children with disabilities, as well as rails, lower door handles, or any environmental adaptation for special needs children.

The researcher also observed that in few classrooms that were permanent, few had ramps with most having staircases. The research is different from what Osborne (2013) found in New Zealand schools where access to resources (including technology): typically a learning common is surrounded by breakout spaces allowing a range of different activities, such as reading, group work, project space, wet areas, reflection, and presenting. There is often a mixture of wireless and wired technology offering access as and when students needed it, within the flow of their learning. This shows that classroom accessibility has been improved in developed countries (New Zealand) compared to Kenya.

When asked as to whether their classes had nature corners for enhancing teaching and learning of science, creative and mathematics activities, 99 (48.3%) of teachers strongly disagreed with the statement. From the result, it can be deduced that majority 61.0% of schools have no nature corners in their classrooms to facilitate learning.

This assertion is also supported by the mean result obtained (M=2.23 and SD=1.43) that showed teachers tending to disagree with the statement. The results are in agreement with research done by Assefa (2014) that showed that most of respondents said that there was poor arrangement of nature corners in their classroom. This showed that most classrooms in developing countries do not have space for nature corners inside the class to facilitate learning of science, creative and mathematics activities.

Furthermore, 83 (40.5%) of teachers disagreed that their classrooms had proper lighting to enable conducive environment for learning. From the result, it is clear that 62.9% of public ECDE centres in West Pokot County have no proper lighting. The descriptive statistics also supports this view where the respondents appeared to disagree (M=2.4 and SD=1.26. This showed that classrooms have no adequate windows to ensure there is proper lighting in class thereby affecting teaching and learning by pupils in class.

Result also showed that 83 (40.5%) of teachers disagreed with the statement that pupils were able to write their work well because the desks and tables were not high. It is therefore evident that majority 55.1% of desks and tables in public ECDE centres are not comfortable for learners to write or sit on them well and this makes some to stand when writing while others are forced to bend more to enable them write during class teaching (M=2.68 and SD=1.18).

The result also points to non-involvement of ECDE teachers by school administration during the process of tendering and construction of these resources and this could explain poor curriculum delivery in schools. The result coincides with Mutuma (2015) who established that classroom furniture that is ill adapted to the physical size of

children is uncomfortable and can cause postural discomfort and pain. Some centres have benches that are fixed too far from the table the children use. This strains the child's arms when writing. Typically, children bend over the writing table and this undesirable practice is due to combination of poor sitting conditions and furniture misfits. However, some head teachers disagreed with teachers' opinion in interview question No. 6 whereby Head teacher (HT9) indicated that:

> *The schools have been ahead in improving the facilities to fit the learners, e.g. the new chairs are for the aged in ECDE classes.*

When asked as to whether they regularly ensured that physical sitting arrangement was in order to ensure interaction between them and learners, 97 (47.3%) agreed that they ensured good sitting arrangement in their classrooms. The findings showed that majority of teachers agreed (M=3.71 and SD=1.14) with the statement. This implies that teachers ensure that physical sitting arrangement in classrooms is in order to ensure that interaction takes place with learners. The findings concurs with Waithanji et al. (2013) who found out that teachers can change classroom seating positions in a way that optimizes learning achievement for every learner, since the seat position has the potential to improve achievement gains. This therefore shows that seating arrangement is an important factor in determining provision of quality education in ECDE.

In general to teachers' responses, composite mean shows that respondents were undecided (M=2.76 and SD=1.29) on the status of indoor classroom environmental setting towards quality provision in public ECDE centres in West Pokot County. The finding suggests that some schools had proper indoor classroom setting while others did not have proper indoor classroom environmental setting in the county. The result

therefore indicated that indoor classroom environmental setting is critical to provision of quality education. However, the challenges in classroom environment was evident by Chepkwesis (2015) study in Trans-Nzoia County that showed that majority of the ECD teachers identified that the ECD enrolment, the physical conditions of classrooms, the physical conditions of school affected the pre-school classroom performance. Ngode (2014) recommended that quality assurance and standards officers to assess if the learning environment is conducive for young learners.

4.3.1 Relationship between Indoor Classroom Environment Setting and Provision of Quality Education in Public ECDE Centres

Pearson Correlation was computed at 0.01 significance level by correlating variables of indoor classroom setting against provision of quality education. The results of analysis are given in Table 4.8.

Table 4.8 Correlation Statistics on Indoor Classroom Setting and Provision of Quality Education

		Quality Education	Learning Facilities
Quality Education	Pearson Correlation	1	.663**
	Sig. (2-tailed)		0.001
	N	205	205
Indoor Classroom Setting	Pearson Correlation	.663**	1
	Sig. (2-tailed)	0.001	
	N	205	205
	** Correlation is significant at the 0.01 level (2-tailed).		

Source: Field Data (2016)

Statistics in Table 4.8 shows that the computed value is r=.663, and p=0.000 which is less than the 0.01 leading to conclusion that there exist significant relationship between indoor classroom setting and provision of quality education in public ECDE centres in West Pokot County, Kenya. The results imply that with good classroom

environmental setting there is likelihood of improvement in quality education. The results showed that classes that had good internal setting, provision of quality ECDE education was high compared to those that had poor indoor classroom environmental setting.

The result therefore indicates that there is need for improvement in classroom setting to allow and give opportunities for all learners to study with minimal or no interruptions. The study findings coincide with Chepkwesis (2015) who established that majority of the ECD teachers identified that the physical conditions of classrooms affected teachers' classroom performance. In addition, Waithanji et al. (2013) established that managing classroom indoor environments has the potential to address learning differentials, different seating positions and arrangements should be tested for their efficiency in instructional delivery and effectiveness in improving learning outcomes among learners with different academic ability. From the result and discussion from previous research, it is evident that learning environment in classroom need to be conducive to ensure quality education is received by learners.

4.4 Influence of Instructional Learning Resources on Provision of Quality Education in Public ECDE Centres

The third objective of the research was to determine how instructional learning resources utilisation influenced provision of quality education in public ECDE centres in West Pokot County. The study collected data through questionnaires, interviews and observation checklists. Resources both physical and human are critical to provision of quality early childhood education. Resources support quality teaching and learning. Therefore, the ECDE teachers were asked to state the frequency to which they utilised various instructional learning resources (always (5), often (4),

Sometimes (3), rare (2)–never (1) to ensure provision of quality education. The results are presented in Table 4.9.

Table 4.9 Influence of Instructional Resources on Provision of Quality Education

Variable (n=205)		**A**	**O**	**S**	**R**	**N**	**Mean**	**SD**
Textbooks	**f**	24	26	8	70	45	2.5805	1.28323
	%	11.7	12.7	3.9	34.1	22.0		
Storybooks	**f**	23	10	71	41	60	2.4878	1.27036
	%	11.2	4.9	34.6	20.0	29.3		
Charts pictures	**f**	17	29	38	64	57	2.4390	1.26120
	%	8.3	14.1	18.5	31.2	27.8		
Chalks	**f**	9	140	22	12	22	3.4976	1.05079
	%	4.4	68.3	10.7	5.9	10.7		
Plasticine	**f**	25	23	35	83	39	2.5707	1.26069
	%	12.2	11.2	17.1	40.5	19.0		
Sports equipment	**f**	32	37	32	23	81	2.5902	1.53006
	%	15.6	18.0	15.6	11.2	39.5		
Newspaper cuttings	**f**	23	25	20	46	91	2.2341	1.41206
	%	11.2	12.2	9.8	22.4	44.4		
Teacher guides and manuals	**f**	8	4	31	128	34	2.1415	.85434
	%	3.9	2.0	15.1	62.4	16.6		
Music instruments	**f**	29	24	60	45	47	2.7220	1.32316
	%	14.1	11.7	29.3	22.0	22.9		
Teaching aids	**f**	22	29	27	57	70	2.3951	1.36302
	%	10.7	14.1	13.2	27.8	34.1		
Composite mean							2.4410	1.24446

Key: A-Always, O-Often, S-Sometimes, R-Rarely, N-Never, and SD- standard deviation

Source: Field Data (2016)

Findings from Table 4.8 shows that with regard to textbook usage, 70 (34.1%) of teachers said that they rarely used textbooks in their classrooms. The finding show that teachers (M=2.58 and SD=1.28) sometimes used textbooks for instruction in public ECDE centres in the study area. The finding is similar to a research conducted by Chepsiror (2012) in Wareng Sub County TAC offices that showed the state of the few text books and visual aids were pathetic; they were old, dirty and torn and were haphazardly stacked against each other and this made teachers not to use them.

There was total disarray on arrangement and order of the materials. Similarly, Jepleting (2013) also found out that more than 4 children shared a mathematics text book. In addition, Mwamba (2013) revealed that majority of the schools did not have adequate text books or the ones available were in poor state. Inadequate or unusable textbooks may affect teaching/learning hence contribute to poor provision of quality education. In addition, Abiero (2013) study in Bondo found out that most parents who were dissatisfied with the quality of pre-primary education in Bondo district cited inadequacy of textbooks. The research finding in this study confirms that textbooks were at times utilised in provision of quality education in public ECDE centres in West Pokot County. Kombo and Gogo (2012) found out that pupil / textbook ratios ranged from 1:1 to 1:50; the latter was an extreme case in a slum school. An ideal ratio of pupil/textbook should be one book per child per subject which was achieved in only seven schools (22.58%). Lack of adequate textbooks usage greatly affects provision of quality of education.

