# LEARNER' S DRAWINGS AS PEDAGOGICAL TOOLS IN THE ACQUISITION OF EFFECTIVE COMMUNICATION IN EARLY YEARS EDUCATION IN KENYA.

BY

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# DECLARATION

**Declaration by Candidate**

This thesis is my original work and has not been presented to any other examination body. No part of this thesis may be produced without prior permission of the author and/or Moi University.

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# DEDICATION

I dedicate this work to my parents: to my lovely mother, the late Esther Tonui and father James Tonui. To my husband, Thomas Bor and our lovely children; Chemutai, Cherono, Kibet and Kiprotich. I admit with much gratitude their efforts for being understanding and supportive during the long hours, days, weeks, months and years I needed to complete this work.

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# ABSTRACT

Children's conversations are the very heart of schooling and pedagogy. Studies globally and regionally indicate a low reading and communication attainment by children, with 90% of them in 3$^{rd}$ world countries not attaining the average levels required. The majority across Africa struggle to read and communicate, which leads to meager academic performance, Kenya is no exception to this trend. This scenario has been associated partly with challenges related to effective communication acquisition. Therefore, how teachers' aid learners to achieve the ability to converse is a question in this study. This study had sought to explore children's drawing as a pedagogical tool in the acquisition of effective communication in early years' Education in Kenya with the following objectives to: explore the teachers' pedagogical competency of drawing, examine the nature of classroom environment for drawing, establish the use of drawing resources and explore the use of learners' drawings in the acquisition of effective communication in early years' education in Kenya. The study was guided by Piaget's cognitive development theory. The study adopted a pragmatic philosophical approach which allows for a mixed method research design. The study stratified Nandi County into six sub-counties and used Yamane formula to arrive at the sample of schools. 300 teachers, one per school was purposively sampled out and 15 teachers and 6 early years program officers were selected through convenience sampling for the interviews. Non-Proportionate purposive sampling was used to pick 400 drawings from the pupils. The research instruments used in this study were questionnaires, interview schedules, direct observational schedule, and document analysis. A mixed approach research design was used whereby quantitative data were analyzed using descriptive and inferential statistics while qualitative data were analyzed using themes. The study found that there is a significant positive relationship between the teachers' pedagogical content knowledge on drawing and use in the acquisition of communication skills in Early years education ($\beta1=0.206$, $p<0.05$). There is a substantial positive relationship between the classroom environment's nature in the acquisition of effective communication ($\beta2=0.245$, $p<0.05$). There is a significant relationship between the use of drawing resources and the acquisition of effective communication ($\beta3=0.180$, $p<0.05$). There is a significant positive relationship between use of learner's drawings and the acquisition of effctive communication ($\beta4=0.188$, $p<0.05$). This was supported by views of the teachers and program officers who were interviewed, documents analyzed and observations made on children's drawing and the classroom environment. The study concluded that the majority of early years education teachers are not adequately prepared with drawing competencies and further, drawing has been established to be an effective tool in early years education that enhance effective communication. Therefore, the study concludes by recommending further teacher training on pedagogical competency on use of drawing and that, drawing be adopted and used as a heuristic strategy to enhance effective communication in early years classrooms. Hence, an approval by the ministry of education curriculum developers and stakeholders is important for its adoption as a heuristic strategy for early years education learning since it is a significant tool in enhancing effective classroom communication in early years education.

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# ABBREVIATIONS AND ACRONYMS

ANOVA        Analysis of Variance

BECF         Basic Education Curriculum Framework

CBC          Competency-Based Curriculum

CRE          Content Related Experience

DRE          Drawing Related Experience

DV           Dependent Variable

ECCE         Early Childhood Education and Care

ESL          English as a Second Language

EYE          Early years Education in Kenya.

EYET         Early years education Teacher

GRM          Genetic Research Methodology

IV           Independent Variables

KG           Kindergarten

KICD         Kenya Institute of Curriculum Development

KIE          Kenya institute of education

KMO          Kaiser –Meyer- Olkin

MoE          Ministry of Education

NCCAS        National Coalition for Core Arts Standards

POR           Programme Officer Respondent

POP          Programme officer Participant

SDGs         Sustainable Development Goals

SPSS         Statistical Package for Social Sciences

TC           Total Communication Theory

UN           United Nations

UNESCO       United Nations Educational Scientific and Cultural Organization

USA          United States of America

USATBCB      U.S. Architectural Transportation Barriers Compliance Board

VIF          Variance Inflation Factor

## CHAPTER ONE

## INTRODUCTION

This chapter provides the background of the study, statement of the problem, objectives of the study, research hypothesis and justification of the study, significance of the study, scope of the study, assumptions of the study, conceptual and theoretical framework and lastly the operational definition of terms.

### 1.1 Background to the Study

The United Nations (UN) Sustainable Development Goals (SDGs) obligate all countries to provide access to eminence education for all children and lifetime learning (UN General Assembly, 2015). Among' other countries and regions, Kenya is a signatory to the United Nations' SDGs, which have adopted quality education in the East African Community aligned to SGD goals.

As regards Kenya, contextualized targets for SDG through different policies and reforms are renowned. For example.  Kenya Vision 2030 Medium Term Plan II on Education and Training, 2013-2018, identifies education as fundamental to the transformation envisaged under the social pillar. East African Harmonization Structures and Framework (2013), equally aligned to SDGs, is the (Constitution of Kenya 2010). To realize the above, Kenya has developed the Basic Education Curriculum Framework (BECF) (KICD, 2017), which is competency-based to address the global, regional, and national concerns and to fill the gaps in the current CBC education system.

In support of children's drawings, Annings et al. (2012) state that self-expression is as necessary and valuable as reading and writing skills. This is in line with (Piller 2017), who claims that language is insufficient for the expression of everything, so drawing,

graphic-narrative play, and other forms of artistic expression provide necessary and distinct forms of meaning-making through communication, which is intricate, multifaceted, symbolic, and metaphoric, Harris (2017).

Early Childhood Education and Care (ECCE) is commonly recognized as a fundamental level of education for children in their early years. According to UNESCO (2006), this is the period between birth and eight years of age, and it is a period of considerable cognitive growth, establishing the groundwork for future learning and development (2006).

In this regard, ECECs in various countries have taken it upon themselves to promote a common aim of developing the child through care and learning. At this stage, research shows some variations concerning the cultural context of childcare and learning as per the country.

There are various variations on curricula designs globally (Syomwene, 2017). These variations include the Competency-Based Curriculum, which has in the recent past increased in its' popularity. Evidence from education systems across the world indicates that either many have fully or partially initiated and implemented the process of implementation. Some of these nations include the USA, Canada, Finland, New Zealand, Singapore, the United Kingdom, South Africa, Rwanda, Tanzania, and Uganda (Sturgis, 2017; the Republic of Rwanda, 2015; Patrick, 2012; Moon, 2007; Bristow & Patrick, 2014; Mulder, 2017; Komba & Mavandanji, 2015). This global trend indicates international consciousness and advocacy for quality and relevant education as articulated in the United Nations Sustainable development Goal (SDG) 4, which aims to ensure equitable quality education and promote lifetime learning opportunities for all (UNESCO, 2015).

The Kenya government set up a review of the Early Years Education national curriculum in 2011n to develop a new curriculum that will sufficiently address and meet the needs and aspirations of Kenyans (GoK, 2014). It is believed that the Curriculum would provide the learners with skills, knowledge, and appropriate attitudes that will help fit and compete internationally in all fields (Syomwene, 2017). This was based on a research report by KICD on the needs assessment for Curriculum reform, which affirmed the necessity for an EYE school curriculum to integrate and equip the individual with competencies and skills in real-life situations both globally and locally (Jwan, 2017). For this reason, Competency-Based Curriculum (CBC) has been developed to catalyze the goals of Kenya's Vision 2030 that is anchored on the United Nations' SDGs and domesticated in the Education Act (2012) and the Republic of Kenya (2017).

Communication occurs both verbally and non-verbal (Dequara, 2015). This is supported by Vince (2016) that communication is spoken conversations (for example, person to person) and written messages, for example, letters, electronic mail, bulletins) while Non-verbal communication is less direct.

A teacher is the (source) of information in a classroom conversation because he or she picks and organizes the subject content (message). The learners (recipients) are to digest the knowledge and provide feedback to assess if they understand it. This procedure takes place in a specific setting (environment). There is a dynamic interplay between these distinct process components. It should be remembered that messages must not be twisted during the communication process in order for communication to be effective.

Communication should be used for the intended purpose and sometimes the desired effect is not reached. Issues that operate as bottlenecks must be explained to determine why the communication failed (Korir, 2016). Language, emotions, selective perceptions, information overload, quiet, anxiety, and various other elements are among the potential hurdles in effective communication in early years education. He further argues that these obstacles to successful communication might slow or distort the message at every point in the communication process. Chan et al. (2015) support the effectiveness in communication that it should be used for the intended purpose. When the desired effect is not reached, however, issues that operate as bottlenecks must be explained to determine why the communication failed. Brooks (2003) identifies possible factors that influence effective communication: language, emotions, selective perceptions, information overload, quiet, anxiety, and a variety of other elements are among the potential hurdles. This study sought to explore children's drawing as a pedagogical tool in the acquisition of effective communication in EYE.

A teacher can usually listen and observe this from the learners' body language (for example, crying or speaking) and tone of voice (Brice 2012, Korir, 2016). Teachers in early childhood settings frequently rely on nonverbal communication to transmit and receive meaning rather than words. This is especially true when learners are attempting to communicate complicated feelings, ideas, and concepts, as nonverbal communication aids in transmitting meaning and understanding during a conversation (Metin & Aral, 2020). They said that nonverbal communication could signal a readiness to participate in a conversation and create communication channels between learners and teachers. Teachers, therefore, have a part in setting up opportunities for learners to acquire a language of communication both directly through interaction

with the learners and indirectly by creating an environment that is rich in learning stimuli. This study suggested that this can be done by encouraging prompt discussion and reflections on their ideas to promote verbalization to encourage originality and independence of expression. The study sought to explore drawing use as a stimulus in acquiring communication skills in EYE. Research studies confirm the critical role that drawing plays between the teachers and learners, creating a comfortable environment, thus initiating a communication process (McCroskey & Richmond, 2015). There is much literature dealing and focusing on the social, physical, and psychological aspects of drawings examples include: (Kellogg & O'Dell, 1970; Brooks, 2006; Duncan 2013; Anning, 2014; Hall, 2015; Packman et al. 2017 and Metin et al., 2020) among others. Metin and Aral (2020) assert that;

> 'Drawing is not simply an automatic consequence of maturation but involves a learned set of abilities which, although related to children's developing motor, socio-emotional and cognitive skills, is also influenced by their environment.

Based on the importance of drawing, the study explores drawing as a pedagogical tool in attaining communication skills in the Early Years of Education which differs from other studies that dealt with the psycho-social use of drawing. Piller (2017) notes that the oral communication medium is insufficient with children's language, especially for the manifestation of everything. There arises the need to seek other communication mediums, and this study endeavors to explore the connection between learners' drawings and communication skill acquisition.

Developing proper pedagogical resources, such as professional documents and learners drawing books, is essential to the teaching and learning process in Early Years Education for a teacher to use drawing successfully. According to (Gichuba 2010), a prepared teacher is well on his or her way to having a successful teaching

experience. This is because proper planning leads to exciting lesson activities and engagements that take a great deal of time and exertion on both the teacher and the learner. This concurs with Suskie (2018), who posits that for an engaging drawing activity, the best-planned lesson is worthless if interesting delivery procedures are not utilized, along with good classroom organization and management techniques, the inclusion of assessments as instruments of education policy and practice should also be encompassed as an activity. She further observes that, during the school years, teachers use assessments to make judgments about tracking the learners' learning processes.

The nature of the classroom environment for drawing includes; the infrastructure that supports drawing activities and the organization of resources that may support classroom experiences. This study sees the possibility of using drawing to acquire communication skills since the early years' learners have limited vocabulary to use for self-expression.

The availability and use of drawing resources are essential in this study. EYE schools depend on drawing resources to learn and express their ideas. EYE learners should be provided with a wide variety of drawing materials, for instance, crayons, paper, wax crayons, paint, books, and child-size furniture. Learners can use these to express themselves. The medium offered to "draw" on will help children to develop their creativity and imagination by allowing them to "draw" on it (Harriet, 2002). The chalkboard should constantly remind well-planned, well-executed work; better writing, figuring, drawing, and clean work should all be presented on the chalkboard. The blackboard is frequently utilized in classroom lessons, according to Singh (2014),

and should be designed for clarifications, demonstrations, synopses, and children's exercises.

The content of learners' drawings is a subject of interest to this study. Most early years learners love to scribble, and they do it expansively to serve various purposes in a classroom. For example, their scribbles eventually develop into schema drawings during their play or other routine activities at home and school (Papandreou, 2014). The young learners sometimes subconsciously draw figures or objects familiar with or imagine. They produce drawings effortlessly and have the pleasure of representing their ideas (Mackenzie, 2011). This is supported by (Copple & Bredekamp, 2009), who express that drawing is children's play, an activity rarely refused by children to do. This study believes that there is a lack of clear evidence on whether teachers have adequate resources for use in helping young learners acquire communication competency skills. This study attempts to address these concerns whether EYE teachers have been trained on drawing pedagogy and can use that content knowledge to acquire communication skills in EYE. This is where the edge of this study lies. Despite the many studies on children's drawings as cited on the above background information dwelling on pedagogical tools and acquisition of communication skills, none lays a hand specifically on children's drawing as a pedagogical tool in acquiring communication abilities in Early Years Education in Education Kenya.

## 1.2 Statement of Problem

Early Childhood Education initiatives are critical to any country's social and economic success (Dequara, 2015, Korir, 2016, Hungi et al. 2018, Kumari, 2020). According to O'Reilly (2014), learning quality is a high priority on the global agenda. The essential ability every learner at any level is expected to possess is to express self

clearly and effectively, and lack of it hampers progress in learning areas. About 90% of children in 3rd world countries cannot read and communicate effectively in their classrooms (Ntheketha et al., 2016, Gooden & Kearns, 2013).

Maina (2020) notes that poor communication predicts poor literacy skills and, without the right help, 50% to 90% of children with persistent communication needs have receptive and expressive communication difficulties in the future. This is further supported by Dequara (2015) that many early years learners face communication difficulties, such as oral and listening skills. This is further supported by Gilbert et al. (2017), who see communication as a prerequisite to effective learning among school learners. As they enter school, Gilbert observed that young learners are expected to acquire communication skills as a tool for learning and social negotiation. Hence, teachers need a heuristic strategy to help learners acquire practical effective communication in Early learning.