The utilisation rate of storybooks was that 71 (34.6%) of teachers said that they sometimes used storybooks in classroom teaching and learning process. The result confirms that storybooks were rarely used (M=2.4 and SD=1.2) by teachers in teaching language skills to pupils in the study area. This could be due to their unavailability or inadequacy to be used by all learners. The study coincide with a research paper conducted by UBS Optimum foundation (2013) in Nairobi pre-schools that showed that storybooks, activity books, art materials and toys were limited or absent. The above result confirms that public ECDE centres in Kenya face shortage of storybooks for promoting quality education. The same situation was observed in Zimbabwe where Chikutuma (2013) study noted that teachers bought story books so that they would ensure that their children were exposed to stories. The researcher

found out that exposure to story books increased the ECD children's language and visual literacy.

On charts and pictures, 64 (31.2%) of teachers indicated that they rarely used charts and pictures in their classroom teaching and learning. The finding implies that charts and pictures were rarely (M=2.43 and SD=1.26) used by teachers for instruction in ECDE classrooms. This finding concurs with Chepkorir et al, (2014) who found out that picture and charts were rarely used in pre-schools. Chepsiror (2012) advocated that for quality education provision, the learning environment has to be prepared through provision of a range of physical instructional resources that are organized and made available for free, independent use, to stimulate the children's instinct in ECDE classrooms. Research findings further showed that in some schools, there was shortage of charts and pictures as one head teacher (HT3) pointed during interview on Question No. 5 indicated that:

> *There is a shortage of instructional materials like charts, pictures and other materials that require financial implication.*

In addition, one education officer from West Pokot Sub County indicated that:

> *Learning resources like pictures, charts and maps are inadequate in public ECDE centres in this sub county.*

This implies that most of the public ECDE centres in West Pokot County do not have adequate teaching aids such as pictures and charts and this could affect learner acquisition of critical skills. On the utilisation of chalks, 140 (68.3%) indicated that they often used chalks when writing on chalkboards. Descriptive statistics result confirms that most teachers often (M=3.49 and SD=1.05) used chalks in teaching ECDE classrooms on regular basis in the study area. This is in contrast from what

Mwamba's (2013) established that only 16.7% of schools had adequate chalks and other stationeries in their schools. The result implies there is adequate supply of chalks to teachers. This suggests that adequate provision of this resource will improve teaching and learning process in classroom.

On the use of plasticine, 83 (40.5%) of teachers indicated that they rarely used plasticine during creative and other arts-based activities in their school. The provision of plasticine which is a brand of modelling clay to small children is essential during modelling lessons. However, findings implied that teachers sometimes (M=2.57 and SD=1.26) used plasticine during modelling activities and this could be due to the fact that they are not affordable by many learners or ECDE centres since they have to be purchased. To mitigate the unavailability of this modelling resource, some teachers mentioned that they considered using clay or anthill soil during modelling activities instead of plasticine which performs similar roles.

The results on the frequency of sports equipment utilisation revealed that 81 (39.5%) of teachers said that they never used sports equipment during co-curricular activities in their centres. This suggests that majority of public ECDE centres in West Pokot county do not have sports equipments resources (M=2.59 and SD=1.53) to facilitate learner participation in extra-curricular activities. The unavailability of sports equipments in ECDE centres limit time dedicated for co-curricular activities for learners which is important for their physical, mental and social growth.

Through observation, the researcher observed that learners made their own balls (through use of plastic bags) rather than rubber (leather) balls. The non-regular and unavailability of sports kits to ECDE learners deprived them or decreased their social interaction abilities and cognitive development. The head teachers also indicated that

the sports equipments were inadequate (Interview Question No. 5) in their schools as remarked by one head teacher (HT10) who said that:

> *The facilities for outdoor are inadequate due to large numbers of pupils coming in every day*.

In addition, one education officer from Central Pokot Sub County had this to say:

> *Although majority of pupils love to play, the sporting equipments are not actually prioritised in majority of public ECDE in this area.*

The above response confirms that instructional resources for sports are inadequate in most public ECDE centres in West Pokot County and this may affect provision of quality education. The findings coincide with a comparative research done by Ngigi et al. (2015) in Nairobi that showed that public ECDE centres did not have adequate play materials for indoor play.

On the newspaper cuttings, 91 (44.4%) of teachers indicated that they had never used newspaper cuttings during teaching and learning process in classroom. The newspapers contain stories, pictures and activities for learners to learn, practice and achieve competency skills in reading, writing and even creativity. From the result, it is evident that teachers rarely (M=2.23 and SD=1.41) used newspapers cuttings during ECDE learning instruction in West Pokot County. It is seen that most of teachers did not use newspaper cuttings during instruction.

With regard to frequency of teacher guides and manuals, 128 (62.4%) said that they rarely used teacher guides and manuals during classroom instruction. These resources are aimed at providing teachers with procedures on syllabus coverage, how to prepare and update their schemes of work, lesson plans and prepare lesson notes. Their rare utilisation affects lesson planning and implementation. From the result, it can be

concluded that majority of teachers' rarely utilised teaching guides and manuals (M=2.14 and SD=0.85) thereby affecting provision of quality education in classrooms. The results is similar from what Mwamba's (2013) who established that 43.6% of teachers were dissatisfied with the availability of teacher preparation notebooks, 37.3% of teachers were extremely dissatisfied with textbooks while 40.4% of teachers were satisfied with the writing materials in their school. This revealed that similarity exists in rare utilisation of teaching guides and manuals across schools in Kenya. In addition, a research by Chikutuma (2013) found out that ECD teachers in the study stated that they did not have reference books, resources or story books and had to buy their own even though it was the schools' responsibility. The result confirms that the problem of teachers having inadequate teaching guides influenced provision of quality education to ECDE pupils in West Pokot County.

Results also showed that 60 (29.3%) of teachers admitted that they sometimes used musical instruments in their teaching. The results are showing that musical instruments were sometimes (M=2.72 and SD=1.32) used by teachers in pre-school centres in the study area to teach various activities. These resources are critical during learning of cultural and language activities in ECDE classrooms. Observation by researcher showed that some teachers relied on traditional / cultural musical instruments as opposed to modern ones.

When asked to indicate the frequency to which they were using teaching aids, 70 (34.1%) said they have never used during teaching in public ECDE centres in West Pokot County. From the result, it is clear that teachers rarely used (M=2.39 and SD=1.36) teaching aids for instruction in their schools and this is one important resource for ensuring provision of quality education which happens to be inadequate

in public ECDE centres in West Pokot County. These materials tend to assist children to open up in many areas which lead to holistic learning. Were (2014) noted that when children are exposed to various teaching and learning resources, they tend to be active and involved in the learning process.

Composite statistics showed that teachers rarely (M=2.44 and SD=1.24) used learning resources in provision of quality education in public ECDE centres in West Pokot County, Kenya. This revealed that the learning resources were inadequate in public ECDE centres. The result coincides with Mwamba (2013) who found out that teaching / learning aids were inadequate in the schools as indicated by majority 18(60.0%) of the principals. Murundu, Indoshi and Okwara (2010) results also showed that most ECDE centres in Emuhaya District had inadequate teaching-learning resources, poor diet and inappropriate medium of instruction. The above findings indicated that schools did not have the required instructional resources for provision of quality education in public ECDE centres in West Pokot County.

On their part, the head teachers also voiced their concerns on the adequacy of instructional resources to improve quality education delivery in schools. On interview question No. 5, one head teacher (HT7) mentioned that:

> *The materials are not adequate because of the large numbers of pupils in our ECDE.*

In addition, one DICECE officer from North Pokot Sub County remarked that:

> *Instructional resources for teaching and learning in public ECDE centres for quality education provision are inadequate.*

From these, it can be deduced that overcrowded ECDE classrooms inhibits adequate provision of instructional resources to pre-school children in West Pokot County. This

ultimately affected provision of quality education. The result on the inadequacy of instructional learning resources was also established in Nigeria by Osho et al. (2014) who found out that resources including television/computer systems, nature table/corners, toys and models, charts and well drawings and even playing equipments like see-saw, merry- go – round, slides among others were almost completely not available in any of the schools. Similarly in Kenya, Bosibori et al. (2015) revealed that teaching and learning resources were inadequate in all the ECDE centres. This negatively affects the implementation of inclusive education in Nyamira North Sub County.

Teaching and learning materials are important for enrolment and maintenance of learners with special needs in pre-school centres. Even in Uasin Gishu, Chepkorir et al. (2014) established that majority 41(68.3%) of respondents reported that they did not have adequate teaching and learning materials while 19(31.7%) did agree that they had adequate materials. In addition, Mwamba (2013) established that a significant number of learners were not satisfied with the status of teaching learning resources in their school which affected quality education. In addition, Were (2014) established that resources aid the teacher to effectively transfer the content to the pre-primary learner. The above findings confirm that majority of ECDE centres face the challenge of inadequate instructional resources for learning.

The researcher also made observation on the availability and condition of various instructional resources in classrooms. Here is what the researcher recorded as given in Table 4.10.

Table 4.10 Researcher's Observation on Instructional Resources in ECDE

Resources	Type	Condition	Adequacy
Teachers	TSC, PTA and voluntary staff	They were not adequately motivated	They were inadequate in schools
Textbooks	Those approved by the government	They were outdated.	Inadequate in most of public ECDE centres
Charts	Those purchased and those improvised through manila paper	They were in poor state	They were inadequate to be used in schools. Due to lack of adequate classrooms, some could not be mounted
Sports equipments	Manufactured ones, locally improvised	They were not adequately handled while others were not being utilised well	They were inadequate in schools (manufactured). although the locally improvised ones were adequate
Teacher guides	Print media	In poor state and outdated	They were inadequate in schools
Chalks	Low standard ones	They were used by teachers	They were adequate in schools

Source: Field Data (2016)

The researcher's observation showed that instructional learning resources were inadequate in majority of public ECDE centres in West Pokot County. Only chalks were found to be adequate in most ECDE centres visited. Other instructional learning resources appeared to be inadequate like; chalks, teacher guides, musical sports equipments, textbooks and charts. The inadequacy of instructional resource influenced provision of quality education.

4.4.1 Relationship between Instructional Learning Resources and Provision of Quality Education in Public ECDE Centres

A Karl Pearson Correlation was computed to check the degree of relationship between teachers utilisation of instructional resources influenced quality of learning in ECDE centres in West Pokot County at 0.01 (99%) significant level (2-tailed). The results of the analysis are presented on Table 4.11.

Table 4.11 Utilisation of Learning Resources and Provision of Quality Education

		Quality Education	Learning Resources
Quality Education	Pearson Correlation	1	
	Sig. (2-tailed)		
		205	
Learning Resources	Pearson Correlation	.492**	1
	Sig. (2-tailed)	0.001	
		205	205

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

Source: Field Data (2016)

Correlation on Table 4.11 indicates that there exist positive correlation (r=0.492) between utilisation of learning resources and provision of quality education in public ECDE centres in West Pokot County which is significant ($p<0.01$) for two tailed test. This led to conclusion that there is significant relationship between learning resources and provision of quality education in public ECDE centres in West Pokot County. This is because instructional learning resources were found to be moderately used in majority of public ECDE centres in West Pokot County. The findings are similar to the study by Bosibori et al. (2015) that showed that most ECD centres lack the necessary facilities, equipment and materials that would promote holistic development of children. Were (2014) also found out that effective use of teaching and learning

resources promoted pre-primary learners transition to class one as this accounts for 83% of the respondents.

The right condition necessary for optimal development and learning need to be secured within children Microsystems, among which are ECD centres. However, the result suggests that if learning resources are provided and utilised by teachers, quality education will be provided to ECDE learners in the study area. Boke (2014) also found out that curriculum implementation was poor due to poor teacher qualification and performance, low teacher students ratio, unavailability of physical facilities, inadequate teaching and learning resources and poor supervision of the implementation process. This implied that necessary instructional resources have to be provided for effective provision of quality education in ECDE centres.

Chepkwesis et al. (2015) also found out that supply of teaching/ learning materials affect the teachers' class room performance. Chepkorir et al. (2014) also found out that environments with adequate and varied teaching and learning materials enhanced children's understanding of new concepts. It can be deduced that for quality education to be achieved in ECDE, learning resources have to be provided. When these resources are provided, teachers will utilise them to pass knowledge to learners. Moreover, learning resources in centres used during teaching attract, more ECDE children to enrol in schools because children enjoy playing with the materials provided (Were, 2014).

4.5 Influence of Outdoor Classroom Environment on Provision of Quality Education in Public ECDE Centres

The fourth objective of the study sought to determine the influence of outdoor classroom environment on provision of quality education in public ECDE centres in West Pokot County. Through statements measured in a five point Likert scale of: (strongly disagree, disagree, undecided, agree and strongly agree), the teachers were asked to indicate their opinion. The results of the analysis are given in Table 4.12.

Table 4.12 Influence of Outdoor Classroom Environment on Provision of Quality Education

Variable (n=205)		**SD**	**D**	**U**	**A**	**SA**	**Mean**	**SD**
I regularly play with pupils outside the classroom	**f**	19	10	15	109	52	3.8049	1.15086
	%	9.3	4.9	7.3	53.2	25.4		
Surfaces of outdoor play areas are free from sharp objects, harmful plants and discarded materials and equipment	**f**	40	95	16	29	25	2.5317	1.28918
	%	19.5	46.3	7.8	14.1	12.2		
The school compound is safe and securely fixed with playing equipments	**f**	33	99	16	26	31	2.6244	1.31372
	%	16.1	48.3	7.8	12.7	15.1		
The school is fenced around to provide security and minimise interference from outside	**f**	18	24	69	71	23	3.2780	1.09175
	%	8.8	11.7	33.7	34.6	11.2		
We sometimes conduct our lessons outside the classroom to interact with nature	**f**	10	11	14	126	44	3.8927	.96416
	%	4.9	5.4	6.8	61.5	21.5		
We have enough playgrounds for our pupils	**f**	17	24	33	43	88	3.7854	1.32945
	%	8.3	11.7	16.1	21.0	42.9		
We regularly engage pupils in environmental activities of cleaning the compound, collecting trash and even planting flowers/trees	**f**	22	28	13	89	53	3.6000	1.29706
	%	10.7	13.7	6.3	43.4	25.9		
Composite mean							**3.3596**	**1.20517**

Key: SD-Strongly Disagree (1), D-Disagree (2), U-Undecided (3), A-Agree (4), SA-Strongly Agree (5) and SD- Standard Deviation

Source: Field Data (2016)

Table 4.12 result shows that most 109 (53.2%) of teachers agreed that they regularly played with pupils outside the classroom during co-curricular activities. The result shows that most (M= 3.80 and SD=1.15) teachers played with their pupils outside classroom as required by curriculum for co-curricular activities. The above responses indicated that teachers create a pleasant atmosphere in ECDE by regularly playing with their children outside the classroom for the purpose of ensuring that they meet the extra-curriculum goals. Dewey (1857–1957), the father of child-friendly school, supported the idea of children learning through play. The researcher also observed this practice (Appendix IX-Plate 19) where teachers engaged their pupils in ball games as evidenced from the image attached.

When asked as to whether surfaces of outdoor play areas were free from sharp objects, harmful plants and discarded materials and equipment, 95 (46.3%) disagreed. The result implies that majority 65.8% of teachers agreed that their school compounds were not smooth as they had sharp objects (thorns and stones) that prevented pupils from participating in outdoor activities on regular occasions. The computed mean was 2.53 with standard deviation scores of 1.28 suggesting that teachers were undecided on the statement. The findings of the study coincides with Sitati et al. (2016) that showed that outdoor areas were not free form sharp objects and harmful plants. This indicated that quality education cannot be achieved where the environment appears not to be safe for children to play.

On whether their school environment compound was safe and securely fixed with playing equipments like swings, climbing frame (in one centre), merry go round (in one centre), kites, tyres, balls, ropes; neither had sand pit, 99 (48.3%) of teachers disagreed that their schools had the above mentioned equipments. The computed

means was (M=2.62 and SD=1.31) which suggested that most public ECDE centres in West Pokot County compound were not safe and not fitted with play materials like tyres which are critical requirement for ECDE centres. Their lack of participation in sports activities was due to lack of playing kits, balls, ropes, tyres and unlevelled area (playground) in their institutions. This problem was found to be common in majority of schools in the four sub counties as researcher observed during data collection. The results coincide with a research done by Were (2014) in Rachunyo South Sub County that established that only 10% of pre-schools had outdoor fixed materials. In addition, Chikutuma (2013) study found out that the schools did not have adequate play equipment for grades one to three, since in most schools they were meant to be sharing the play equipment with ECD children.

When asked as to whether their school was fenced around to provide security and minimise disruptions and interference from outside, 71 (34.6%) of teachers agreed that their schools had fence and 69 (33.7%) were undecided on the statement. This indicates that they were undecided (M=3.27 and SD=1.09) on whether their schools were secured with fences. Observation by the researcher during the period of data collection showed that despite schools reporting to have fence, most (90%) of them were live fence with several openings where pupils passed through when getting to school. this implied that the security of pupils for conducive learning was regularly interrupted by neighbours and animals grazing from nearby fields since they were accessing the schools.

The study is somewhat different from a study conducted by Ngigi et al. (2015) in private primary schools that showed that they had developmentally appropriate learning materials, adequate play materials, safe materials, a fenced area, lockable

gates, a well-maintained and clear compounds. This suggested that investment in purchase and design of school outdoor resources is emphasised in private schools than public schools in Kenya.

On whether ECDE teachers conducted their lessons outside classroom, 126 (61.5%) agreed. The result shows that more than 83.0% of teachers agreed (M=3.89 and SD=0.96) that they conducted some of their lessons outside the classroom to ensure learners interacted with the environment. This was done especially when their learning required the learners to understand their environment, plants and even animals. Plate 15 and 18 (Appendix IX) shows an ECDE classroom ongoing under a tree to learn on nature activities while others were in the bush. This is one of the positive outdoor classroom environmental practices that promote quality education in ECDE schools. The study coincides with Osborne (2013) research in New Zealand that showed that learning about pond ecosystems was more powerful if students visit a pond in addition to learning about them in a classroom or textbook.

When asked as to whether they had enough playgrounds for their pupils, 88 (42.9%) strongly agreed and 43 (21.0%) agreed. From the result, it is clear that 63.9% of schools in West Pokot County public ECDE centres have enough playgrounds for learners' participation in co-curricular activities (M=3.78 and SD=1.32). However, observation data showed that some schools did not have levelled playgrounds as the environment was surrounded by bushes while in others were rocky.

The results coincide with Olaleye and Omoyayo (2009) research in Nigeria that showed that many of the ECD lacked portable water and conducive playgrounds for the children. The unavailability of safe playgrounds may inhibit the ECDE children to reach their perceived potential to acquire knowledge, physical and perceptual skills or

competences that ensure their holistic learning and development (Macharia, 2012). Contrary to teacher responses, some head teachers during interview question No. 7 where head teacher (HT4) indicated that:

> *The indoor activities have enough spaces within the classrooms. Whereas outdoor activities they have a wide open safe field for playing. Enough time has been allocated in the timetable to fit the outdoor activities.*

Another school head teacher (HT8) remarked that:

> *The teachers have always attended the outdoor activities without fail. The playing field is always available for ECDE pupils (nursery up to Std 1-3) included. The indoor activities are only affected by limited space available in the classes.*

From the education perspective, one from North Pokot Sub County indicated the following with regard to outdoor learning environment:

> *During monitoring, I check the outdoor participation and use of facilities as well as the needs of the centre.*

Some of the ECDE centres observed were sharing their playing field with primary school pupils while others their playing fields were not levelled. The study finding coincides with Okudo and Omotuyole (2014) who found out that in the playful interactions, they utilize play gadgets and materials in their learning environments. Teachers trained for this level have also strongly advocated and emphasized the play-way method with an environment richly enhanced with play gadgets and materials.