Therefore, this study was necessary because little was known about teachers' use of drawing as a pedagogical heuristic strategy in the early years' effective communication acquisition to achieve a classroom conversation. This is based on the importance of drawing in early years education. These drawings are inessential for both the learners and the teachers of early years education. The EYE learners will draw and discuss their drawing outcomes hence acquiring the ability to communicate effectively. This will expose what the learners' 'know' in any given activity area and is vital for teachers to understand the state of knowledge where the learners are and bridge the knowledge gap that exists by starting from the known to unknown in knowledge acquisition. Therefore, the purpose of this study was to investigate the

teachers' use of learner's drawings as a pedagogical heuristic strategy in the acquisition of effective communication in Nandi County, Kenya.

## 1.3 Purpose of the Study

The purpose of this study was to investigate the use of learner's drawing as a pedagogical tool in the acquisition of effective communication in early year's education in Kenya.

## 1.4 Objectives of the Study

The objectives of this study are to achieve the following;

1. To investigate the teacher's pedagogical competency on use of drawing in the acquisition of effective communication in Early Years Education.

2. To examine the nature of the classroom environment for drawing activities in the acquisition of effective communication in Early Years Education.

3. To determine the use of drawing resources in the acquisition of effective communication in Early Years Education.

4. To establish the use of learners' drawings in the acquisition of effective communication in Early Years Education.

## 1.5 Research Hypothesis

Hypothesis represents declarative statements of the relationship between two or more variables (Kerlinger, 2013). A hypothesis leads to an easier evaluation of relationship, if any, or difference if any, between two variables.

The following hypotheses were tested;

**H$_{01}$:** Teacher's pedagogical competency on drawing has no statistical significant influence on the acquisition of effective communication in Early Years Education.

**H$_{02}$:** Nature of the classroom environment for drawing has no statistical significant influence on the acquisition of effective communication in Early Years Education.

**H$_{03}$:** Use of drawing resources have no statistical significant influence on the acquisition of effective communication in Early Years Education.

**H$_{04}$:** Use of learner's drawings has no statistical significant influence on the acquisition of effective communication in Early Years Education.

## 1.6 Significance of the Study

The research study provides valuable information to teachers and education stakeholders on improving communication skills acquisition in the early years of learning to aid the learners to achieve the best out of their learning experiences. The study might enhance the quality of communication between the learners and their teachers and learners to other learners and ensure the quality of learning at all levels by highlighting the critical concerns in education. They include enhancing Creativity and creative thinking, communication, and collaboration in early childhood settings, which, if not emphasized, can inhibit the realization of quality of learning in the early years' education and the realization of vision 2030.

This study might inspire EYE teachers to have a sound, thought-out pedagogy that develops the eminence of teaching and how EYE learners learn. It is further hoped to facilitate the learners in gaining a deeper grasp of fundamental concepts in their early

learning activities because being mindful of how a teacher teaches can help better understand how to assist learners to achieve a more profound learning experience.

This study might equip teachers with the knowledge to create a conducive learning environment with a well-organized thought-out classroom for the learners, optimizing learners learning experiences and reducing distractions in classroom drawing activities. The study further anticipates helping the teacher understand how the learners understand the world around them and therefore plan appropriate activities for them that will aid the learners in their learning and communication processes, especially with the introduction of a 100% learner transition policy on all learners to the next grade level. It might also be helpful to the curriculum developers, publishers, and Ministry of Education. Lastly, the study might be a basis of literature for future academic references.

## 1.7 Justification of the Study

This research is based on a survey conducted in Kenya, which found that approximately 70% of standard three students were unable to read a standard 2 level tale in both English and Kiswahili and that learners in class three were unable to create meaningful sentences of 5 to 6 words (Uwezo, 2016). Their teachers notice that they mainly communicate through screams or facial expressions, with little or no voice, gestures, images, signs, or words. This worrying data has sparked concern among education investors, as students' reading and speaking skills impact all courses across the curriculum. As a result, there was an urgent need to undertake this study to establish the reality on the ground because if the situation remained unchanged, students at higher levels of elementary school would have dreadful academic performance. According to a Russian scientist, reading and conversation subsidize the formation of a fully

developed intellectual and emotional person capable of self-growth and self-realization (Sagitova, 2014). Communication in EYE is an essential indicator for determining where learning may deviate (Akimova, 2014, 2014). This study, therefore, was justified to be carried out in Kenya.

## 1.8 Scope and Limitations of the Study

### 1.8.1 Scope of the study

The study was carried out in EYE settings in Nandi County, Kenya. It links drawing as a pedagogical competency to effective communication in Early Years Education. The focus was on the four objectives; teacher's pedagogical competency on drawing for the acquisition of effective Communication, the nature of classroom environment for drawing for the acquisition of Communication skill, the use of drawing resources for the acquisition of effective Communication and the use of learner's drawings in the acquisition of effective Communication. The study included PP2 learners because they have the following suitable characteristics: By age 4, children should have developed reasonable control when holding a pencil, crayon, or paintbrush. The child can now draw spontaneously and show environmental influence, interest, and experiences in a drawing. S/he draws what s/he knows and that their representation of people, places, and objects constantly changes and their communication abilities. The study adopted the KICD Competency-Based Curriculum. This program accentuates the complex outcomes of learning that include acquaintance, skill, and approaches to be applied by learners with an expected outcome. This new curriculum is related in content and replaces the KICD- NACECE Curriculum and is the most widely used approach.

The study's respondents were EYE teachers and Pp2 learners in Nandi County. The research tools used were questionnaires, interview schedules, document analysis, and

observational schedules. The research was carried out from September 2019 to March 2020.

## 1.8.2 Limitations of the study

A limitation is an aspect that may sway the results negatively, but over which the researcher has no control, (Mugenda & Mugenda, 2003). The current study was influenced by some limitations, which includes the following:

i.   Some school administrators were wary of strangers and fear investigations.

ii.  Not all EYE teachers were willing or able to supply all of the necessary information. Despite this, an introductory note was included with the questionnaire to ensure that the information provided by the respondents remained confidential.

iii. This study was conducted in Nandi County, which may not allow generalization to the other counties in Kenya because of its unique characteristics. It was then necessary to support teachers' self-reported data of Nandi County with a variety of other views from direct observation of resources and classroom activities in Nandi County schools and document analysis.

## 1.9 Assumptions of the Study

This study is carried out based on the following:

i.   That the respondents would be ready and eager to participate in the study wherein, the respondents would be co-operative and willing to read and understand the items in the questionnaire and provide honest, relevant and reliable data to support the study.

ii.  That the sample frame drawn would reflect the universal population.

**1.10 Theoretical Framework for the Study**

According to Kerlinger, (2013), a theory is a proclamation explaining a particular portion of phenomena by specifying certain relationships. This study was guided by Piaget's Cognitive theory. These ideas are relevant to this study and inform the theoretical framework.

**1.10.1 Piaget's cognitive theory**

Piaget's cognitive theory promotes the active inclusion of learners into the learning process to improve their learning outcomes, which includes communication skill acquisition. Piaget argued that children are masters of their own learning experience, and they develop healthy mental models that allow them to construct new knowledge from their understanding of their environment.

 Piaget suggested that learning in children could be more effective and sustainable if teachers plan for their activities and environment and are left to explore their environments freely. Their curiosity leads to creative cognitive abilities being expressed. As a result, they can grasp the concepts of reading and writing (drawing) through the problem-solving methods they develop for and by themselves. Therefore, Piaget argues that the teachers contribute to the knowledge presented to children to explore only a means to an end and not an end in itself. Writing (drawing) is only part of the knowledge development equation in communication skill acquisition.

Applying the theory to the study, teachers should plan and guide the learner is into their drawing activities that are open-ended and child-centered. This means that the learners should be permitted to access their immediate environment to acquire various ideas through curiosity, thus creating knowledge that will enhance their performance

in the communication process. As learners are curious beings and are exploratory by nature, they will express themselves based on their abilities.

The teacher's pedagogical competency in drawing will guide them to develop a language of communication. This will assist the learners lay the foundation for more advanced writing and communication skills development. Piaget also *s*hows that since children are more active learners and love to do things by themselves, their innate need to communicate through drawing drives their quest for self-expression. This study is vital for the transition to junior secondary at grade 6 for their secondary or technical orientation, where learners are expected to communicate competently and understand various written and communication modes. This supports the Ministry of Education Kenya Vision 2030, on a 100 percent transition of learners to junior secondary school.

Therefore, based on the theory of the study, teachers with basic knowledge of drawing are vital in assisting learners in their learning and spontaneous self-expression activities. It is, therefore, beneficial to provide children with adequate guidance in the activities they engage in to create new experiences and communicate them.

Each research objective was addressed using this theory in the study. According to Piaget's idea, children's learning can be more efficient and long-lasting if teachers arrange activities and environments for them and then allow them to freely explore their surroundings since their curiosity leads to the expression of creative cognition and communication. Therefore, this study explores ways in which drawing can be used to acquire communication skills in the early years of learning in Kenya.

**1.11 Conceptual Framework**

A conceptual framework is a collection of general ideas and philosophies from several fields of study that will be utilized to structure a future presentation (Bryman & Bell, 2015). The independent variables (IVs) and the dependent variable (DV) are two types of variables in this study. The independent variables, in this case, are the teacher's pedagogical competency on drawing in the acquisition of communication skills in early years education, nature of classroom environment for drawing activities in the acquisition of communication skills in early years education, the use of drawing resources in the acquisition of communication skills in early years education and the use of learners' drawings in the acquisition of communication skills in early years education.

The dependent variable in this study is the learners' acquisition of effective communication. A teacher with adequate competency on the subject will influence learners' effective communication; how the classroom environment is organized for drawing influences how learners conceptualize drawing activities and hence the learner's acquisition of effective communication. The use of drawing resources and put in use will influence the acquisition of effective communication, and the Use knowledge of learners' drawings can inform the teacher or adults of the learner's status in the acquisition of effective communication. In this study, the intervening variables are drawings learners draw at home and the learners' role models on drawing activities in Early Years Education.

This study adopted the following conceptual framework to illustrate the use of drawing as a pedagogical heuristic strategy in the acquisition of effective communication in Early Years' Education in Kenya.

**Independent Variables**

**Dependent Variable**

**Teacher's pedagogical competency on use of learner's drawings**

- Teachers' competency on use of learners' drawings
- Teacher's Experience

**Nature of the Classroom environment for drawing**
- Infrastructure- Natural Lighting, Quality of air/ temperature, Noise, space, floor
- Organization of resources- Objects/models/wall hanging/location of resources

**Learner's acquisition of effective communication to achieve a classroom conversation.**

**I. Receptive skills**
**II. Expressive skills**

**Use of drawing resources**
- Professional Documents
- Drawing resources- tools for writing and mark making

**Use of learner's drawings**
- Creativity
- Imagination

**Intervening Variables**
- Home drawing
- Role model

**Figure 1.1: Conceptual Framework**
*Source: Author (2021)*

**1.12 Operational Definition of Terms**

**Acquisition:**        In this study it is used interchange-ably to refer to the achievement of communication or development of communication skills.

**Communication Competence**: In this study, refers to the capability to apply knowledge and skills to develop coherent and cohesive conversation

**Communication Skills:** In this study, refers to the ability to have a conversation (receptive and expressive) information or the achievement of a conversation

**Drawing resources:** Refers to tools, materials, and environment used for drawing activities which includes: pencils, crayons, charcoal, color and sticks

**Drawing:**        In this study, refers to scribbles or a form of pictorial art in early years writing in which a learner uses numerous writing tools to make marks on a surface

**Early Years Education:**    In this study, refers to Preschool learning

**Evaluation:**        Refers to the systematic process of gathering relevant information on drawing to decide on the provision of an appropriate action

**EYE Center/ ECDE Setting:** In this study, it refers to an education setting serving children aged between 4 and 6 years old that is of Pp1 and Pp2 before joining primary school. These terms are used interchangeably where appropriate through the study.

**Instructional resources:** In this study, it refers to drawing resources that are part of the instructional resources that include: teaching-learning aids.

**Pedagogical content knowledge:** In this study, it refers to "what" and "how" in integration of knowledge and skill on drawing

**Pedagogical skills:** In this study, it refers to the teachers' education and training in interpersonal and collaborative skills

**Pedagogical tool:** In this study, it refers to resources used in a way in which drawing activities are in use to achieve learners' communication skills.

**Pedagogy:** In this study, it refers to 'what and how' in the use of drawing in creating classroom meaningful experiences.

**Preschool:** In this study, it refers to an educational establishment or learning space offering early childhood education to children before they begin compulsory education at primary school.

**Resources:** In this study, it refers to teaching and learning aids used by a teacher in giving instructions to learners.

**Spontaneous drawing:** In this study, it refers to mark-making activities children engage in without prior planning and instructions.

**Standards:** In this study, it refers to guidelines given for good practice.

**Teachers' knowledge:** In this study, refers to all the required cognitive knowledge for creating effective teaching and learning environments

**Teachers' level of training:** In this study, it refers to parameters of teachers' professional qualifications.

**Training professional skills:** In this study, it refers to skills teachers acquire to be effective in their teaching.

## 1.13 Summary of the Chapter

This chapter covered the study's preparations, as well as the study's context. This chapter also addressed the problem statement, research objectives, and questions. This chapter also discusses the study's justification and relevance, as well as the investigation's scope and restrictions, theoretical framework, and word definitions. The remainder of the study is separated into three chapters: chapter two covers the literature review, and chapter three covers the methodology. The fourth chapter of the study examines, interprets, and debates the presentation of the findings. Finally, in Chapter five, you will find findings, recommendations, and research ideas.

## CHAPTER TWO

## REVIEW OF RELATED LITERATURE

### 2.1 Introduction

The literature review is discussed in this chapter. The review is broken down into four sections. The first section examines the teacher's pedagogical competency on drawing and its application in the acquisition of communication skills in Early Years Education. The second section investigates the nature of the classroom environment for drawing activities in the acquisition of communication skills in early years education. The third section covers relevant literature focused on researched materials, determining use of drawing resources in the acquisition of communication skills in Early Years Education, and finally discussing the use of learners' drawings in the acquisition of communication skills in Early Years Education.

This section highlights the applicable skills from the CBC that includes; communication and collaboration as well as imagination and creativity. The Summary of the chapter has been given by stating and discussing related studies and later identifying the existing gap in knowledge, to situate this study with existing knowledge of the EYE curriculum in Kenya.