On whether they regularly engaged pupils in environmental activities, 89 (43.4%) of teachers agreed with the statement. The results showed that only 24.4% of teachers did not involve their pupils in cleaning compound, collecting trash, planting trees and

flowers as part of their environmental studies. Most of the teachers tended to agree with the statement (M=3.60 and SD=1.29). The act of teachers to engage learners in environmental conservation activities at an early age will ensure that learners grow up knowing the significance of protecting their environment against destruction. Composite mean with regard to outdoor environment influence on provision of quality education in public ECDE, results show that teachers agreed (M=3.35 and SD=1.20) that outdoor environmental influenced provision of quality education to ECDE pupils.

4.5.1 Relationship between Outdoor Classroom Environment and Provision of Quality Education in Public ECDE Centres

A Karl Pearson correlation was computed using two-tailed test at 0.01 (99%) significant level. The results of the analysis are presented in Table 4.13.

Table 4.13 Outdoor Classroom Environment and Provision of Quality Education

		Quality Education	Outdoor Classroom Environment
Quality Education	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	205	
Outdoor Classroom Environment	Pearson Correlation	.208**	1
	Sig. (2-tailed)	0.003	
	N	205	205

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

Source: Field Data (2016)

Result on Table 4.13 shows that there exists positive correlation (r=0.208) between outdoor classroom environmental practices by teachers and provision of quality education which is significant ($p<0.01$) for two tailed-test in West Pokot County schools. This led to conclusion that there exist significant relationship between

outdoor classroom environment and provision of quality education in public ECDE centres in West Pokot County, Kenya. This implies that due to unfavourable school environment (compound), teachers do not regularly conduct outside lesson in the open. If the environment was inclusive, it could promote competence, independent exploration and learning through play by ECDE children.

4.5.2 Respondents Suggestions on How Learning Environment can be changed to Improve Provision of Quality Education

Through open-ended questions in the questionnaires and interviews, the respondents were asked to suggest ways in which learning environment can be transformed in order to improve quality education in ECDE. The following are the responses made by various head teachers on Question No. 9. One head teacher HT11 said that:

> *The learning environment can be improved by expanding the available structures, employed a trained ECDE teacher and incorporating the surrounding environment to suit learning.*

Another head teacher HT22 also reiterated that:

> *The learning environment can be improved by training ECDE teachers on how to improvise the available materials within their environment.*

An education officer interviewed on question No. 10 from Central Pokot Sub County said that:

> *An increase in budgetary allocation to allow expansion and employment of qualified ECDE personnel.*

Another education officer from West Pokot Sub County also said that:

> *Increase finance support for the ECDE.*

The one from Pokot South Sub County remarked that:

> *We need assistance from all stakeholders.*

And the officer from North Pokot Sub County remarked that:

Build more ECDE centres.

From the above responses, it is clear that different strategies have been advanced on how to improve learning environment in pre-schools in West Pokot County and Kenya at large.

4.6 Chapter Summary

This chapter has dealt with presentation of data analysed from questionnaires, observation checklist and interview schedules. Data presentation has mainly been done through use of tables and narrations for qualitative data. The quantitative data presentation involved used of descriptive and inferential statistics. The research results have presented the situation of learning environment in various public ECDE centres in West Pokot County and their influence on provision of quality education for pupils.

The results obtained for the research were also compared to see if there existed significant relationship between learning environment and provision of quality education in public ECDE centres. Moreover, deductions were made on the actual influence of the learning environmental features on the provision of quality education in ECDE centres in West Pokot County. The next chapter presents the summary of the major findings of the study, conclusions, recommendations and suggestions for future research.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study investigated the influence of learning environment on provision of quality education in public ECDE centres in West Pokot County. This chapter presents the summary of findings, conclusions, recommendations and suggestions for further research.

5.2 Summary of Findings

The study was conducted in light of the challenges faced by public ECDE centres in the area that had affected transition of pupils from one level (lower primary) to upper primary in West Pokot County. Moreover, research reports showed that majority of learners in the county transiting from ECDE recorded low competencies in reading and writing. Therefore, the research sought information from education officers, ECDE teachers and head teachers to answer the key research questions. This was because a negative learning environment adversely affected pupils learning like low academic performance, poor behaviour, anxiety and even sometimes depressions.

The results of the study have shown how learning environment influence provision of quality education in public ECDE centres in West Pokot County. The ECDE centres were the ones that were attached to primary schools and were in direct command of head teachers. The summary of the findings of the study follows the research objectives which were to:

1. Investigate the influence of learning facilities on provision of quality education in public ECDE centres in West Pokot County

2. Establish the influence of indoor classroom environment setting on provision of quality education in public ECDE centres in West Pokot County
3. Determine the influence of instructional learning resources on provision of quality education in public ECDE centres in West Pokot County
4. Assess the influence of outdoor classroom environment on provision of quality education in public ECDE centres in West Pokot County

The summary discusses briefly the key findings of the research based on the themes of the study in the following sub-sections.

5.2.1 Influence of Learning Facilities on Provision of Quality Education

The first objective of the study was to investigate how the availability and adequacy of learning facilities influenced provision of quality education in ECDE centres in West Pokot County. In a school situation, supportive infrastructure is critical to ensure curriculum implementation takes place. Therefore, the research collected information on the status of learning facilities and how they affected provision of quality education in ECDE centres in West Pokot County. Appropriate and adequate physical facilities are necessary for effective teaching/learning in ECDE. The result showed that 65.4% of schools had inadequate chalkboards.

In terms of classrooms, 6.3% of public ECDE centres were found to have adequate classrooms (Table 4.4.), 36.6% of ECDE centres did not have any classroom structure, children were learning in the open while others were learning under trees. This was common in schools that were located in rural areas (Appendix IX, plate 1 & 6). Facilities like tables, offices, kitchen and stores were inadequate in public ECDE centres in West Pokot County (Plate 15 and 18).

The findings provided a grim picture on the status of pre-school centres in West Pokot County. However, information from head teachers showed that there were initiatives ongoing on construction of more ECDE centres and improvement of the existing ones through county governments and non-government organisations. Through open ended questions, the teachers said that inadequate facilities inhibited provision of quality education. For instance, learners without chairs and desks rarely participated in schools since they could not have places they could sit on. Moreover, lack of water and sanitation facilities increased chances of learners contracting waterborne diseases in their schools. Competition for resources between ECDE and primary schools also affected the provision of quality education in schools. In conclusion, the research found that there was significant relationship ($p<0.01$) between learning facilities and provision of quality ECDE in West Pokot County.

5.2.2 Influence of Indoor Classroom Environment Setting on Provision of Quality Education

The second objective of the study was to establish how indoor classroom environmental setting affected provision of quality education in public ECDE centres in West Pokot County. The study sought information from ECDE teachers and head teachers on the status of their classroom setting. According to Policy Guidelines on ECDE (2006), classrooms have to be convenient, air, large and organised in a good manner to ensure learning takes place without interruptions. From the study findings, teachers were undecided ($M=2.76$ and $SD=1.29$) on the condition and status of indoor classroom environmental setting on provision of quality education It was found out that only 37.6% of classrooms were well ventilated, 52.2% of classrooms studied were found not to have enough space for easy classroom movement and 53.6% of classrooms were found to be inaccessible by all learners including those with

disabilities. In addition, 61.0% of teachers indicated that their classes lacked adequate nature corners. Designs of tables, chairs and desks in the classrooms proved to be a challenge to majority of learners as some were high while others were rough making it impossible for learners to concentrate during lesson time. It was also found out that there was lack of adequate furniture while in some ECDE centres had no furniture at all, many more did not have enough for the number of enrolled pupils thereby affecting provision of quality education. The researcher observed that often; the furniture available did not match with the physical size and stature of children.

All the respondents (ECDE teachers, head teacher and education officers) agreed that indoor classroom environment setting was significant in improving the quality of education provided in ECDE centres in the study area. This led to conclusion that indoor classroom environment influenced to a moderate degree provision of quality education in public ECDE centres in West Pokot County. However, the challenge remained on school administration involvement of other stakeholders like teachers to ensure the resources and design of classrooms conformed to the standards that the Ministry of Education through the policy guidelines that had outlined in chapter two.

5.2.3 Influence of Instructional Learning Resources on Provision of Quality Education

The third objective of the study was to determine the influence of instructional learning resources on provision of quality education in public ECDE centres in West Pokot County. Learning instructional resources are critical to effective implementation of ECDE curriculum. The resources are human and material. Information from head teachers showed that majority of ECDE centres were understaffed while the ones available were not adequately remunerated.

Majority of teachers complained that there were no adequate instructional resources to aid them in teaching and learning. Composite mean showed that teaching and learning resources were rarely used (M=2.44 and SD=1.24) in classroom instruction in public ECDE centres in West Pokot County. It was established that teachers sometimes used the following resources for instructions; textbooks, story books, plasticine, sports equipments and music instruments. Resources such as teaching aids, teacher guides, manuals newspaper cuttings, charts and pictures were found to be rarely used in classrooms. Chalks were often used in the classroom teaching and learning.

Despite their usage, the resources were inadequate in schools and this was found to be a challenge towards provision of quality education. The inadequacy of appropriate learning resources in public ECDE centres was found to negatively affect provision of quality education. The research results showed that provision of adequate and current teaching and learning resources was a challenge to majority of public ECDE centres in West Pokot County. Most respondents said that parents were unable to pay their children school fees since they considered ECDE education as free. This notion made majority of parents not to pay fees for their children.

Some head teachers also noted that despite county government commitment to improve the status of early childhood education, there were delays in delivery of support to schools. This has created a problem to school head teachers who are faced with the challenge of providing the required resources in schools. The research result revealed that without adequate instructional resources, quality ECDE curriculum cannot be provided to pupils. The inadequacy of instructional learning resources was found to be a hindrance towards provision of quality education to ECDE pupils in West Pokot County. The p value was less than 0.05 leading to the conclusion that

there existed significant relationship between learning resources and provision of quality education in ECDE centres. However, the relationship appeared to be moderate suggesting that majority of schools did not have adequate resources for classroom instruction in ECDE.

5.2.4 Influence of Outdoor Classroom Environment on Provision of Quality Education

The fourth objective of the research was to assess how outdoor classroom environment affected provision of quality education in public ECDE centres in West Pokot County. Learning in ECDE takes place inside and outside classroom. For instance, science, languages, sports (physical education) and environmental activities were conducted in open field, field excursions and nature observations. Therefore, teachers had a responsibility of ensuring that they consider outside learning environment to ensure provision of quality education.

Children learn better through play, discovery and imitation. This is only possible if the appropriate and adequate play equipment and materials are provided to the children. Facilities that meet the needs and interest of the child should be provided and the learning environment and materials should be child-friendly, brightly coloured and suitable for the age of the child. This makes learning interesting and fun, motivating the child to love learning. From the study results, it was established that 83.0% of teachers conducted their lessons outside so that learners can interact with nature. The result shows that majority of ECDE teachers were aware of the importance of taking lessons outside classroom to ensure that learners interacted with their natural environment.

The ECDE teachers engaged pupils in environmental activities of sweeping, environmental cleaning, planting of flowers and trees. The fourth objective found that there existed significant relationship between outdoor classroom environment and provision of quality education in schools. The results of the study therefore showed that outdoor classroom environment positively influenced provision of quality education in public ECDE centres in West Pokot County. This implied that when teachers conduct activities outside classrooms, learners were able to acquire required competencies to assist in their growth and development.

5.3 Conclusions

The study sought to find out how four learning environmental features; school facilities, indoor classroom setting, learning resources and outdoor environment affected provision of quality education to ECDE pupils in West Pokot County. The research established that learning facilities were critical to provision of quality education in ECDE centres in West Pokot County.

However, research results showed that majority of public ECDE centres in the county did not have adequate facilities to support provision of quality education. Lack of adequate classrooms, desks, chairs and tables affected pupils learning as overcrowding affected learners acquisition of competency skills required at ECDE level. It was revealed that inadequate learning facilities hinder the achievement of quality education while adequate learning facilities promoted quality education in West Pokot County public ECDE centres.

The physical environment in classroom was also found to be critical in ensuring positive learning environment takes place. Teachers have to pay attention to how physical classroom environment is as it is one of the ingredients for successful

curriculum implementation. Research results revealed that majority of classes did not have adequate space for teacher movement while others were not well ventilated increasing incidences of pupils sleeping while in class. The second objective concluded that there existed significant relationship between indoor classroom environment and provision of quality education in public ECDE centres in West Pokot County. All the respondents agreed that indoor classroom environmental setting needed adjustments and modifications to ensure that the goals and objectives of ECDE are realised.

Good quality instructional materials in public ECDE centres in the study area were found to be inadequate. This made it impossible to use by all learners in classroom teaching. Teaching aids, teacher guides and manuals, newspaper cuttings and pictures were found to be rarely used in ECDE centres by teachers. Textbooks, musical instruments and story books were found to be sometimes used in provision of quality education in public ECDE centres in West Pokot County. Lack of adequate and modern instructional learning resources was found to be a significant impediment to provision of quality education in public ECDE centres.

Head teachers and ECDE teachers agreed that if the learning resources were provided to the high number of pupils enrolled in their institutions, quality teaching and learning will ensure high quality delivery of ECDE services. However, it was found that disparity exist in the provision of resources as schools located in far flung and remote areas were not adequately provided with proper resources. The third objective showed that there was significant relationship between learning resources and provision of quality education in ECDE centres.

The goal of ECDE is to ensure that learners develop holistically through their interaction with the environment they are in. Both the ECDE teachers and head teachers concurred that outside environment was critical to provision of quality education. A positive observation revealed by the study finding was that majority of teachers were able to play and interact with their children outside classrooms during sports and physical education exercises.

However, it was established that despite availability of playing fields for young children, some of the fields were not levelled while others had thorny bushes and rocks making participation of children in sports and physical activities difficult. The fourth objective revealed that outdoor classroom environment moderately influenced provision of quality education in public ECDE centres in West Pokot County. In general, it has been observed that a conducive environment helps children to feel a sense of belonging and attachment as well as allowing them opportunities to practice using materials and equipment enabling them to acquire quality ECDE education in West Pokot County.

5.4 Recommendations

Based on the findings of the study, it has been shown that learning environment is critical to provision of quality education in ECDE centres in West Pokot County. However, significant challenges were observed and require immediate action by all stakeholders to redeem the state of ECDE education. The recommendations made in this work touches on policy development, implementation and collaboration by all stakeholders in improving quality of ECDE. The study makes the following recommendations based on the objectives of the study:

1. To improve on the status of learning facilities, there is need for county government of West Pokot to speed up the process of constructing more ECDE classrooms to ensure learners admitted learn in a spacious classroom. ECDE administration (head teachers and parents association (PA)need to engage other stakeholders (parents) to mobilise resources for construction of more classroom facilities that will ensure more learners are admitted and retained in their institutions. Provision of right classroom to ECDE facilities will ensure that the environment is comfortable to learners and teachers through provision of shelter, protection against risks to their health, sufficient physical space and appropriate sanitary facilities separate for boys and girls and other utilities such as electricity and water. On the policy implementation front, approval should be given to ECDE School building plans before they construct in order to monitor the standard of facilities. The ECDE facilities should be inspected before learners are admitted into the schools and monitored and maintained to ensure quality ECDE learning institutions.
2. To improve on classroom setting towards provision of quality education, the study suggest that there is need for ECDE teachers to work with head teachers to ensure that classrooms setting are safe, secure and conducive for teaching and learning process. On the policy front, there is need for county government to work with national government to establish appropriate standards for ideal Indoor Classroom Environmental Setting for ECDE learners in West Pokot County. This is because the classroom environment needs to encourage physical, emotional and intellectual development of learners which will promote good physical and mental growth.

3. There is need for teachers to improvise locally available materials to ensure that learners appreciate and are stimulated to learn. The ECDE centres management need also to sponsor teachers for further training to improve their knowledge and skills on how to operate modern learning resources. In addition, ECDE centres management need to consider inviting concerned stakeholders (NGOs, former pupils, early childhood education officers) to come and assist in making instructional learning materials that can be used in ECDE centres.
4. There is need for head teachers to supervise and ensure that co-curricular activities are fully implemented by teachers in ECDE centres around the county outside the classroom as Education Act 2013 recommends. Teachers need to move their lesson from inside to outside the classroom to ensure learners are taught and interact with their natural environment. The school management need also to ensure that a school environment is created that has facilities for physical education, both indoor and outdoor. Sports equipments and musical instruments need also to be considered during outside classroom learning by teachers.

5.5 Suggestions for Further Research

The study was conducted to determine the influence of learning environment on provision of quality ECDE curriculum in West Pokot County. Based on the findings, conclusions and recommendations of the study, the study makes the following recommendations for further studies;

1. A similar study can be conducted in other region to determine influence of learning environment on quality education delivery
2. A comparative research can be conducted between learning environment in private and public ECDE centres towards provision of quality education
3. Influence of teacher competencies on provision of quality education in ECDE centres.

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APPENDICES

Appendix I: Research Introductory Letter

Dear respondent,

RE: REQUEST TO PARTICIPATE IN THE RESEARCH

I am a doctoral student at University of Eldoret, carrying out a research study on **"Influence of Learning Environment on Provision of Quality Education in Public ECDE Centres in West Pokot County.** The information collected will be used to make recommendations for improvement of the teaching and learning process of primary school pupils.

You are therefore kindly requested to participate and respond as best as you can to items in the questionnaire/interview guide. The information provided will be treated with utmost confidentiality and will be used only for the purpose of this study.

Let me take this opportunity to thank you in advance for taking part in this study.

Yours sincerely,

CHEPKONGA C. MILDRED

Student

University of Eldoret

Appendix II: Questionnaire for ECDE Teachers

Instructions

Kindly follow the instruction guide through the questionnaire. Please respond to each question by ticking the appropriate response. Your response will be highly confidential

Section A: Demographic Data

1. What is your gender?

Male ( )

Female ( )

2. What is your age bracket?

20-30 years ( )

41-50 years ( )

31-40 years ( )

Above 51 years ( )

3. What is your highest educational qualification?

Form Four ( )

Certificate ( )

Diploma ( )

Degree ( )

Other (specify) ……

4. Indicate your experience in teaching at ECDE centre?

0-5 years ( )

6-10 years ( )

11-15 years ( )

16-20 years ( )

Above 21 years ( )

Section B: Provision of Quality Education in ECDE Centres

This section addresses the dependent variable for the research which is denoted by provision of quality education in public ECDE centres.

5. Rate your responses on the level of quality education being provided to ECDE children in your school with regard to their performance in several areas while at school.