### 2.2 Teacher's Pedagogical competence on use of learners' Drawings for effective communication Skill Acquisition

A concept is represented by pedagogical content knowledge, an academic construct. According to Shulman (1986), PCM is defined as the merger of subject expertise and skilled teaching of a particular subject. According to Barnett and Hodson (2014), in helping to learn, the teachers' elucidations and interpretations of the subjects that matter on Knowledge. Loughran et al. (2012) agree with Shulman, stating that "it is an idea

embedded in ideas that schooling involves more than communicating topics content knowledge to learners and that learners learning is more than just grabbing material for later accurate retrieval. PCK is the acquaintance that a teacher develops over time and the capability to teach particular content precisely to enhance the learner's understanding. This includes the most valuable representations in teaching creative art (drawing), Bell et al., 2013. Teachers should have the ability to create connections between creative art-drawing topics and real-world problems. Teachers' content Knowledge is vital to improving teaching and learning processes. The pedagogical competencies in this study posses the following elements;

Teachers' qualification, teachers' Knowledge of drawing, teachers' preparation for drawing, and teachers' use of drawing and meaning-making. The PCK should possess the following key characteristics: Content Knowledge of subject matter representations, learners' conceptions of the subject, and the teaching and learning implications should be put under consideration having in mind the specific subject matter, Knowledge in teaching strategies, Knowledge of the curriculum, educational context knowledge and Knowledge of the purpose of education, (Shulman, 1987).

Barnett & Hodson (2014) proposed a teacher Knowledge Model for schools. The combination of numerous models and conceptions reported in the literature on teachers' Knowledge is offered in this model for school science education. This model illustrates how they can incorporate talks into their classroom practice. Science teachers use four different types of Knowledge: classroom knowledge, pedagogical content knowledge (academic), research knowledge, and Professional Knowledge. The model evaluates data gathered from science instructors' interviews on organizing and teaching science lessons. The model's results show that it helps provide a primary and quick yet effective

and efficient method of solving problems. This model has its shortcomings; there was no discussion on how this Knowledge could be used for ECDE teachers and on drawing, and this creates a knowledge gap that the researcher sought to explore. In the 1990s, education research academics increased and promoted the growth of PCK among pre-service and in-service teachers. They pointed out that there is relatively little research on sketching as an educational tool in the development of communication skills among Early Years students. What counts most is professional subject teaching in the classroom, according to the Idra Newsletter (August 2007).

According to (Npet 2003), professional teacher learning is an ongoing knowledge development process and skill enhancement for effective teaching practices. Law (2016) studied teachers' perceived Knowledge of drawing-related experience (DRE), and their confidence in teaching drawing-oriented activities was investigated. The findings showed that teachers were quite confident in their Knowledge of DRE, although their DRE test scores were much below the standard of achievement anticipated of a first-grade student, as determined by the South Carolina Physical Education Assessment Program. Further research was conducted into the impact of instructor qualities on DRE knowledge. The findings demonstrated that self-efficacy was influenced by age and years of teaching experience but not by DRE knowledge. This study, therefore, revealed that the targeted teacher development is an essential part of achieving the drawing Knowledge required to teach. By investigating the teacher's pedagogical competence in drawing in the acquisition of communication skills in EYE, this study challenges these ideas mentioned.

**Figure 2.1** is an illustration of a pot in which the teacher's beliefs influence the learning outcome of the learner. Other factors that come into play for the learning to be

actualized include pedagogical competence on the activity area the teacher has to have, including the curriculum content and the Knowledge on the subject and the methods used for effective teaching and learning processes on the subject. There has to be an interaction and interrelationship between the pedagogical content knowledge and the teaching, which has to help the teacher understand the learner well. The teacher needs to understand the learners' state to plan appropriate, achievable activities for them, engaging and building on their ideas. All these factors contribute to the learners' learning and communication achievement development. This is illustrated below;
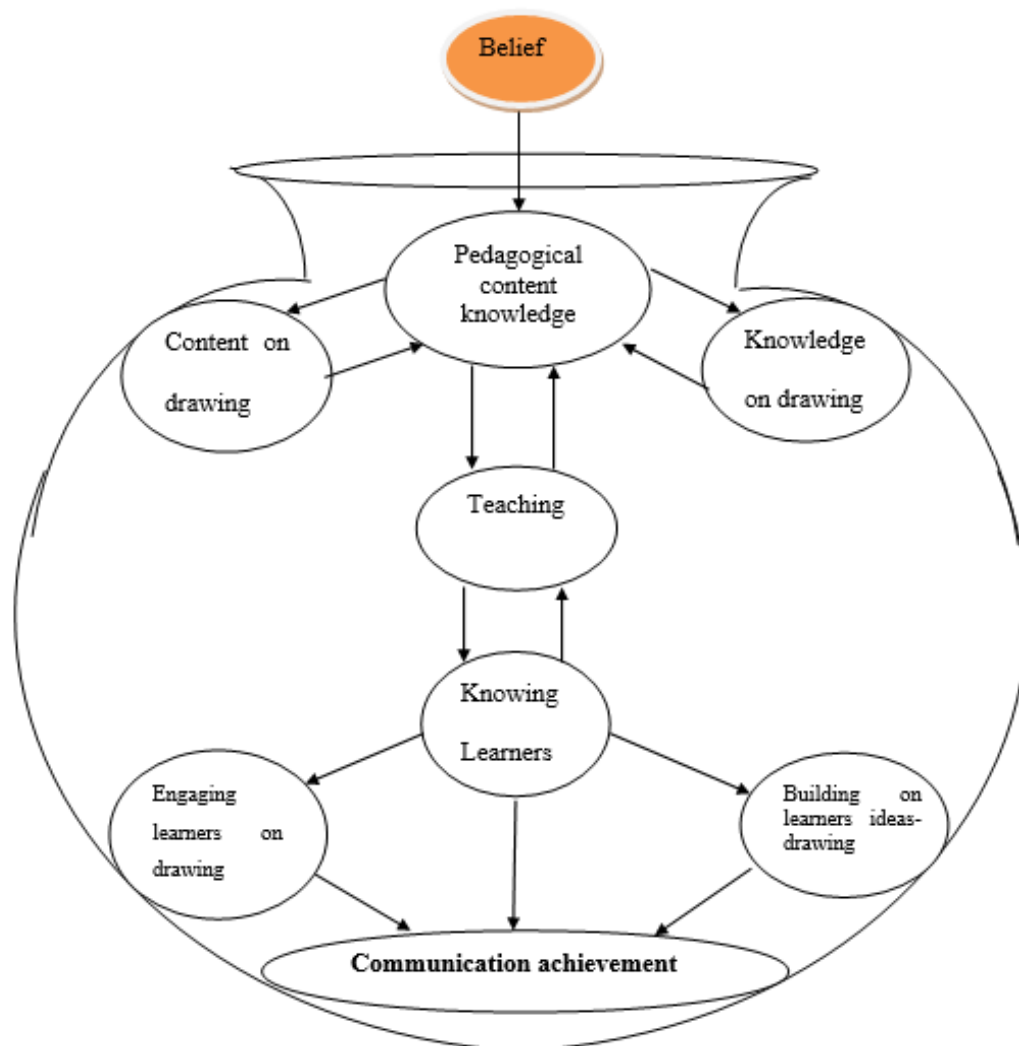


**Figure 2.1: Teacher's beliefs have an influence on the learning outcome of the learner**

*Source:* Author 2020

According to research and observations of learning dynamics, a teacher's knowledge, actions, and beliefs have a significant impact on how children learn. Most significantly, we know that the correct forms of information, abilities, and pedagogical topic knowledge are all part of these dynamic behaviors and dispositions grow over time. Therefore, this academic construct has proved to have a significant relationship with the achievement of a conversation which leads to the acquisition if communication skills.

## 2.2.1 Pedagogical content knowledge and assessment in drawing

This includes curriculum topics to learn, the ideas that learners bring to the learning process, and appropriate teaching strategies. A teacher should have a clear understanding of CBC well to assist learners in conceptualizing their ideas. This is to create an effective learning process that is important to note that teachers need to connect ideas across all fields of learning every day. NBTS (1998) notes that the teaching standards demonstrating teaching expectations should be enhanced. However, there is a scarcity of information dealing with classroom teaching content observed on drawing.

The answer to the critical issue about teachers' pedagogical content and use of drawing in the acquisition of communication skills indicates that teaching and teachers' learning experiences are essential in pedagogy. According to research, professional development improves the knowledge required to improve teaching and learn in creative art drawing.

Freir, (2018) aver that teachers use assessments to discover individual learners' learning requirements and inform the teaching process. Therefore, it is noted that the goal of the drawing activities will determine the type of assessment tool to utilize. Sato (2014)

agrees, adding that daily experiences give a wealth of knowledge that both learners and teachers can benefit from. He claims that there is more to be learned about the uses, misuses, and unintended consequences in different educational settings than just in a drawing. However, he believes that drawing allows teachers to evaluate their students' thoughts and ideas since it allows them to see where the student is in the process of learning and to design relevant actions to improve the learning outcome. According to Nunan and Lamb (1996), drawing is a tool that a teacher uses to foster learning skills such as communication expression and thus help learners to closely world around them, recording and expressing what they observed, and using that as a basis for further inquiry, thus enhancing communication skill acquisition.

Ball (1998, 2003) notes that, though research has been carried out in teacher pedagogical content knowledge, it does not provide the depth of knowledge necessary and provides sufficient instructional possibilities that learners need to utilize in their learning. (Ball & Bass, 2000; Fuller, 1996, Mewborn, 2001), mentions a few more studies that have concentrated on teachers' content knowledge in learning areas, perhaps because of the belief that content knowledge may not pose critical challenges at the ECDE level.   However, the available data, though insufficient, has served to reveal the misconception of this assumption (Ball et al., 2001). This exposes a big gap at the ECDE level to explore the pedagogical competence of drawing in the acquisition of communication skills in Early Years Education in Kenya.

## 2.3 Nature of Classroom Environment in the Acquisition of Effective Communication

Despite several research studies demonstrating the effectiveness of teachers using child-centered learning in various educational settings, few studies have focused on the

classroom environment in Preschools, as was done in this study (Andiema, 2016). This study looks into the impact of the classroom environment on science teaching and learning in preschools in West Pokot County, Kenya. The study was descriptive, as it sought the opinions of Preschool teachers and headteachers. The study concluded that teachers' use of inadequate and non-conducive class approaches affected pupils' acquisition of science skills in schools. This supports the need for more investigation on the suitable classroom for drawing.

According to Owala, Odongo & Raburu (2016), the performance of Pre-school teachers has become a significant issue in contemporary society due to their responsibility for imparting knowledge and skills to learners while molding them toward realizing their potentials in life during formative years. This necessitates establishing a pleasant working environment for both teachers and students. Teachers must be motivated for public ECDE centers to create the necessary conditions for children's holistic development. The findings were that the teachers in public ECDE Centers could perform well, but they must be motivated. This study only talked about teachers' motivation, including the classroom environment but not on learners as the current study. The prior study only looked at and researched the classroom environment rather than sketching, as the present study did. Learning instruction in Early Childhood Education settings needs learners to interact with their environment while learning various activities (Okudo & Omotuyole 2014).

The researchers wanted to explore how the outdoor classroom setting affects the quality of education given in West Pokot County, Kenya's public ECDE institutions. The study found out that children's educational quality improved when they regularly participated in an activity outside of the classroom. Outsiders should not disturb outdoor activities

or pose a security risk to pupils if the school is securely walled. The quality of education in the study includes classroom organization but not on drawing as a pedagogical competence in the acquisition of communication skills as in the current study.

Ajayi Ekundayo & Osalusi (2010) investigated the association between the learning environment and secondary school effectiveness in Nigeria. The study was conducted using a survey-type descriptive research design. The study findings that secondary schools had a very conducive learning environment and that secondary schools were beneficial in the emotive and psycho-motor dimensions of learning, but not so much in the cognitive area. The study took place in Nigeria; however, the students were secondary school, as opposed to the present study, which will take place in Kenya and focus on ECDE learners.

Kariuki (2018) investigated the appropriateness of teacher traits, classroom facilities, and resources concerning excellent early childhood development and education. A descriptive survey design was used in this investigation. The study's target population included all 40 public Pre-primary schools in Naivasha's central zone and the 40 principals/managers and 120 ECDE teachers. Purposive and simple random sampling procedures were used to choose the centers. Two questionnaires were distributed to headteachers and ECDE teachers to elicit data. The observation schedule was utilized to gather data on the available resources and their current state. Pilot research was conducted at two ECDE sites prior to the main study to test the validity and reliability of the instruments that would be utilized. The collected data were analyzed using frequencies and percentages, and the results were presented in tables. According to the study, classroom facilities and teacher qualities are related to child development.

Chepkwony et al. (2018) investigated how teacher environmental organization affects ECD language learning activities. The learning environment's organization is a vehicle for taking students from where they are now to where they need to be a year from now. An observation schedule was used to get this study's environment organization results. It looked at how teachers organized the learning environment to prepare ECD pupils for English language instruction in lower primary. The findings revealed that learner performance in linguistic activities improved when the setting was organized. It also demonstrates that most centers lacked the most basic and pleasant learning environment. The study, therefore, concluded that the majority of learners in ECD were not effectively prepared in language activities to cope with instruction of English language in lower primary. The importance of a positive preschool environment in boosting curriculum application cannot be overstated. As described below, a good preschool environment is participatory and includes teachers providing instructional resources and a positive classroom climate, which includes ambiance or a child-friendly classroom. Preschool instructors in Sweden who created a positive classroom environment were more effective in delivering high-quality teaching and learning (Taguma et al., 2013). The results differ from with study on investigating the nature of the classroom in the acquisition of communication skills.

Teachers that create a positive classroom atmosphere enhance curriculum implementation through approachable and supportive social relationships, according to (Gichuki 2013). Furthermore, learning becomes more engaging, collaborative, and less of a competitive endeavor when children connect. This classroom atmosphere facilitates curriculum implementation by allowing students to learn independently via exploration and discovery while still receiving guidance and supervision from the

teacher. The use of instructional aides makes learning easy, enjoyable, practical, and more meaningful to the learner than rote learning Ibrahim, (2005).

According to (Karaka, Nyangasi, & Githii 2004), A study shows that learning is highly personalized and individualized. The importance of drawing in the Pre-school curriculum cannot be overstated, as the classroom environment is frequently decorated with various drawings and paintings, giving the impression that learners' learning experiences are rich in artistic activity. However, there are various benefits to sketching that extend beyond decoration or creativity in terms of other aspects of the curriculum. In this study, the nature of classroom structure is a significant impact. Within the configuration of a classroom setting, more drawing activities are done, and how the classroom environment is organized impacts how learners express themselves. According to research, classroom organization focuses on the physical environment. Kohn (1996), Stronge, et al., (2004), & Ng'asike (2012), and learning environments should be safe and organized classrooms to promote learning and social interaction Koris, (2016. Teachers should strategically situate furniture, organize learning centers and materials to maximize pupils learning while minimizing distractions Ng'asike (, 2012).

Administration and classroom structure are strongly intertwined Farrant & Coehlo (2003). While rules and procedures influence student behavior, class organization influences the physical aspects of the classroom, making it a more productive environment for others, especially drawing activities. Several authors, including Twoli et al. (2007) & Korir (2016), identify classroom organization to include furniture layouts, material placement, displays, and fixed features. An organized classroom influences learner behavior, as evidenced by (Gichuba 2010), who claims that a

well-organized classroom allows students to get the drawing supplies they require without asking the teacher. As a result, learners can use and return resources independently, allowing each learner to focus on materials that interest him or her for personalized expression of ideas. In contrast to a disorderly classroom or setting, where all materials are crowded in one area, this makes learners feel independent, interested, and successful in their learning processes and stimulates inquiry. This differs from this study in that this study sought to examine the classroom environment for drawing activities.

According to Ng'asike (2012), a disorderly classroom irritates students and their learning experiences, causing them to lose interest in their studies. As a result, teachers must ensure that their classrooms are clean, well-organized, and conducive to learning and self-expression, enhancing drawing activities in the acquisition of communication skills in Early Years Education. The relevant literature evaluated does not explicitly highlight the role of drawing activities in developing communication skills in Early Years Education.

According to the U.S. Architectural Transportation Barriers Compliance Board (2002), classroom noise is even more of an issue for pupils with hearing impairments or attention deficiencies. Another significant factor is the temperature within the classroom. The ideal temperature for learning is by all accounts somewhere in the range of 68° and 74, Earthman, (2004). In an analysis on impacts of temperature on learning, male students performed best on a trial of word affiliations when they had taken in those relationships in a 72° room, and performed essentially more unfortunate as temperatures turned out to be more outrageous in either heading (Allen and Fischer, 1978).

The air quality inside the ECDE study hall is also a significant issue. According to research, exposure to low-quality air is linked to lower understudy engagement and impacts teachers' abilities to teach Schneider (, 2002). Accessibility of learners to use space and resources such as chairs, tables, and shelves within the classroom is also a crucial factor to consider. One study found that improving the classroom's physical environment (e.g., noise quality, guest plans, visual stimulation, and study hall association) improved scholarly commitment for hard of hearing and nearly deaf students. However, it could not pinpoint which factor(s) were responsible (Guardino and Antia, 2012). Several studies have demonstrated a significant link between physical foundation quality and understudy achievement. These findings strongly imply that adding building and study hall enhancements to suggested conventional offices can significantly increase understudy learning and achievement.

According to Burgess & Kaya (2007) and Cheryan et al. Martin (2002), A study found that the classroom furniture layout influences how comfortable learners feel and how much collaboration they have with other learners and the teachers. Various classroom actions may be used to achieve various related goals. The learning objectives are essential considerations in creating appropriate learner activities because clustered arrangements might lead to more off-task and challenging behavior (Hastings & Schwieso, 1995, Wannarka & Ruhl, 2008).

Another critical aspect of classroom organization is objects and wall hangings. When everyday objects/hangings are displayed in a classroom, they might be detrimental to learning. Pre-schoolers were randomly assigned to learn basic scientific exercises in a classroom with few or no wall displays in one study. Understudies in the study hall with the wall displays were more distracted and did worse on exercise worksheets than those

in the exposed classroom (Fisher et al., 2014, Korir et al., 2016). More research can help determine ideal measurements as well as the material and nature of the classroom and how much these findings apply to children of older ages.

The Kenya Early Years Education Service Standard Guidelines (2006) propose a minimum acreage of 0.125 acres for ECDE centers in urban centers. The minimum acreage in urban slums can be as little as 0.125 acres. A conventional classroom size of 8 meters by 6 meters, with a maximum capacity of 25 students, is also recommended by the service requirements. It also suggests that every classroom have a chair and table for the teacher and a cabinet. This is in addition to the fact that children's tables and chairs must be suitable and appropriate for students with special needs. There are two crucial concerns regarding an indoor area or setting. The first is its permanent characteristics. The shape and size of the room, the door and windows, and any built-in storage space, such as shelves, are examples of these elements. The room's moveable or semi-fixed components are the second factor to evaluate. These characteristics include the layout of learning materials and furnishings and the texture and color of the environment. All of these factors influence how successfully the classroom space is utilized. As an example, of a classroom standard measurement:

**Picture plate 1: Recommended classroom size and child size chairs and tables**

In nations like the Netherlands, Australia, South Africa, Nigeria, and Rwanda, more studies have been done on the impact of classroom design on successful learning Pawlowska et al. (2014) and (Singh 2014) on students' personality, classroom environment, and students' outcomes with a focus on learning and individual difference. This differs from this study in that this study was to look into the characteristics of the ECDE classroom setting for the acquisition of communication skills in Kenya's Early Years Education.

## 2.4 Use of Drawing Resources in the Acquisition of effective Communication

According to the study of technology resources in acquiring language skills in Gem Sub-County, Kenya (Ogott and Odera, 2014). The findings indicated that; teacher preparedness, availability of technology tools, and administrative assistance all influenced the learning of language skills.

A study by (Okongo et al., 2015) wanted to see if the availability of teaching and learning resources influenced the acquisition of speaking strategies in Nyamira North sub-county pre-school centers. The data was analyzed using graphic insights of means, rates, and means. The study's findings revealed insufficient teaching and learning

resources that influenced the acquisition of speaking styles among pupils in ECDE centers.

Children must learn to create, comprehend, and use written, visual, auditory, and multimodal messages (Nyongesa, 2015). When children start school, they are usually prepared to create spoken and visual writings (drawings), but they have limited abilities to create written content (composing). Their research looked at what would happen if teachers encouraged learners to create visual content while teaching them how to write and communicate during the first half-year of formal learning. The findings indicated that educating children to draw while also training them to communicate allows them to construct complex, meaningful writings that they might not make using traditional print forms alone. They also claimed that, given contemporary understandings of literacy, integrating drawing into the early writing curriculum is more vital. The current study will take place in Kenya to fill the geographical gap left by the previous study, which took place in Australia.

Kitheka (2005) researched the quality of language resources selected, generated, and used in youth instruction programs. The goal of this study was to figure out what factors influence language material selection, advancement, and use. The investigation discovered a severe lack of language materials because of regulatory, physical, human, and target task elements that impacted the determination, advancement, and utilization of language materials in ECDE focus. However, the study did not look at any variables related to drawing materials, the only language in general.

According to Romiszowski (1974), Dale (1969), and Patel (1986), a lack of educational resources hampered effective utilization. This is supported by Njoroge (2000), who discovered that inaccessibility to instructional assets inhibits effective utilization in a

study of factors influencing accessibility, getting, and using assets in the teaching of English in selected supplementary schools in Kenya. However, Kitheka (2005) observed that schools with abundant resources may not always employ them effectively, failing to improve understudy execution. On the other hand, schools with limited resources can make the most of what they have, which can help students learn more effectively. Learners should maximize and use available resources to meet their educational goals.

According to (Hirvonen 2019) & (Waithaka 2017), A study revealed that the use of readily available resources takes precedence over the amount. This is supported by Cohen et al. (2003), who state that the issue is not making resources available to schools but getting those resources used by students and teachers to learn academic resources. The nature of teaching the subject is determined by the availability of teaching and learning materials and their appealing application. This is because the bulk of the materials have a vital role in understanding concepts and skills development. The use of resources in pre-schools is essential since it promotes experiential learning.

Asiabaka (2008) observed that the administration's inability to develop tactical instructions on most minor guidelines affecting school offices has resulted in anomalies in sourcing learning assets in Nigeria. This is because, while some have well-equipped research centers, libraries, and other offices for effective teaching and learning, others do not, or if they do, they are inadequately equipped. In a similar vein, (Olaniyan & Ojo 2008) identified a lack of course materials and instructional pamphlets as one of the barriers to the effective use of beginning innovation in Nigerian secondary schools.

This is supported by (Chiriswa 2002), who observed that effective teaching and learning are dependent on the availability of enough resources, such as books, library materials, and a variety of other visual and auditory aids that improve national test performance. Essentially, (Bitok et al. 2015) stated that the accessibility and quality of materials promote the smooth operation of any school, thus increasing appealing teaching activity, and as a result, pupils achieve superior instructional achievement. Differently, these studies touch on the role of resources in primary and secondary schools, but there are few studies on resource accessibility and use in ECDE. As a result, the goal of this study was to bridge the gap and determine the resources in Nandi County ECDE schools, as well as whether teachers can encourage learners by utilizing the available resources in their teaching/learning activities.

Crayons, paper, wax crayons, and books, among other things, should be provided to ECDE pupils. Students can use these to express themselves, and the ability to "draw" on them will encourage children to use their imaginations. Harriet is a writer who lives in the United Kingdom (2002). The blackboard should fill in as a consistent case of excellent organization, and the work should be of the highest quality, with a clear writing slate, improved composition, figuring, and drawing demonstrated.

Learning/teaching materials pique children's interests, and as a result, preschoolers become creative and innovative. UNICEF (United Nations Children's Fund) (2003). Many educational materials should be made available and used in pre-schools. Young children must-see, hear, feel, touch, and taste things. Exercises will be fruitful only if the educational resources are readily available and sufficient for all pupils in the class to allow children to control them without reservation. Kafu (2010). The Montessori model reveals that there can be no learning without educating and learning materials. If

teaching resources are provided promptly, she believes pre-school kids should receive quality training.

More attention is needed to arranging sufficient offices, assets, and open doors for educators to use ideas on the utilization of accessible, available, and correct assets in the arrangement of ECD instructional difficulties, according to (Bittok et al. 2014) in a workshop paper. Furthermore, using these resources has not been oriented toward drawing and acquiring relational abilities. Kochar (1990) claims that an instructor with enough and essential training materials and offices will be more confident, viable, and profitable, and Kariuki (2018) agrees that relevant assets should be provided and an exceptional asset for use in pre-school instruction. Ng'asike (2012) emphasizes that in educating and learning, resources and teachers are essential components in improving study hall learning. These materials include both physical offices seen in schools and instructional and learning resources that aid in the learning process. However, these studies focus on pre-school instruction and adaptation rather than how attracting may be bridled to improve correspondence ability acquisition in Early Years Education, a critical component of early learning and a teaching concern.

Romisszowski (1974), Dale (1969), and Patel (1969) all state that physical facilities, teaching, and learning resources, are essential to the teaching and learning process. The availability or non-availability of instructional materials and facilities may significantly impact the success or failure of teaching and learning processes. More attention is needed to the arrangement of adequate offices and resources, as well as opportunities for educators to share ideas on the use of accessible, available, and appropriate assets in the arrangement of instructive pre-school issues, according to (Standa 1980, Ng'asike, 2012, & Were 2005).

According to (Heinnioch 1988, 2010), instructors are valuable assets in the teaching and learning process and should be regarded as such by other learning assets. Gichuba (2010) supports and presents the best resources to be incorporated with a particular training system designed to complete a specific learning practice, such as topical methodology, without which head-educators may face an authoritative issue. This is unmistakable evidence that a lack of adequate resource sources hampers the execution of new ideas and techniques. Almost none has been mentioned based on the aforementioned writing, and the examined writing in section 2. how accessible resources might be prepared and used for attracting activities the development of relationship abilities in early childhood education.

The literature study says that successful Pre-school programs require all-around prepared teachers, dynamic learning methods, an enjoyable atmosphere and learning resources, and a scenario that both motivates and encourages learning. However, casual assessments, as reported in a published work by Bitok et al. (2014), based on school reports, teacher evaluations, and expert participation with the Eldoret Municipality, reveal insufficient resources, and the teacher understudy proportion is high. As per Kochar (1990), a teacher with adequate and appropriate training materials and facilities will be more viable and productive.

According to Kariuki (2018), the available resources have a significant impact on what happens in schools nowadays. With over 1:30, the teacher understudy ratio is large, posing a problem for using limited educational learning resources efficiently. The number of drawing exercises is determined by the availability of facilities and the instructor's readiness. The activity areas will be viewed better in an ECDE setting since the students will identify with the child's exercises. In this way, it is apparent that a lack

of resource materials and facilities frustrates instructors and reduces their motivation, especially in early childhood, where the establishment is. He also noted that children learn in this area by being actively involved in the learning cycle, such as tallying, painting, and attracting the arithmetic activity area.

Nonetheless, this investigation discovered that a teacher is a critical resource without which other resources cannot be utilized effectively. This prompted the researcher to investigate drawing as a teaching tool in the acquisition of social skills in early childhood education and look at the results. Many studies look at how resources are obtained, used, and preserved, but none look at how these resources may be sorted out for use in drawing as an academic tool in acquiring communication achievement in early childhood education.

## 2.5 Use of Learners Drawing and Communication in the Acquisition of effective Communication

According to (Murundu, Okwara, & Odongo 2014), drawing is the most effective way for children to learn. Children's positive relational abilities are enhanced through drawing-based instruction and learning. Today, many children are not given time to play, and educators do not fully integrate drawing into the educational plan because many educators do not see the importance of attracting children, resulting in the horrible showing of children. However, small children's instruction and learning should be based entirely on play. The study's goal was to establish the importance of drawing activities as part of an Early Childhood Development and Education (ECDE) educational plan. A descriptive survey design was used in this study. The findings indicated that most teachers include appropriate types of drawing tasks separate from analytic attracting, which is confusing, uninteresting, and unnecessary to the education

and learning of young children. Teachers and students recognize the relevance of the sketching exercises included in the ECDE curriculum.

A study aimed at determining the role of sketching on the development of speaking talents in pre-kindergarten children. The study's main goal was to look into the use of sketching in the development of speaking skills in pre-kindergarten kids. The study included a survey research design. The target population in the Bomet Central Division was 185 ECD centers with 370 educators and administrators. A sample of 30% of the centers was chosen, resulting in 56 centers. The study found that drawing impacted the development of preschool children's speech abilities, but it did not look into the learner's drawing abilities.

Hongi et al. (2018) investigated the relationship between the language of instruction and pre-grade children's learning ability in a multilingual domain. The case study includes 1867 pupils from low-income metropolitan families who attend 147 low-cost private pre-primary schools in Nairobi, Kenya. Around half of the pupils (48.4%) were taught essential aspects of education, such as letter naming, letter sounds, and rhymes, in Kiswahili (the most generally spoken language in the area), while the other half (51.6%) were taught these concepts in English. Because the students taking this exam come from various ethnic backgrounds, Kiswahili and English are not their first languages. This study sought to answer the following question: Is there a benefit to developing competency skills in a second language (in this case, Kiswahili) over a third language (English) in a multilingual setting? Using engaging strategies, the relationship between learning scores and the language of instruction is investigated. This link is further investigated using multivariate approaches that consider student gender, study hall resources, class size, teacher's Pre-Service training, and educator long stretches of

understanding, among other variables. Even after controlling for the effects of various variables in the study, the results showed that pupils trained in education abilities using Kiswahili outperformed their English-taught counterparts (at p 0.05 level). The results indicated that the content retention rate in students was influenced by the primary language of instruction they received.

Every parent wishes for their child's transition from preschool to be as seamless as possible given the circumstances so that he or she can accomplish the best possible growth and formative achievements. In any event, there are a few issues that children and guardians, and instructors should be aware of to ensure a smooth transition (Ntheketha, Mwangi, & Ajuoga, 2016). A few tremendous educational and learning resources are in charge of this smooth change measure. The study used a case study research method to evaluate the relationship between understudy material absorption and learning resources on preschool students moving to Rachuonyo South Sub County class. The study was based on Piaget's theory of intellectual development, which recognizes the importance of instruction resource availability in developing a child's schema. The study discovered that appropriately procuring, using, and storing learner content and learning materials improves the transition rate of preschool children.