No	Quality Education Provision	Very high	High	Average	Low	Very low
i	Pupils acquisition of numeracy skills					
i	Pupils acquisition of reading and writing skills					
iii	Pupils ability to solve problems on their own					
iv	Teacher-pupil ratio					
v	Pupils interest in learning (coming to school daily)					
vi	Pupils transition rate from one level to another					
vii	Pupils performance in exams and assessments					
viii	Pupils ability to work together in teams/ groups					

Section C: How Learning Facilities Influence Provision of Quality Education in ECDE Centres

6. Learning facilities are critical to enhance quality education is delivered in school. Therefore, this section seeks your opinion on how learning facilities affect provision of quality education in your institution. Indicate the availability and adequacy of the following learning facilities in use in your institution.

No	**Learning facilities**	**Available**		**Unavailable**
		Adequate	**Inadequate**	
i	Classroom			
ii	Kitchen			
iii	Latrines			
iv	Playing Field			
v	Tables			
vi	Desks			
vii	Chalkboards			
viii	Store			
ix	Offices			

7. What can you say on the adequacy of learning facilities in your institution and how they affect quality education delivery? _____

_____

_____

Section D: How Classroom Indoor Learning Environment Setting Influence Provision of Quality Education

8. On the following statement, indicate the extent to which you agree/disagree on the influence of indoor learning environmental setting on provision of quality education in your institution. Use the following scale to indicate your degree of agreement/disagreement Scale: SD-Strongly Disagree, D-Disagree, U-Undecided, A-Agree and SA-Strongly Agree.

No	Indoor classroom environmental setting	SD	D	U	A	SA
i	The classroom is well ventilated and this ensures that there is adequate supply of air thereby minimising sleeping amongst learners					
ii	There is enough space in the classroom for easy movement					
iii	The classroom is easily accessible by all learners (including those who are disabled)					
iv	Our classrooms have nature corners for enhancing teaching and learning					
v	The materials and resources for learning are accessible by all learners in our centre					
vi	Pupils can be able to write their work well because the desks and tables are not high					
vii	I regularly ensure that physical sitting arrangement (how the tables, chairs and benches have been arranged) is orderly manner to ensure interaction between learners and I					

9. What is your opinion on the influence of indoor classroom environment setting (inside) on quality learning in your school? _____

_____

_____

Section E: How Instructional Learning Resources Influence Provision of Quality Education

10. Indicate the usage of the following learning resources in teaching and learning process in your school for quality education delivery; A-Always, O-Often, S-Sometimes, R-Rarely and N-Never

No	Instructional Learning Resources	A	O	S	R	N
i	Textbooks					
ii	Story books					
iii	Charts and Pictures					
iv	Chalks					
v	Plasticine					
vi	Sports equipments					
vii	Newspaper cuttings					
viii	Teacher guides and manuals					
ix	Music instruments					
x	Teaching aids					

11 (a) In order of priority, state other instructional learning resources that you regularly use in teaching and learning in classroom in improving quality of education?

_____

_____

(b) Do adequate and standard instructional resources influence quality education delivery in pre-school (explain your response) _____

_____

Section F: How Outdoor classroom environment Influence Provision of Quality Education in ECDE Centres

12. Indicate the influence of outdoor classroom environment and how it affects quality of learning in your centre. Use the following Likert scale to rate your opinion; SD-Strongly Disagree, D-Disagree, U-Undecided, A-Agree and SA-Strongly Agree.

No	Outdoor environment	SD	D	U	A	SA
i	I regularly play with pupils outside the classroom I					
ii	Surfaces of outdoor play areas are free from sharp objects, harmful plants and discarded materials and equipment					
iii	The school compound is safe and securely fixed with playing equipments					
iv	The school is fenced around to provide security and minimise interference from outside					
v	We sometimes conduct our lessons outside the classroom to interact with nature					
vi	We have enough playgrounds for our pupils					
vii	We regularly engage pupils in environmental activities of cleaning the compound, collecting trash and even planting flowers/trees					

13. Which factors influence effectiveness of learning environment towards provision of quality education in your centre?

_____

_____

_____

14. What do you think needs to be done to improve learning environment towards providing quality ECDE education in your school?

_____

_____

_____

The end

Thank you

Appendix III: Interview Guide for Head Teachers

Dear Sir/Madam,

I am Mildred Chepkonga, a Doctor of Philosophy student from University of Eldoret conducting a research on the "**Influence of learning environment on provision of quality education in Public ECDE centres in West Pokot County**". The purpose of this interview is to get views from you on how learning environment in your school influence provision of quality education to ECDE children. Therefore, note that the information you will provide will be treated with utmost confidentiality and will be used only for the purpose of this study. I am requesting you to participate in the interview session with me. This interview will not last more than 45 minutes. I request that you spare your time to answer me the following questions on the above topic.

Interview questions

1. How long have you been heading this school?
2. Could you provide the transition rate of pupils from your ECDE to standard one for the following number of years? 2012, 2013, 2014 and 2015 (to support with documentary evidence from school admission records)
3. What progresses has your institution made towards improving ECDE learning? (to ask the status of school facilities at inception and progress made till now)
4. What is the nature of ECDE classroom learning environment here? Do you think it influences learning? (To be keen on determining the structure)
5. What can you say on the adequacy of facilities and other instructional materials for teaching and learning process in your ECDE centre? (to be based on the number of pupils admitted – carrying capacity)

6. Are teaching and learning facilities available fit for ECDE children learning? Please explain? (to benchmark with what is expected in standard classroom)
7. What is the status of indoor and outdoor activities evident among ECDE learners? (to confirm the availability of play equipments and materials)
8. What is your view on the influence of learning environment on provision of quality education among ECDE children in your school? (to probe so that personal insight from the head teacher might be heard)
9. How can learning environment be improved to facilitate effective teaching and learning to ensure the basic education objectives have been attained?

The end

Thank you for your time

Appendix IV: Interview Guide for DICECE Officers

Dear Sir/Madam

I am Mildred Chepkonga, a Doctor of Philosophy student from University of Eldoret conducting a research on the "**Influence of learning environment on provision of quality education in Public ECDE centres in West Pokot County**". The purpose of this interview is to get views from you on how learning environment in your Sub County influence provision of quality education to ECDE children. Therefore, note that the information you will provide will be treated with utmost confidentiality and will be used only for the purpose of this study. I am requesting you to participate in the interview session with me. This interview will not last more than 45 minutes. I request that you spare your time to answer me the following questions on the above topic.

Interview questions

1. What is the status of majority of ECDE centres in this sub-county (ones that are public)?
2. What is the condition of most ECDE centres in this area? (to state and give examples from different sub-counties)
3. To what extent have ECDE centres made to improve quality of education in this area?
4. What is the status of learning facilities in most ECDEs in this County?
5. What is the status of learning resources for teaching and learning in ECDEs in this area?
6. What do you do during inspection, monitoring and evaluation of ECDE learning in this area?

7. Do learners participate in indoor and outdoor activities frequently in majority of pre-primary? For answers, please give the reasons.
8. What is the effect of learning environment on quality of education provided to ECDE children in this area?
9. What are the challenges that your officers face in ensuring quality education is provided in a conducive learning environment?
10. What needs to be done to rectify the situation above?

The end

Thank you for your time

Appendix V: Observation Checklist

This is a checklist in which the status of facilities and instructional resources are recorded by the researcher in the order in which they are to be observed:

	Facilities	**Type**	**Condition**	**Adequacy**
1	Desks			
2	Tables			
3	Chalkboard			
4	Latrines			
5	Kitchen			
6	Store			
7	Water storage tanks			
8	Compound			
	Instructional resources			
1	Teachers			
2	Textbooks			
3	Charts			
4	Sports equipments			
5	Teacher guides			
6	Chalks			

Appendix VI Head teachers Interview Excerpts Sample

1. Interview Excerpt – Head Teachers

1. How long have you been heading this school?

14 years

2. Could you provide the transition rate of pupils from your ECDE to standard one for the following number of years? 2012, 2013, 2014 and 2015 (to support with documentary evidence from school admission records)

The transition rate has been upward every year. There is an increase in the number of pupils joining class one.

Years	Pupils	Variation
2012	41	-
2013	48	+7
2014	52	+4
2015	56	+4

3. What progresses has your institution made towards improving ECDE learning? (To ask the status of school facilities at inception and progress made till now)

The school has improved facilities like chairs and desks there is slight improvement. Desks and tables are not age appropriate.

4. What is the nature of ECDE classroom learning environment here? Do you think it influences learning? (To be keen on determining the structure)

The room is not spacious, either enough or adequate for learning no proper movement within the classroom. It is congested. No enough circulation of air this influence learning negatively.

5. What can you say on the adequacy of facilities and other instructional materials for teaching and learning process in your ECDE centre? (To be based on the number of pupils admitted – carrying capacity)

The facilities are not adequate. We have or there is a shortage of instructional materials like charts, pictures and other materials that require financial implication.

6. Are teaching and learning facilities available fit for ECDE children learning? Please explain? (To benchmark with what is expected in standard classroom)

They are not fit and well suited for the ECDE learners. Temporary structures, desks and tables are broken and some are unbalanced.

7. What is the status of indoor and outdoor activities evident among ECDE learners? (To confirm the availability of play equipments and materials)

The outdoor activities have been allocated enough time in the timetable for learners to participate. The equipment materials are few for children to play with.

8. What is your view on the influence of learning environment on provision of quality education among ECDE children in your school? (to probe so that personal insight from the head teacher might be heard)

The learning environment is key in ECDE children. This is because the environment influences both directly and indirectly the learning and development process of an ECDE child. Learning environment should be well equipped with the necessary facilities and instructional resources.

9. How can learning environment be improved to facilitate effective teaching and learning to ensure the basic education objectives have been attained?

The learning environment should be equipped with all the necessary facilities; it should be enriched with all the elements of learning to provide all round influence on learning. Construct desks and table that are age appropriate. Stakeholders and other well wishers to make materials to be used in ECDE. County government to allocate more funds to ECDE. Pay ECDE teachers well.