Okello (2017) researched a relationship between learning materials and student knowledge in mathematics (number work). This study aimed to examine the influence of different types of learning materials, their accessibility, the impact of learning materials, and the instructor's use of learning materials on student knowledge in several Kisumu East Sub County Kisumu County Pre-schools. The study's findings suggest that using learning resources to learn number work positively impacts student

knowledge of number work activities. Regardless, the examination did not look into the content of the children's drawings.

This study by (Waithaka 2017) sought to prompt an introductory and intelligent talk on the utilization of the first language in Kenyan youth instruction (ECE) establishments trying to recognize the presence of xenocentrism. Even though the Kenyan ECE policy framework endorses the utilization of the language of the catchment territory when instructing and speaking with the youthful students, numerous (Waithaka, 2017) aimed to provoke an essential and intelligent discussion on the horrendous use of the first language in Kenyan youth instruction (ECE) schools in order to detect the presence of xenocentrism.

Although the Kenyan ECE policy framework encourages teachers to use the language of the catchment area while teaching and communicating with young pupils, many teachers continue to use English. Although reviews have attempted to recognize factors that prevent the utilization of the native language, it is not sure whether the training could be a marker of xenocentrism. The study's objectives were to assess students' proficiency in their first language, their perceptions of their first language, and their enthusiasm to learn it. A descriptive research design was used in this study. Preschool educators and guardians with children enrolled in preschools in a rural area of Kiambu County made up the crowd. Interviews were used to acquire information. The findings revealed that guardians and instructors encouraged young kids to use English. Guardians believed that schools that taught English as a second language were superior to those that taught it as a first language. A few teachers argued that because the vast majority of reading resources are written in English, it was critical to familiarize children with the language early on in their lives.

On the other hand, this study looked into how drawing can be used to secure connection capacities in any visual language in the classroom. Children usually explore the world around them through intellectual, physical, and emotional means using tools such as paper, pencil crayons, and makers. The study further reported that children become more expressive due to these drawings, which improved their emotional intelligence, motor skills, and problem-solving abilities.

According to (Wright 2007), add to this by stating that in the classroom, teachers use drawings as a "time filler" and an exercise to foster realistic representation of objects, people, locations, and events. According to French and Richards (2003) and Annings (2002), children's enthusiasm and participation in drawing tend to drop as they progress through school, probably due to shifting settings.

Direct attention to the story that follows the markings formed on a surface when focusing on children's drawings is linked to marks made on a surface, according to (Kress 1997, 2006). Both the drawing and the supporting tales contribute to the meaning-making process, according to Cox (2005). Through what they choose to draw and their emotional engagement in a picture, children's drawings reveal a lot about their anxieties, joys, dreams, and hopes, as well as a glimpse into their personalities. When it comes to both the drawing and the narratives that children create, the social construction of meaning that children express to adults through their drawings is essential than the content of the drawings. Wong (1915). This study aimed to investigate the meaning and narrative of learners' drawings in the learning of communication skills in Kenyan Early Childhood Education. The importance of children's narratives throughout the drawing process is emphasized in this study. The meanings of words can be changeable and perplexing. They shift across modes, media,

texts, and time and space to meet the needs of persons and settings. They can shift, change, and transform. Each time there is a shift between modes, there is a shift in meaning-making possibilities.

Teachers should be able to connect creative art-drawing activities to real-world issues. As a result, their pedagogical content knowledge becomes crucial in engaging learners in conceptualizing their class drawing activities. Drawing visual representations are critical for ECDE because it allows learners to engage their visual model-based reasoning. There is a drawing framework to learn what drawing is and why it is used in an ECDE classroom as an intervention method to help teachers build an atmosphere that encourages children to draw and use visual models in particular. Bloom's tool for drawing activities is a recommendation to assist teachers in overcoming potential obstacles to introducing and analyzing drawing to learn in the classroom. The framework aims to raise the profile of drawing as a creative art skill that encourages the study and best practices implementation.

## 2.6 Developmental Stages of Children's Drawing

The progression of a child's drawing development is determined by the age of the child. They can use any form of imprint to communicate a thought, despite the fact that adults may not see any similarity between what children are communicating by using blemishes on a surface and what adults are conveying by using blemishes on a surface. In the long term, children go through four stages of authenticity: from drawing what they know (scholarly authenticity) to drawing what they perceive (creative authenticity) (visual authenticity).Children begin to write when they are just a few years old. This period is described by (Luquet, 1970) as fortuitous realism. The children progresses from random scribbling to more focused scribbling when they recognize the

connection between lines, forms, and marks, according to (Anning, et al., 2012). The next stage is what's known as failed authenticity, which appears between the ages of four and five. One can see a child's first genuine endeavors here. The third is a stage is portrayed as scholarly authenticity, otherwise called the phase where children draw what they know instead of what they see.

Luquet (1970) depicts how children develop from academic to visual authenticity between the ages of seven and nine. As the children begins to draw what they observe, visual authenticity becomes increasingly important. As a result, children's portrayals are more realistic on the surface. What a child can draw is mostly determined by his or her age and experience, and while they draw, they attempt to communicate what they are depicting. Taylor et al. (2011) also claimed that through various types of drawing, children develop solid approaches to speak to what they know and represent their experiences, and that as they develop, they move from the writing to the Pre-Schematic stage by having the option to use marks as portrayals of thoughts. Gentle (1985) observed that children communicate in a variety of ways, including words, actions, impressions, and movements, and that as they grow older, their capacities for interpreting, teaching, and sharing such experiences develop. This study sought to investigate manners by which drawing which is mark-production can be utilized in the securing of relational abilities among early years students. Lowenfeld & Brittain (1987) in concurrence with (Luguet, 1970) distinguished six imaginative formative phases of kids; Scribbles (2-4 years); roughly age two the youngster starts to cause scattered imprints for entertainment only and advances to cognizant manifestations at age three to give a striking record of the kid's reasoning cycle. Pre-schematic; (4-7 years); after a few jotting exercises, the youngster can supply more detail imperfections on a surface in comparison to the previous stage, and can relate anecdotes about the imprints he/she

has made. Schematic (7-9 years): At this age, children create a large number of images, including x-beam drawings that accurately depict protests, and the child recognizes relationship and space in his or her drawings. In the gang age (9-12 years), the children's drawing becomes more keen and free, displaying more details to communicate with the real world.. Pseudo-Naturalistic stage (12-14): this stage marks the end of children's free-form drawing and the beginning of more adult-like manifestations as they become critical of what they draw. The Decision-Making stage (14-16) is the final stage in which children decide whether or not to continue painting because it is a beautiful enunciation of their thoughts and the developing child is shifting from youthful to formative as shown in the artwork below.
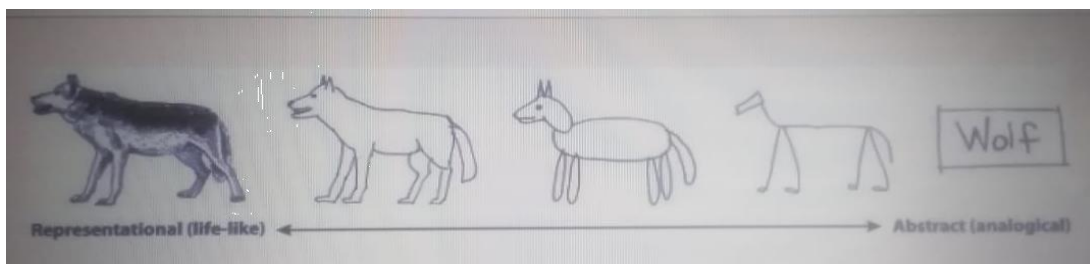


**Figure 2.2: Einsworth (2011) Developmental stages of children's art**

The amount to which the learners are representational varies. Children's drawings are similar in the degree to which they are authentic, based on the Lowenfield stages of development (Dequera, 2015). In essence, all drawings are related because they cannot honestly speak to the present reality, but they differ in the extent to which they are supposed to be illustrative.

The study focuses on five to six-year-olds in Pre-Primary 2 who are in the pre-schematic stage (4-7 years) of development. According to Lowenfeld and Brittain, (1987), children in this age develop schema (visual cognition) associated with drawing round pictures with a line in the shape of human or animal representation. These researchers went on to say that children at this age have limited concept of

space, so they would draw and utilize shading haphazardly, without a logical presentation, and they will draw to show what they perceive to be relevant. Additionally, (Kellogg & O'Dell, 1970) noted that scribbles comprise of dots, horizontal, vertical open and closed lines, circles, spirals which structure the premise of the drawing.

## 2.7 Drawing as a Communication Process

Drawing is visual art that many educators regard as an essential exercise for youngsters. It fulfills a vital role in the lives of children by assisting them in comprehending their natural surroundings and the social world in which they live (Appelman & Foks, 2012). Children can communicate from a variety of perspectives through drawing. It is a beautiful way for children with limited language to communicate with their peers and adults, both at school and home. Drawing has been viewed as a broad language, and it provides pupils with a powerful means of expressing feelings that cannot be communicated orally and a means of correspondence.

Einarsdottir et al. (2009). When drawing is utilized as an instrument for correspondence, students can communicate and make significance out of the earth around them. Utilizing drawing as a method for correspondence helps make thoughts, considerations, and emotions accessible and comprehended by others (Adams, 2006).

In their many drawing activities, children have a variety of messages to portray. They draw themselves as a sort of identity or self-articulation in their pictorial presentations, and they can draw the figure of a man or a child, a lady or a girl to signify gender, as well as a variety of other things that are significant to them, for example, dairy animals, goats chicken, vehicles, homes, family, trees, school, church and some more. These portrayals are made through drawing to communicate with others around them, as

demonstrated by (Anning et al. 2012). Drawing causes youngsters to impart their comprehension and understanding of the world before communicating verbally, and emotions communicated in expressions regularly convey better than words (Tonui, 2015).

Drawing is seen as a finished activity once the final output has been created. Wrightson (2009) also uses 'drawing' to describe this art product. Perry went on to say that drawing should not be judged solely on the outcome or object but that the prior cycle should also be taken into account. If we accept this viewpoint, it becomes clear that parents and teachers routinely restrict a significant portion of children's drawings or even ignore them. The encounters that the child has previously, and keeping in mind that occupied with, the drawing cycle affects the drawing created. These encounters ought to be considered while analyzing youngsters' drawings. Drawing human figures is an essential highlight in youngsters' drawing execution. The figures that youngsters draw can represent parts of their character in one manner or the other. For example, Klepsh and Logie (1982) decipher long legs or massive arms in youngsters' drawing as a craving for capacity to control other children, while (Koppitz 1968) considers it the child's ability to help other children. Then again, children draw to portray their companions, relatives, and people of significance in their area. Cox (1992) had a similar view with (Tonui 2015) that when a child draws a person, it means self-character. Besides, (Hawkins 2002) clarified that drawing is an incredible medium through which learners see their mental self-portrait. Accordingly, drawing an individual portrays their identity and uncovers a feeling of self-personality.

Children are occupied with various drawing exercises either for no particular reason or for communicating in different manners. Scribbling or mark-making, images, lines, and

shapes are essential components of drawing in the early years. Research shows that learners utilize visual media to make and explore lines, shapes, and hues in a cycle associated with intellectual norms, for example, language and mathematics Matthews, (2003).

Even though numerous grown-ups believe children's scribbles do not give any significant representations, (Striker & Kimmel, 2001) accentuated that scribbling is one of the practical exercises of children and as the first form of a drawing of a child and should be viewed as a child's first tool for communication. She further focused on children's scribble for a reason, and it implies the cycle of development since scribbles are made in formative stages. Striker & Kimmel clarify that scribbles could be an impression of the child's feelings and character. For example, grown-ups and teachers can utilize the scribbling made by children to decide if a child is glad, gloomy, healthy, or restless. Drawings mean a lot to children since they provide them joy and help them relieve stress and emotions at the same time.

Different expert professional groups utilize children's drawings, such as pediatricians, specialists, teachers, and legal therapists (Dequara 2015). The allure of utilizing drawings as a research instrument might be owing to their effortlessness of organization, just as the activity is viewed as a feature of most children's day-by-day repertoires. Different studies recommend that revealing the substance of a drawing is viewed as less undermining than verbal input from direct occasions or feelings (Gaskins et al., 1987). Cox (2005) stresses another significant advantage that the strategy offers: ' drawings are not excessively subject to language.' This is also fortified by how drawing is frequently utilized in ethnographic and anthropological work in

nations where youngsters do not communicate in English or their first language (Camfield, 2011, Veale, 2005 & Taylor, 2011).

Although the language is not essential for creating drawings, language is imperative for their translation and comprehension. Drawings are arranged in a particular society, a specific time, and made inside a specific setting (Annings, 2014). Therefore, researchers need an intuitive way to consider different components that impact what and how children draw. These may thus influence the implications of portrayals and affect how we decipher drawings as portrayals of children's viewpoints. If we neglect to use the narratives produced from the process of drawing, at that point, the implications we decipher from visual portrayals may bring about inaccurate records of children's projected messages.

Drawing is a meaning-making activity that happens in specific social-constructivism settings to discover proof for its informative possibilities, just as the connection between thought and drawing in early childhood (Dequara, 2015). The researcher challenges conventional perspectives towards children's drawings that pay attention to the consequence of the drawing movement, moving to more contemporary perspectives that think of it as a social-constructivism philosophical hypothesis. The researchers investigate the overall writing and dissect preschoolers' drawing activities derived from past perceptions on educational contexts, using the focal points of the social-constructivism approach, in exposing children's importance of assessing drawing as well as ways that drawing action suggested that people their reasoning and communications efforts and causes them to create.

Farokhi et al. (2011) explain that when children understand that their drawings are not understandable by others or think that the realistic depiction is not adequate, they

quickly incorporate verbal or even create explanations to their drawings to pass on the right message. Sometimes they ask for help from adults or friends to improve their pictures through discussion (Anning et al., 2012).

Tonui (2014) observed that when children draw gathered around a table in early childhood schools, observation reveals that they engage in a wide range of communication activities, which often match the learning culture of each classroom. They consider and discuss the drawing theme, disagree or collaborate on what to draw and how to draw it, inform others about the content of their drawings and the significance of their images, tell stories, speculate on the significance of their companions' images, and randomly duplicate others' images. Thompson gives an understanding depiction of the significance of these communication skills for both the advancement of drawing activity and learning: Copying another child's drawing is widely regarded as the highest form of flattery and is seen as a legitimate way of participating in an ongoing activity and asserting common sense with another child. Occasionally, there is no spoken collaboration since the children draw next to each other in a friendly manner. In some cases, children's desire to doodle grows as they reflect on their experiences in the world.

Dequara (2015) avers those children make a conscious effort to communicate through movement and interrelationships among the numerous symbols in their drawing. Along these lines, they create a variety of realistic graphics devices to represent connections and changes, such as arrows, lines, circles, and so on. They purposefully manipulate the graphic area (for example, (they place the symbols at specific positions on the paper sheet or repeat similar images at various situations in their drawing) to construct complex implications such as portrayals. At the same time, other researchers consider

the function of attracting action mathematically (Duncan 2013). Children's drawing activity is dynamic as they engage in different drawing exercises. They constantly investigate the connection between the symbol and meaning and progressively understand that adjustments in the image lead to changes in the meaning or the other way around. More often than not, the youngsters consolidate their images with images they get from their environmental setting, for example, companions' and grown-ups' realistic images or different traditional images and codes (e.g., letters, numerals, traffic signs, billboards, and so forth which they may at first use in their manners.

Consequently, they modify and improve their emblematic codes and build up their drawings while improving correspondence. It follows that the way toward building images and implications through attracting movement appears to incorporate exploration, creation, reevaluation, rearrangement, composition, and cognizant endeavors toward the portrayal of relations between images just as reality changes. Hsiao, Chang, Lin, and Hu (2014) further notes that these cycles are incredibly demanding and comprise mental activities. The study discovered a link between drawing activity and reasoning, which is evident because developing implications through realistic images is a psychological action and because drawing activity serves as a device that supports and builds up the thinking process.

Perhaps this is why drawing activities have been successfully used to investigate little children's thinking in several countries, including France, New Zealand, Nigeria, Senegal, Uganda, and Kenyan Early Years educational curriculum domains (Dequara 2015). The researcher opted to show and analyze the drawing activity of pp2 learners in a classroom environment for this discourse, explicitly recognizing drawing activity as both a cognitive process and a tool. In particular, the learner's drawing activity

introduced in this section is essential for the data gathered during all-inclusive extended research drawing as an educational tool to understand the content of learners' drawings among the early years' learners in Kenya.

This drawing comprise of 5 things in an image; these are deciphered as: a boy, girl, hen, cow and a tree.
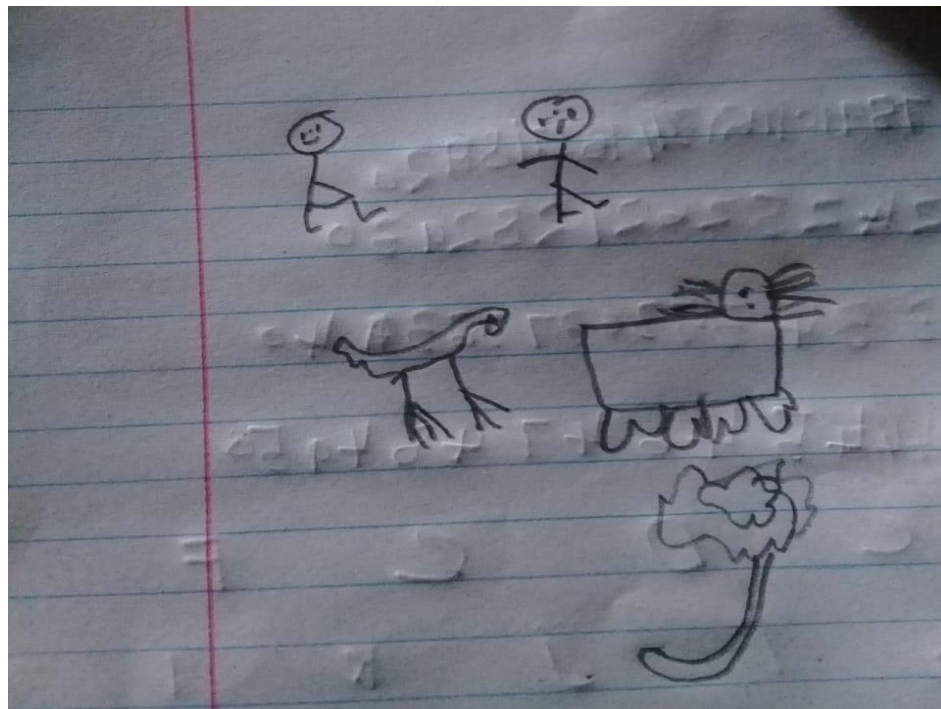


**Picture plate 2: Drawn by a six years old Goldie**

This investigation was conducted in a normal classroom setting in EYE school pre-primary grade II (4 to 6-year-olds). The children were given a range of creative art activities. The ideas came from their home and school environments, and the classroom teacher read them aloud in front of the entire class. The children initially followed the directions. The children worked individually after that, using paper and pencils. Finally, sampled learners were interviewed individually by their teacher about their drawings, as well as the graphic symbols and meanings they attributed to each of them. Field notes were taken during the entire exercise.

**2.7.1 Drawing and Communication competence**

Communication competence in this study alludes to a capacity to use information and abilities to create intelligent communication. It includes at least two people (teachers and learners), in which information is sent, with the sender having the aim to alter the information condition of the receiver. This open communication act can be said to have been accomplished when the important actions of the participants have been adjusted. In this vein, Papandreou (2014) stresses the deliberateness of communication in his meaning of the highest sense' of communication which is as per the following: sending is done voluntarily by the sender, the sender recognizes the receiver as a capable agent who can take voluntary action and the receiver recognizes that the sender has an aim and that he can acknowledge it without necessarily fulfilling the sender's desires and objectives.

Children have a limited vocabulary, therefore drawing allows them to communicate with themselves and impart in the manner described above. It is a viable way for them to communicate with their friends and adults, both at school and at home environments. Drawing is regarded as a common language, and it allows young learners to communicate feelings that they might not have been able to convey otherwise, according to (Piller, 2017). This study looks into the use of drawing as a communication tool that children rarely refuse to engage in. Learners can communicate and make meaning out of their environments when they use drawing as a tool for communication.

Schmidgall et al., (2019) asserts that utilizing drawing as a way of communication in thoughts and actions of expressions accessible to others since learners have numerous messages to convey in their different drawing activities. Anning et al (2012) describes

the content of learners' pictures that, in their pictorial presentations, they normally draw themselves as a type of personality expression or self-articulation, and they can draw the figure of a man or a boy, a woman or a girl to speak of sexual orientation, just as drawing numerous things that are important to them, similar to vehicles, structures, family, trees, social occasions and some more. Every one of these portrayals are made through drawing to communicate to the individuals around them, as demonstrated by Southscott et. al., (2015) art encourages children to convey their comprehension and translations of the world before they can communicate verbally, and emotions communicated in expressions frequently convey superior to words.

## 2.7.2 Drawing as a Method of understanding Children's Perspectives

Drawing is an element of inventiveness and creative mind and thus the capacity to frame new pictures and sensations in a student's psyche and transform them into the real world (British Council, 2016). Inventiveness and imagination allude to the capacity to envision things that may not be genuine, to frame pictures in the brain of items/puts that one has not seen or experienced, and transform those photos into genuine articles. Creativity further alludes to the arrangement of mental pictures of things that are absent to the faculties or are never entirely seen, making physical portrayals of those pictures.

The creative mind exists or arises in the subconscious, staying there. Imagination and creativity are defined as the ability to see the world in new ways, uncover hidden meanings, establish connections between seemingly insignificant things, and invent solutions. It is a wonder how new and vital ideas come to be. Learners that are creative and inventive may express themselves and communicate with others. They can use the knowledge, skills, and values acquired over the learning cycle to generate

new ideas that result in articulations and ideas that improve their lives and the lives of those around them. Kupersmidt, Parker, Mathis, (2013). This study sought to explore how learners use drawing their drawings to communicate.

A comparative report by (Packman et al., 2017) utilized drawings to diagnose children's cerebral pains. Regardless of the participants being characterized as children, there was a broad scope of ages inside their definition, with the most youthful being four years of age and the oldest member being 29. The study appeared to strengthen the children's points of view in one respect, as the paper clearly stated that the researcher asked no leading questions to limit tendency. On the other hand, the child was given only one piece of transparent paper, a pencil, and an eraser, which did not stimulate the potential for articulation that sketching can provide when a variety of tools are provided. The results proved the effectiveness of drawing in communication.

Quillin & Thomas (2015) provide drawing as depicted in the diagram below. In order to sketch, children must first connect with a mental cycle and choose the most appropriate plan to express. The next phase is to sort out the intellectual structures into a possible model before moving on to the third step of creating an inner model and continuing to outline on a surface as seen in figure 2.4.
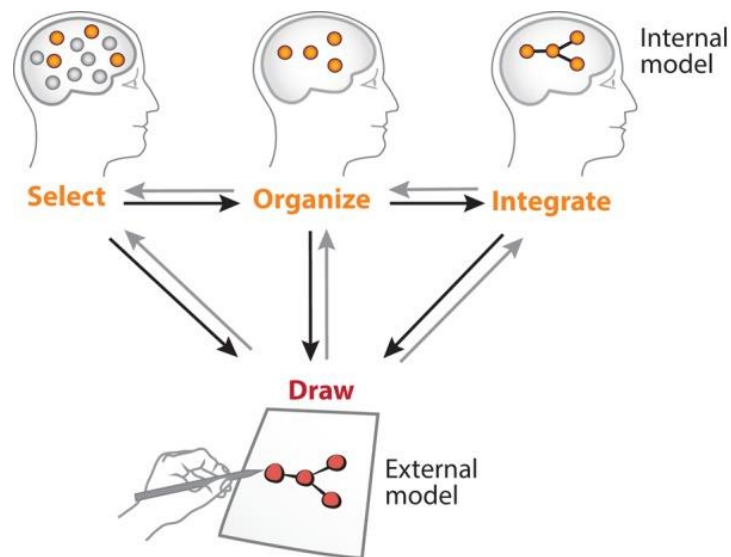
**Figure 2.3: Process of Drawing**

*Source:* Quillin & Thomas (2015).

The Preschool curriculum is structured and adheres to a set schedule. A schedule lists all of the day's events and activities, as well as the time allotted to each. A timetable allows for a range of interactions, including interactions between students and teachers and interactions between small and large groups of students. Thus, a good schedule should consider the target learners' developmental stage, interests, and needs. Both students and teachers benefit from having a schedule. In order to establish a sense of security in early childhood, a predictable routine is needed.

Components and activities in early childhood education settings are consistent among educational jurisdictions and programs (Dequara 2015). However, the order in which these components are presented and their time may alter from one program to the next. Each day, the most significant part of time should be dedicated to pre-selected activities from which children can choose. *Activity time* is the name given to this section of a timetable. It appears in all preschool schedules, regardless of program or curriculum format. Self-selected learning activities, free play, playtime, learning center time, and other similar terms are all used to describe activity time.

The names and design of this component imply that the students are free to choose the activities they want to participate in. Many of the activities for artistic, physical, verbal, cognitive, and social development are incorporated into this timetable section. Here you can put a variety of well-planned activities to reinforce and promote the curriculum subject and objectives. Each day's activities should aid in developing the child's language, fine and gross motor, creative, cognitive, and social skills. This study interrogates drawing, which is firmly rooted in creative activities and runs across all activity areas in the EYE curriculum.

As indicated by (NACECE 1999) and (Syomwene 2017), the core curriculum activities for this level have been created to depend on the learner's developmental stage. This serves to organize a learners' knowledge and thus enhance communication skills (Abdi and Zarezad, 2016). The pre-schematic stage is the edge of this study in exploring the utilization of drawing resources in the acquisition of communication skills in EYE.

Johnston and Goettsch (2013) argued that drawing is pivotal in the life of each learner and, therefore, a need for their development. They further focused on drawing as an essential aspect of the curriculum since it motivates learners to draw. This affirmation was likewise underscored by the Curriculum Guidance for Preschools (1989) that children become mindful of and utilize different types of communication, including drawing, listening, speaking, and use of body movements. Drawing is to explore activities and develop pre-writing skills in the preschool educational programs. Teachers have a role in encouraging learners to use their creativity and imagination during drawing activities (Tonui 2015).

As Brittain (1979) & Anning (1999) stated, drawings by children are not simply to make decorations for home and schools. It goes far beyond that. Drawing is an

esteemed component of the school educational program since it prepares learners by enhancing hand-eye coordination, thus improving their visual sense (Anning et al., 2012). Learners are dynamic beings who use the physical setting in a natural, handshakes, physical environment full of materials that are important for children to explore for their learning experiences. The timetable, space, connection with others and every day schedules all give learning opportunities s to everyday learners. Accordingly, the learning environment ought to give a rich collection of materials and equipment that ought to be efficient inside the accessible space for children to grow socially, emotionally, psychologically, and cognitively (Tonui, 2014).

According to Aistear, Ireland's national curricular framework, the learning environment, and learners' participation should be rich to enhance both language and substance by fostering social relationships with adults and peers through the provision of materials, activities, and opportunities (NCCA, 2007). In any event, this suggested that learners should be exposed to their settings by planning appropriate activities and resources. Various drawing tools, such as pencils, charcoal, pastels, chalk, and others, should also be available for exploring and connecting with the surroundings (Curriculum direction, 1989). Learners need numerous opportunities to draw, decipher, and revise their drawings; subsequently, the instructing and learning condition must offer kids support, time, and opportunity to accomplish this aim (Hsiao et al., 2015).

The debate on preschool educational plans started in Brazil in the last part of the 1970s and mid-1980s with the ascent of new hypothetical and legislative references to learners' six years of age and below on how the public contribute to their education became a rolling stone for early years education development (Silva, 2008). The motivation for this conversation originated from other recorded and social settings that

considered and recommended a curriculum that has its beginning in the pedagogical renewal frameworks. This was introduced by progressive American educational thought and the European New School—because those developments, from their beginnings, were roused by the all-encompassing advancement of the education stakeholders (Sekeralli, 2014). This progression ultimately led to the Early Years Curriculum Model in Kenya.

## 2.8 EYE Educational Plan Models in Kenya

Theorists and scholars in EYE have impacted the advancement of different curriculum models. Various methodologies or educational program models have been derived from the hypotheses and thoughts of these researchers are everywhere in the world in various training capacities Government of Kenya, (2017). According to the report, Kenya's National Center for Early Childhood Education has devised a public education program for EYE (NACECE). EYE is managed by NACECE, a Kenya Institute of Curriculum Development (KICD). This semi-autonomous government organization falls under the Ministry of Education, Science, and Technology (MoEST) and is responsible for developing curriculum for all levels of education below college. It continues, "Through Presidential Circular Number 1 of 1980, the MoEST obtains responsibility for the ECE division.