Appendix VII: Interview Responses for DICECE Officers

1. What is the status of majority of ECDE centres in this sub-county (ones that are public)?

They are all equipped with trained personnel up to 75% of the centres.

2. What is the condition of most ECDE centres in this area? (To state and give examples from different sub-counties)

Few are modern; most are semi-modern while others are temporary structures.

3. To what extent have ECDE centres made to improve quality of education in this area?

There is slight increase in transition to the upper primary. They have to build some structures for ECDE

4. **What is the status of learning facilities in most ECDEs in this County?**

Few ECDE centres have been equipped with modern facilities. Some facilities are not fit for ECDE children

5. What is the status of learning resources for teaching and learning in ECDEs in this area?

Most ECDE centres do not have enough learning resources. Few are purchased and others are improvised by the teachers. Advise teachers

6. What do you do during inspection, monitoring and evaluation of ECDE learning in this area?

Inspect facilities, materials used and the assessment of the needs of the centre

7. Do learners participate in indoor and outdoor activities frequently in majority of pre-primary? For answers, please give the reasons.

Yes, they do – we have qualified personnel, but few equipments for play

8. What is the effect of learning environment on quality of education provided to ECDE children in this area?

Environment influence learning directly up to 90.0%

9. What are the challenges that your officers face in ensuring quality education is provided in a conducive learning environment?

Lack of resources, expansion and employing qualified staff to ECDE centres.

10. What needs to be done to rectify the situation above?

Increase the budgetary allocation to allow expansion and employment of qualified ECDE personnel.

Appendix VIII: Content Validity Index

	Total No. of questions	**Exp 1**	**Exp 2**	**Exp 3**	**Exp 4**	**CVI**		**Decision**
Section B	8							
Section C	9							
Section D	7							
Section E	10							
Section F	7							
Total	41							

	Total No. of questions	**Exp 1**	**Exp 2**	**Exp 3**	**Exp 4**	**CVI**		**Decision**
Section B	8							
Section C	9							
Section D	7							
Section E	10							
Section F	7							
Total	41							

Appendix IX: List of Plates

Plate 1: ECDE Class Ongoing Outside

Plate 2: ECDE Kitchen

Plate 3: An ECDE School Latrine

Plate 4: Unlevelled Playing surface

Plate 5: Pupils in Class while sitting on stones

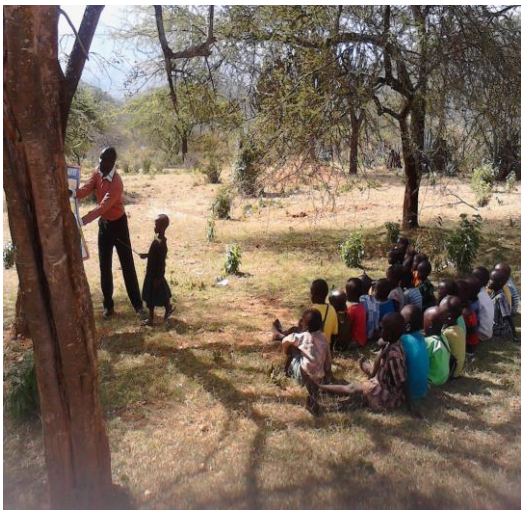


Plate 6: ECDE Children Learning Under Tree

Plate 7: Mud Structure ECDE Classroom

Plate 8: An Iron Sheet (Mabati) Classroom

Plate: 9 A Makeshift Kitchen

Plate 10 A School Gate

Plate 11: Church converted to ECDE on weekdays

Plate 12: An incomplete classroom

Plate 13: A Thatched Store

Plate 14: A Classroom with Learning Resources. The floor has ‘craters’

Plate 15: Outside Learning

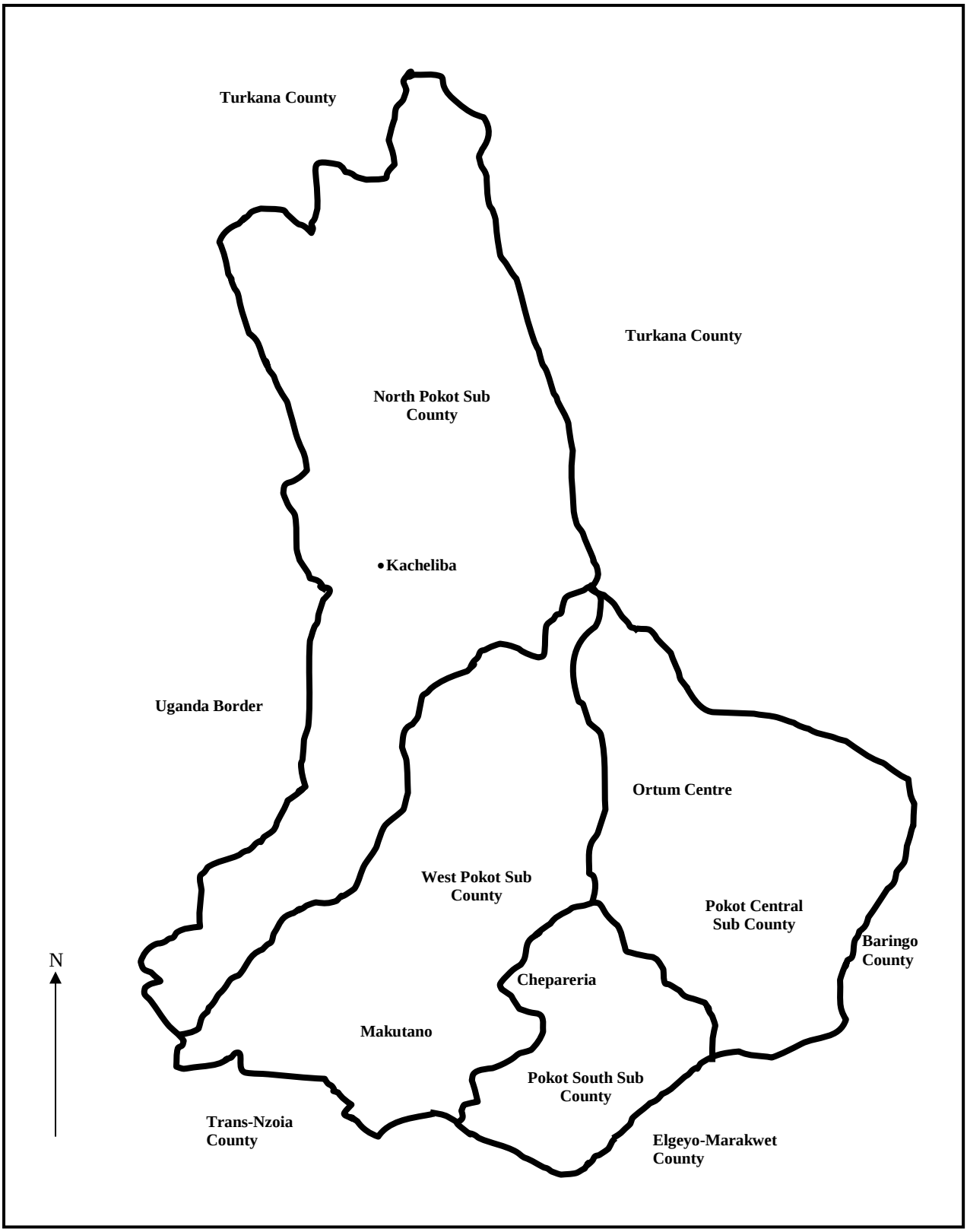
Plate 16: Limited Space in Classroom

Plate 17 Children sitting on the floor

Plate 18: Outside Learning

Plate 19 Teacher playing with ECDE children in the field

Appendix X: West Pokot County Map



Source: West Pokot County Government

Appendix XI: University Letter

University of Eldoret
flame of knowledge and innovation

P.O. Box 1125-30100,
ELDORET, Kenya
Tel: 0774 249552
Fax No. +254-(0)53-206311 Ext 2232
deansoe@uoeld.ac.ke

SCHOOL OF EDUCATION

DEPARTMENT OF CURRICULUM AND INSTRUCTION/EDUCATIONAL PSYCHOLOGY

Our Ref: UOE/B/CIM/LA/59

June, 20th, 2016

The Executive Secretary,
National Council for Science Technology & Innovation
P.O. Box 30623-00100,
NAIROBI.

Dear Sir/Madam,

RE: RESEARCH PERMIT FOR CHEPKONGA CHEPKITE MILDRED EDU/PHD/EPE/003/24

This is to confirm that the above named Post Graduate Student has completed Course work of Doctor of Philosophy in Education with specialization in Early Childhood and Primary Education (EPE).

She is currently preparing for field work to collect data on the thesis title: ***"Influence of Learning Environment on Provision of Quality Education in Early Childhood Education Centers in West Pokot County, Kenya."*** The proposal was examined and approved by academic board of examiners of the school of education on 5th May 2016.

Any assistance accorded her to facilitate acquiring research permit for data collection will be highly appreciated.