Another schedule has been proposed that is competency-based training for EYE learners and is divided into two stages to provide for all categories and ages of children attending EYE centers in Kenya. I Level I – Pre-essential 1 (4 years); (ii) Level II – Pre-essential 2 (4 years); (iii) Level III – Pre-essential 2 (4 years); (iv) Level IV – Pre-essential 2 (4 years (5 years). The Kenyan government's EYE Service (2016)

Kenya has four different curriculum models, all of which are widely used. These are I Kindergarten Headteachers Association (ii) Montessori (iii) Islamic Integrated Education Program (iv) KICD-CBC.

**KICD-Competency-Based Curriculum-** This is a curriculum that emphasizes the complex outcomes of learning that includes knowledge, skill and attitudes to be applied by learners with an expected outcome of the six core competencies that include; creative thinking, conceptual thinking, decision making, communication skill development among others KICD (2017). The curriculum activity areas include Christian Religious Education PP2, Language Activities Pp2, Islamic Activities Pp2, Psychomotor-Creative Arts Pp2, Environmental Activities Pp2, Kiswahili Activities Pp2 and Mathematical Activities Pp2. This new curriculum replaces the **KICD-NACECE Curriculum** – That was developed by NACECE and was the most widely used approach across the country KICD (2017).

**Montessori Curriculum** –The Montessori educational program incorporates studies of human experience, the physical universe, and the natural world into a single methodology (Montessori 1989). The learner works and learns at their own pace by matching the appropriate resources to their current stage of development. This model is founded on Maria Montessori's philosophy.

**Islamic Integrated Education Program** –The Koranic school, also known as a madrassa, prepares Muslim children to understand and practice Islam as a way of life (2008). From the age of four, learners in Kenya are assigned to Koranic schools. The students mostly learn by repetition and practice, and they discuss the Koran, as well as learn and practice how to live as Muslims. They also gain a basic understanding of Arabic, Kiswahili, and English. In 1986, the Muslim community began a project in

conjunction with government and development institutions, particularly the Aga Khan Foundation, to integrate common elements of the larger public ECE educational plan into these Koranic schools MoE. (2008). The Islamic Integrated Education Initiative was the name given to this program (IIEP). It focuses on Muslim children aged 0 to 6, with the goal of ensuring that the Kenyan Muslim child is properly anchored in the Islamic faith while also being prepared for traditional education.

**Kindergarten Headteachers Association** – A group of Nairobi-based headteachers pioneered this educational program model. It provides an alternative ECE educational plan whose ideas complement the standard ECE educational plan (Gok 2015). This approach is concerned about the importance of play for children and learning through play. Froebel's Kindergarten movement can be directly linked to learning via play. The medium of instruction in this educational plan is English. The Kindergarten Headteachers Association (KHA) also provides early childhood education after supplemental school. It takes its cues primarily from Froebel and those who came after him, such as Montessori. The KICD CBC educational program was used in this study because it is intentional in developing aptitudes and competences in each area of child development.

## 2.9 Gap in Knowledge

This study aimed to bridge the gap in the domain of communication achievement in early childhood education. The global and regional research findings lead to the need for a complete evaluation of the literature on the long-term benefits of early communication achievement. Teachers have faced problems in the implementation process, according to the researcher's experience and literature assessment of the CBC curriculum's implementation. They are concerned about the quality of learning

experiences that students will have and struggle to meet curricular expectations on time. This, they claim, may necessitate them putting more effort into syllabus coverage regardless of the learners' learning results, which may harm the learners' academic outcomes in the long term. According to the researcher, if this circumstance is not addressed, learners may miss out on essential skill acquisition, including communication skill achievement. This may also lead to learners becoming social delinquents in the future due to a lack of preparation for the challenges given by social dynamics in the twenty-first century. The (Uwezo report, 2016) states a continuous need for more significant in-depth investigation of specific components and processes within Early Years of Education, as stated by (Pinta et al., 2014). Following a review of the literature on the acquisition of communication skills among preschool pupils, (Gooden 2013) concludes that, while there is substantial evidence supporting the link between language development and its effects on language learning and communication, more research on the acquisition of communication skills in early grades is needed. This study, therefore, seeks to bridge that gap in the use of drawing outcomes in achieving conversations that can enhance communication skill acquisition. This apprehension is also expressed by (National communication Association 2014) laments that there is a deficiency in data on teaching and learning inputs for communication skill acquisition and how these can influence child outcomes in communication skill development. The situation is even more acute in the Kenyan context, where studies indicate that the EYE parents impress on teachers to expect learners to aim for academic excellence to get in the perceived reputable schools in grade 1.

In addition, not many studies have examined the issue of drawing as a pedagogical tool in the acquisition of communication in EYE locally. One of the few studies that this

researcher came across (Chang et al. 2013) aimed to find a conversation about visual arts, facilitating the Oral language in early childhood, examined the study through the lens of children's Oral language development via an adult narrative about their visual arts. In contrast, this study explored drawing as a pedagogical tool in acquiring communication skills. There are some similarities between the two studies, but a point of diversion is evident in the acquisition of communication skill achievement in EYE. Another recent study by Sujata (2020) aimed to explore how teachers use drawing as a pedagogical tool in early years classrooms to facilitate children's learning. This study has significant similarities, especially in the observation of drawing as a pedagogical tool. The point of diversion is on the facilitation of learning. This study seeks to explore drawing as a tool that can facilitate a conversation in the classroom between the teacher and learners and learner to another learner, thus enhancing communication skill acquisition. The knowledge and insights generated by this study contribute towards efforts to fill this acknowledged gap in literature reviews.

## 2.10 Chapter Summary

The chapter looked at the review on the concepts of drawing and communication skill acquisition internationally, regionally and national context. This chapter on literature review has clearly reported that drawing activities can be utilized by the EYE teachers as a tool that enhances effective communication development in Early Years Education.

## CHAPTER THREE

## RESEARCH DESIGN AND METHODOLOGY

### 3.0 Introduction

This chapter focused on the research methodology in relation to the study focus and purpose, expounds on the research strategy engaged including the research methods adopted, the research instruments that have been developed and made the most out of in the pursuit of the research objectives. The methodology, Philosophical stand, research design, and target population, sampling techniques, research instruments, validity and reliability, data collection procedure, data analysis and ethical consideration of the study.

### 3.1 Philosophical Research Paradigm

Paradigm is a constellation of beliefs and dictates which, for researchers in a particular discipline, influence what ought to be studied, how examination ought to be done, and how results ought to be deciphered (Bryman & Bell, 2015). Paradigms are worldviews or belief systems that reflect and guide researchers' decisions (Silverman, 2016). The philosophy informed this study of pragmatism that claims that the proposition of drawing can play a significant role in the acquisition of communication skills in the early years of education. Logical thinkers connect the decision of approach straightforwardly to the reason and nature of the research questions presented (Creswell, 2012). They are progressivists who accept that the world changes, and along these lines, studies ought to expect simple changes (Silverman, 2016). The choice and adequacy of this philosophical methodology were utilized in this study to explore the utilization of drawing as an instructive tool in acquiring relational abilities in EYE. This study finds its foundations in the basic assumptions a researcher holds about the underlying nature of objects of the study. The researchers' directions identified with

society's ontological, epistemological and methodological nature and social science sum up such beliefs.

Ontology refers to assumptions about the 'nature of social reality (Tribe, 1997 and Heylighen, 1993). Regardless of whether the reality is objective and external to the individual or whether it is emotional and psychologically constructed on an individual basis. Therefore, this inquiry is related to epistemological assumptions about the 'premise of information and in what way information would be able to be communicated to other people (Williamson, 2005; Don, 2003). This study examined the participants response on the questionnaire, face-to-face interviews, open ended questions, observations, and documentaries. What the participants perceived was adopted as new knowledge generated on use of drawing in early years education.

This study embraces a pragmatic philosophical worldview to assess the use of drawing as an instructional tool in the acquisition of effective communication in early year's education in Kenya. The pragmatic choice gives room for mixed methods to deal with the research design, both qualitative and quantitative methodologies.

### 3.1.1 Qualitative approach

Qualitative methodology means comprehending *"the universe of human experience"* (Mertens, 2017; Cohen & Manion, 2017). Qualitative scientists underscore that 'social reality is perceived and deciphered by the person as per the philosophical positions one has' Mingers, (2010); Serafeimidis and Smithson, (2018); Walsham, (1995) and Walsham, (2006). Consequently, knowledge is personally experienced instead of acquired from or imposed from the external surrounding.

The aim of adopting a qualitative methodology in this study is for the researcher to gain a more profound comprehension through finding the meaning that might be hard to pass on quantitatively. In this way, qualitative strategies were utilized because the quantitative estimates would not sufficiently depict or decipher the research problems since it is encircled in "how" and "why" questions that will uphold the disclosure of new information. Subsequently, the capacity of qualitative data to completely depict how both EYE teachers and learners can utilize drawings as a pedagogical tool on communication skills acquisition is a significant thought from the researchers' point of view. This study interviewed the program officials and observed classroom organizations emphasizing the arrangement, accessibility, and utilization of resources for drawing exercises. The rest of this study, ordinarily rich with details and insights into participants' perceptions and encounters in drawing activities, might be epistemological in harmony with the reader's experiences.

Delanty (2011) and Merriam (2015) reaffirm that subjective researchers' do not keep the presence from getting social reality as an objective element. However, it stays in question with regards to what is built. They contend that in qualitative exploration, it is commonly muddled whether the truth is something built or whether this is a hidden reality developed by the social actors. This implies that qualitative research findings may be hard to sum up to different settings. Researchers and professionals are typically worried about the potential utility of research discoveries for unmistakable, positive, and extended haul returns for organizations, notwithstanding information's commitment for future research (Alan, 2006; Cohen, 2017). In any case, quantitative research puts more accentuation on getting findings that can be summed up and applied past the circumstance in which the research at first is done. Hence, qualitative researchers appear to miss the mark in explanatory power concerning hidden

instruments, which with regards to drawing as an instructive apparatus on the obtaining of relational abilities in EYE is fundamental for scaling up and applying the discoveries of the study to different circumstances.

### 3.1.2 Quantitative approach

Quantitative Methodology sometimes is alluded to as *"scientific method"* or *"science research- depends on the rationalistic, empiricist reasoning"* (Mertens, 2017) and *"mirrors a deterministic way of thinking where causes most likely determine impacts or results"* (Creswell, 2003). Quantitative research might be applied to the social world on the presumption that social world can be concentrated similarly as the common world, that there is a strategy for contemplating the social world that is without esteem, and that clarification of a casual nature can be given (Cohen, 2017).

In this study, quantitative methodology was aimed at describing the experience while exploring the teachers' competency of drawing as a pedagogical tool in the acquisition of effective communication in EYE. The researcher interrogated the EYE teachers through the questionnaire and interview to find out their experiences while interacting with learners drawing activities and the classroom environment. This is because interpretation of children's drawings as a means of understanding the learner's behavior displayed as they engage in drawing activities is of significance in this study. It is through this interaction that, '*true knowledge based on the experience of senses was obtained' (*Conen and Manion 2017*)*. However, there are similarities and complementarities between qualitative methodology and quantitative methodology that make a combination of the two a more powerful methodology for this research as explained below.

### 3.1.3 Mixed approach methodology

This study is eclectic of quantitative and qualitative data generation methods in a single research design which will *"improve the accuracy and validity of the research findings"* (Ashley, Start & Deshingkar, 2009; Pelto, 2015, cited in Scrimshaw, 2018). The methodological concept of validity and reliability will provide a common foundation for the integration of quantitative and qualitative methods (Creswell 2013 & Scrimshaw, 2018). This emphasis has developed with the growing attention focused on "triangulation" in research (Yin, 2014). The blending of qualitative and quantitative methods in this study will '*counteract biases, sought convergence of results'* (Creswell, 2017). This '*brings out contradictions and fresh perspectives in a study' (Kato*, Ashley& Weaver, 2018) and *will 'produce a final product which can highlight the significant contribution of both'* (Nau, 1995). Qualitative data in this study support explicitly the meaning of quantitative data (Jayaratne, 2019). Rossman & Wilson, (2014) answer the question of why link qualitative and quantitative data and consider it initiating new lines of thinking through attention to surprise or contradiction, "*turning ideas around*", providing fresh insight. In this way, the effectiveness of explanatory research in this study will rest on the premise that the weaknesses in every single method were compensated by the counter-balancing strengths of another. Combining quantitative and qualitative methodology (Mixed approach), therefore, will provide the power for breadth and depth of inquiry into the social phenomena.

The quantitative origination of sociology would not really accept that the analyst can 'realize the world out there freely of how the researchers portrays it (Creswell, 2008 & May, 2014). Science can't get away from its trustworthiness; however, it can make its situation reflective to recognize the domains of freedom and need (Delanty, 2003). In this study, the researcher will not guarantee lack of bias. Specifically, the researcher's

contribution in the semi-structured interviews and observation clearly will have an impact on the translation of data and likely in the surrounding of inquiries posed in the interviews. For quantitative, perception, objects, occasions, data, laws and hypothesis do not exist autonomously of the observers (Stayer, 2017; Geelen, 2018). Nobody can get away from this major subjectivity of experience, and the philosophers who imply to approach a 'Divine being's view' are no special case (Creswell, 2012 & von Glasersfeld, 2014). The procedure consequently, was for the researcher to subject her translation of perceptions and transcriptions to approval by the supervisors, experts in the fields of study and respondents in those processes through feedback and reflection. So, the quantitative dimension was dependent upon an extreme process of evaluation.

During the face-face semi-structured interviews, the researcher and the individual respondents was to discover what they consider new knowledge comparative with what they know; as it were, both the researcher and respondents were making lucidness in their world of experience. The knowledge created was shared implying that fundamental social structures were filling in as instruments for correspondence. Going past knowledge as it is seen by the respondents" to disentangle what it is that, that enhances its generation and dissemination is a key issue in this study.

The perceptions of the use of drawing as a pedagogical tool in the acquisition of communication skills in early years' education articulated by the participants concerning what they know and do is vital in this study. On an analysis of the responses on questionnaires, during face-to-face interviews document analysis and observations on what influences the acquisition of communication skills in EYE, and what the researcher perceives to be useful in drawing will generate new knowledge in the study.

What the Ministry of Education, EYE program officers and EYE teachers' enthusiasm is in education of the learners. This study is in search of new knowledge that will help learners attain their communication achievement and improve performance in EYE. This should be evident in effective communication acquisition at EYE level.

Mixed method methodology disclosed to the researcher the psychological direction of the participants because of drawing as a pedagogical heuristic tool in the acquisition of effective communication in early years' education. The decision for a mix of Qualitative and Quantitative methods implies that, this study takes the position that social reality would not be free of the social actors, simultaneously the chance of causal clarifications of how the truth is molded by the actors. In this view, qualitative and quantitative techniques fortify each other through their contemporary interpretive and explanatory qualities. In this study, the majority views were produced quantitatively while the in-depth perspectives on the study was done qualitatively.