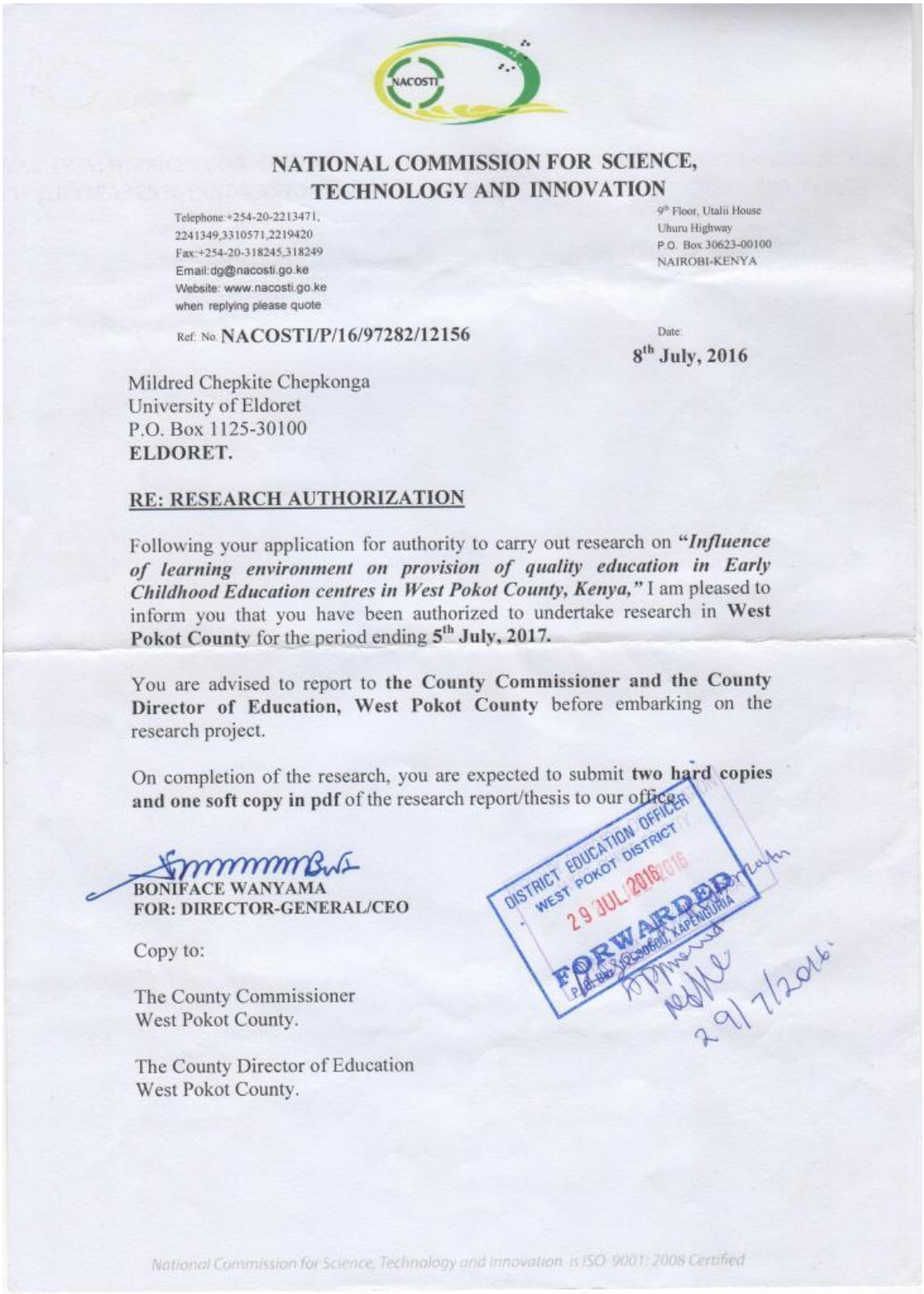
Yours faithfully,

Head of Department
Curriculum & Instruction
UNIVERSITY OF ELDORET

DR. JACOB LOLELEA NATADE
HEAD, CURRICULUM & INSTRUCTION/
EDUCATIONAL PSYCHOLOGY

Cc: - *DVC-ASA*
- *Dean, School of Education*

Appendix XII: Research Authorisation Letter



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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when replying please quote

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

Ref: No. NACOSTI/P/16/97282/12156

Date: 8th July, 2016

Mildred Chepkite Chepkonga
University of Eldoret
P.O. Box 1125-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Influence of learning environment on provision of quality education in Early Childhood Education centres in West Pokot County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **West Pokot County** for the period ending **5th July, 2017.**

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

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

DISTRICT EDUCATION OFFICER WEST POKOT DISTRICT 29 JUL 2016 FORWARDED P.O. BOX 300600, KAPENGURIA

29/7/2016

Copy to:

The County Commissioner
West Pokot County.

The County Director of Education
West Pokot County.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

Appendix XIII: Research Permit

THIS IS TO CERTIFY THAT:
MS. MILDRED CHEPKITE CHEPKONGA
of UNIVERSITY OF ELDORET, 0-30100
eldoret,has been permitted to conduct
research in *Westpokot County*
on the topic: *INFLUENCE OF LEARNING ENVIRONMENT ON PROVISION OF QUALITY EDUCATION IN EARLY CHILDHOOD EDUCATION CENTRES IN WEST POKOT COUNTY, KENYA*
for the period ending:
5th July,2017

Permit No : NACOSTI/P/16/97282/12156
Date Of Issue : 8th July,2016
Fee Recieved :Ksh 2000

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

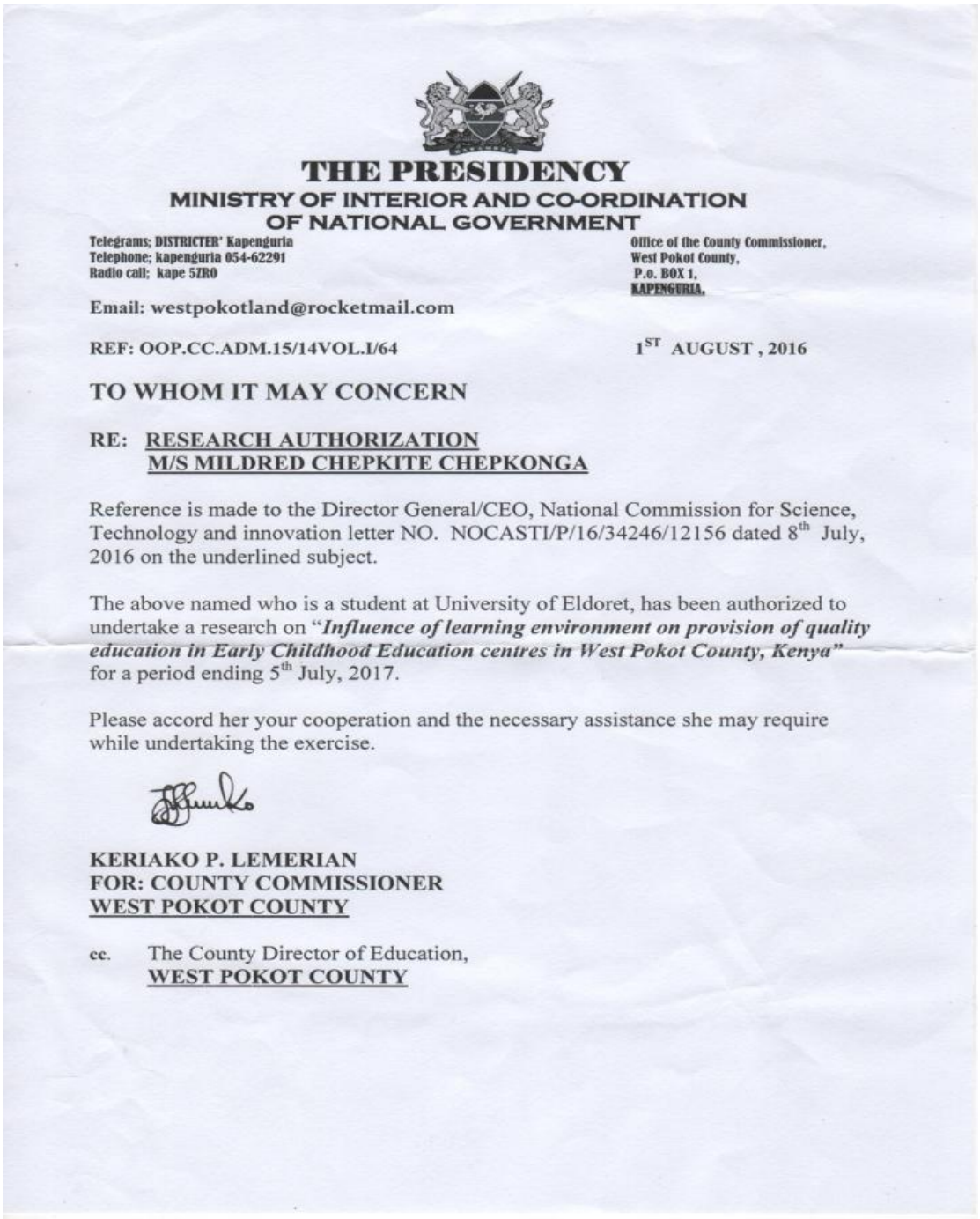
National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 10074

CONDITIONS: see back page

Appendix XIV: County Commissioner's Letter



THE PRESIDENCY
MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT

Telegrams; DISTRICTER' Kapenguria
Telephone; kapenguria 054-62291
Radio call; kape 5ZR0

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

Email: westpokotland@rocketmail.com

REF: OOP.CC.ADM.15/14VOL.I/64

1ST AUGUST , 2016

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION
M/S MILDRED CHEPKITE CHEPKONGA

Reference is made to the Director General/CEO, National Commission for Science, Technology and innovation letter NO. NOCASTI/P/16/34246/12156 dated 8th July, 2016 on the underlined subject.

The above named who is a student at University of Eldoret, has been authorized to undertake a research on "***Influence of learning environment on provision of quality education in Early Childhood Education centres in West Pokot County, Kenya***" for a period ending 5th July, 2017.

Please accord her your cooperation and the necessary assistance she may require while undertaking the exercise.

KERIAKO P. LEMERIAN
FOR: COUNTY COMMISSIONER
WEST POKOT COUNTY

cc. The County Director of Education,
WEST POKOT COUNTY