## 3.2 Research Design

Burns and Grove (2016) characterize research design as an outline for conducting a study with maximum control factors that may meddle with the legitimacy of the findings. The researcher adopted an explanatory research design. An explanatory research design centers around clarifying the parts of a study in an itemized way whereby, giving subtleties where a modest quantity of data exists for a specific thought at the top of the priority list of the researcher (Creswell et al., 2014). The qualities endeavor to portray the essential attributes or encounters of enormous and little populaces in the study area. It plans to gather data from a sample of the populace to such an extent that the outcomes are illustrative of the populace inside a specific degree of error. Data is gathered by asking individuals questions. The data produced

either by having questioners pose inquiries and record answers or by having individuals peruse or hear questions and record their answers. Information is gathered from just a subset of the populace described (a sample) instead of from all individuals.

This design was selected in light of the fact that it can complete structured questions with numerous stakeholders within a generally brief time frame outline. In this study design, data generation was done in two successive stages. In the principal stage, data was created quantitatively and in the following stage qualitative data was generated which was related with the information originally produced.

## 3.3 Study Area

The study was carried out in Nandi County whereby the county has 1,207 EYE schools/centers of which 402 EYE schools are private and 805 schools are public EYE. The enrolment in the EYE sector was 53, 276 Pp2 learners. There are 1,201 EYE teachers in Nandi County (County government of Nandi, 2017).

## 3.4 Target Population

According to (Mugenda & Mugenda,2003 & Jennings, 2010), a target population is the entire group of individuals, events or objects having common observable characteristics in which a researcher would like to generalize the results of a study. The population of this study includes all EYE schools/centers, EYE teachers, EYE Pre-primary 2 learners and EYE Sub County program officers in Nandi County in the year 2019/2020. There is a total of 1201 ECDE schools/centers in Nandi County and target six (6) ECDE Sub County program officers, one per Sub County, 1,201 ECDE teachers and 53, 276 Pp2 class as shown in table 3.1.

**Table 3.1 Target Population**

| Sub county | Schools | ECDE Sub County program officers | ECDE Teachers | Pp2 class |
|---|---|---|---|---|
| A | 218 | 1 | 218 | 9183 |
| B | 220 | 1 | 220 | 10531 |
| C | 227 | 1 | 227 | 7555 |
| D | 167 | 1 | 167 | 111124 |
| E | 124 | 1 | 124 | 8965 |
| F | 245 | 1 | 245 | 6486 |
| **Total** | 1201 | **6** | **1201** | **53,276** |

*Source: Nandi County Government Department of Education (2019)*

### 3.5 Sampling Techniques, Procedures and Sample Size

Sampling is a strategy of choosing a sample from a populace as illustrative of that population (Gentles, et al, 2015). This section deals with the sampling techniques used in arriving at the sample size that was utilized.

According to Bryman and Bell (2015), there is no clear-cut on the sample size to be used. However, the size is dependent on the purpose of research and in their view; the larger the sample the better as it does not only give greater reliability but also sophisticated statistics used. A third of the total population is the minimum number though this could be a very small sample (Creswell et al, 2017). Thirty percent is regarded as the rule of the thumb therefore this sample is thirty items per variable. The sample size determined by the kind of analysis that would be used, the style of research/ research method also constraint by the cost that is time, stress, money, administrative support and number of researchers and resources (Kothari & Gang, 2014). This study's sampling type comprises the initial stratification of Nandi County to 6 Sub counties.

Further stratified sampling was used to get 3 strati comprising of ECDE Sub County program officers, Schools/teachers and Pp 2 learners. Finally, proportional random sampling was carried out to get the individual participants.

### 3.5.1 Sampling of Schools

The researcher stratified Nandi County into six existing Sub-counties structures and used simple random sampling technique to pick schools in Nandi County. The researcher then picked proportionately from each stratum ECDE Sub- County program offices, ECDE and purposively Pp2 class drawings as shown in table 3.2. This ensured

reasonable representation of schools sampled by using Yamane formula: $\left(n = \frac{N}{1+Ne^2}\right)$ to calculate the sample size.

Where;

    n= the sample size

    N = the size of population

    e= the error of 5 percent

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{1200}{1 + 1200x0.05^2}$$

$$n = \frac{1200}{1 + 4.0025}$$

$$n = 300$$

Therefore, the schools sampled were 300 from all the 6 Sub Counties in Nandi County. Simple random sampling technique was used to select schools which took part in the study.

### 3.5.2 Sampling of ECDE Sub County Program Officers

A census of the ECDE Sub County program officers from each of the Sub Counties in Nandi County were purposely picked as respondents.

### 3.5.3 Sampling of ECDE teachers

In order to get sample size for EYE teachers Yamane formula $\left(n = \frac{N}{1+Ne^2}\right)$ was used.

Where;

n= the sample size

N = the size of population

e= the error of 5 percent

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{1200}{1 + 1200x\ 0.05^2}$$

$$n = \frac{1200}{1 + 4.0025}$$

$$n = 300$$

From sampled EYE schools 300 teachers were picked using simple random sampling and sample size of Pp2 class. After collecting drawings of Pp2 class, a non-Proportional purposive sample size was used to pick the samples. As shown in table 3.2.

**Table 3.2: Sample Size**

| Sampling Techniques Stratification | Stratification & simple Random Sampling | Purposive Sampling-Census | Simple Random Sampling |
|---|---|---|---|
| Sub county | Schools | PP2 Drawings | ECDE Programme Officers | ECDE Teachers |
| A | 55 | 54 | 1 | 54 |
| B | 55 | 55 | 1 | 55 |
| C | 56 | 57 | 1 | 57 |
| D | 41 | 42 | 1 | 42 |
| E | 31 | 31 | 1 | 31 |
| F | 62 | 61 | 1 | 61 |
| Total | 300 | 300 | 6 | 300 |

The study applied non-probability purposive sampling to pick teachers per Sub County to participate in the interviews and EYE learners' drawings to participate in the study. Therefore, 15 teachers ultimately participated in the interviews and 300 EYE learners' drawings included in the study. The next section is on the research tools utilized in this study.

## 3.6 Research Instruments

The main data collection instruments included a survey questionnaire, EYE teachers and programme officers' in-depth interviews and direct observation of the classroom. Further, more literature sources were reviewed to give insight in the search for the primary information. The secondary data is presented in chapter 2 of this thesis, while the primary data and analysis are presented in chapter 4 of this thesis.

## 3.6.1 Questionnaires

Bryman and Bell, (2015), attested the significance of questionnaires as valuable for gathering data from respondents thought to be a sample illustrative of some population. Both open-ended and closed-ended items were utilized in this study. The

questionnaires were intended to guarantee that responses from respondents' inspired data on the fundamental issues involved (Creswell 2015 & Sekaran, 2013).

The development of the questionnaire began with an introductory request followed by items that were partitioned into three sections. Section 1 was set to capture the personal data of the respondents. Section 2 was set to capture items on specific objectives; Part 3 was set to capture items on the dependent variable. The structure of the teacher`s questionnaire is illustrated on table 3:3.

**Table 3.3: Structure of EYE teacher questionnaire (Appendix I)**

| Sections in the questionnaire | Contents |
| --- | --- |
| A | Social-Demographic information |
| B | Teachers' pedagogical competence on drawing in the acquisition of effective communication in EYE |
| C | Nature of Classroom Environment in the acquisition of effective communication in EYE |
| D | Use of drawing resources in the acquisition of effective communication in EYE |
| E | Use of learners drawing in EYE in the acquisition of effective communication in EYE |
| F | Learners Acquisition of effective Communication in EYE |

**Source: Author 2021**

Questionnaires were developed and administered to all the 300 EYE teacher respondents' during the second phase of the research process. The questionnaires were used first in this study because it helped to identify major research themes that were further probed with the interviews. The Questionnaires were preferred in this study to generate the initial data because they were appropriate tools through which many

respondents would be reached. They also made it possible to obtain a wide range of responses and to draw a more reliable conclusion from the responses. They facilitated easy and quick derivation of information within a short span of time as affirmed by (Kothari & Gang, 2014). Each item of the questionnaire was developed through an intensive literature review designed in relation to the research objectives, pilot study and consultations with supervisors.

### 3.6.2 Interviews guide

A non- structured interview was used in order to continue propping further on items that were not captured initially. The researcher was flexible to probe initial participant responses - that is, to ask why or how. After analyzing the survey questionnaires, face-to-face interview schedules drawn up to obtain richer data and to examine in-depth issues that emerged from the questionnaires. Twenty-one participants' that included the six (6) ECDE programme officers and Fifteen EYE teachers from different sub-counties in Nandi County were sampled out and included in the face to face structured and non-structured interviews. Efforts made to interview some respondents at least twice was done. This method was used because it offered the possibility of modeling one's line of enquiry, following up interesting responses and allows for an in-depth analysis, and exploring the underlying knowledge about how drawing can be utilized as a pedagogical tool in the acquisition of effective communication in Early Years Education and its effectiveness in a way self-administered questionnaire cannot. An interview guide was used that contained several specific questions that were followed up with probes and a list of topical issues related to the use of drawing in the acquisition of communication skills among preschool learners. (Refer to appendix III and IV).

### 3.6.3 Direct observational schedule

This is a qualitative method of data generation whereby one collects data in a natural setting through a guided observation. The instrument of data collection, in this case, is the observer. The observer notes things such as what teachers and learners say on the children's drawings, their location, facilities they see and or behold among others. Direct observation took place in the classroom to get a better grasp of how learners engage in drawing activities and what they use for their drawing. The researcher also checked on the availability and use of drawing resources in the classroom, which includes the teaching process and the nature of the classroom environment. This includes, the lighting, space, size of the classroom, learning corners, sitting arrangements ventilation, chalkboard positioning, and accessibility of the learners to resources, size of the chairs and tables and the organization appearance of the classroom environment. It also observed the availability of the teaching-learning facilities and resources such as crayons, pens/markers, pencils, erasers, drawing papers, charcoal, and sticks, and if the teacher utilizes these resources. The observation was also made on the kind of physical facilities available. The general appearance of the classrooms was the point of focus observed critically and recorded.

These observations were used as a follow up on questions that had risen from the questionnaires and in-depth interviews as part of the validity process by cross-checking how the professed values and beliefs synchronized with the actual actions of the respondents in their social context (Creswell, 2014). This method was used because the researcher was able to get a real-life situation by observing what respondents' do. A schedule was used as a guide through the observation process and observations recorded in a field notebook. Observations were used to identify how drawing can be used to mediate communication skill acquisition in preschools. The observation

provided the opportunity to research a preschool setting environment during 'Creative activities time'. (Refer to appendix vii).

### 3.6.4 Document analysis schedule

The study used document analysis schedule such as such as the teaching timetable, curriculum design, schemes of work, lesson plans and learners' drawings examined in this study. Analyzing documents incorporates; coding content into themes and referred to as studying content and structure of the documents. The research sought to find out their availability and whether they are in use in enhancing communication skill acquisition in EYE.

### 3.7 Validity and Reliability of Research Instruments

### 3.7.1 Validity

In this study, content validity was considered. Content validity is the extent to which the sample items on the instrument provides adequate coverage on the topic under study Creswell, (2012). The content-related validity of the instruments was determined by giving the questionnaire to supervisors, colleagues in class and other experts to carefully and critically examine and assess the relevance of the items to the objectives of the study. In the process of data collection, triangulation of information from different research methods, techniques and sources was done. The researcher administered the same instruments to the same people at least two times, interview them, and make repeated visits to the same settings if need be so that she can detect patterns that she can draw conclusions from.

In this study, the research procedures ensured that the various data collection methods are used correctly. These procedures included drawing independently and randomly the subject sample; careful selection and thorough training of interviewers; supervision of

interviewers and cross-checking data throughout the study; gender considerations in the selection of various respondents were also considered; gender considerations in the scheduling of interviews and; follow-up visits to clarify or obtain more information when need, and personally facilitating interviews and direct observations. The questionnaires were pilot- tested among ECDE schools in a section of Nandi County. The pilot study was carried out in twenty (20) public EYE centers and twenty (10) private ECDE centers in involving 1 ECDE sub-county program officers, thirty (30) ECDE Teachers and forty (40) Pp2 class learners. The sample size for the pilot study was informed by Mugenda and Mugenda (2003) to use a sample size of 10% of the study sample size for a pilot study. Therefore, the respondents for the pilot study were 71. The observation guide was developed and pre-tested during the reconnaissance visits in the first phase of the research process. The purpose of the pilot study enabled the researcher to ascertain the reliability and validity of the instruments and to familiarize them with the administration of research instruments.

### 3.7.2 Reliability

The reliability of the instrument was tested through the use of Cronbach Alpha value. That is, to establish the reliability of the questionnaire. Cronbach alpha coefficients were reported as an indication of the construct reliability of the measuring instruments. Values range from 0 to 1, with higher values indicating greater reliability. Alpha coefficient of**;** below 0.60 is unacceptable, between .60 and .65 undesirable, between .65 and .70 minimally acceptable, between .70 and .80 respectable between .80 and .90 very good, $> 0.90$ is considered perfect. However, if Cronbach Co-efficient alpha of $\alpha = 0.70$ is obtained then it will indicate that the research instruments were reliable and therefore can be adopted for data collection. The pilot studies examined the instruments for clarity and ambiguity of items,

appropriateness of procedures of instrument administration, validity and reliability. The pilot study results are presented on **table 3.4.** below.

**Table 3.4: Reliability Statistics**

| Items | Cronbach's | No. of Items |
|---|---|---|
| Teacher's pedagogical Competency on Drawing | .733 | 8 |
| Nature of the classroom environment | .815 | 10 |
| Use of Drawing Resources | .719 | 7 |
| Use of Learners Drawings in EYE Center | .745 | 8 |

Table 3.4 presented pilot results on reliability where Cronbach's Alpha coefficient was used. ECDE Teacher's Pedagogical Competency on drawing had a Cronbach's Alpha value of 0.733, Nature of the classroom environment had a Cronbach's Alpha value of 0.815. Use of Drawing Resources had a Cronbach's Alpha value of 0.719 Use of Learners Drawings in ECDE Center had a Cronbach's Alpha value of 0.745, This implies that all the study variables had a Cronbach's alpha coefficient above 0.7 hence reliable. The results of the piloted research instruments enabled the researcher to determine the consistency of responses made by respondents and adjust the items accordingly by revising the document.

**3.8 Pilot Study**

The study was pointed toward determining the practicality, viability and, effectiveness and appropriateness of the tools on the influence of drawing as an educational tool on the acquiring of effective communication among Early Years students. Following the pre-test, the questionnaire was acclimated to improve lucidity and significance for certain inquiries such as the stream and sequencing. The interview questioning route was developed in consultation with supervisors who are experienced in conducting interviews to review the questions and potential probes. Attention here was placed on

the logical and sequential flow of questions and on the ability of probes to elicit the information desired.

## 3.9 Trustworthiness in Qualitative Data

The trustworthiness of qualitative data was accomplished by checking if the gathered data are valid, adaptable, confirmable, and trustworthy (Creswell 2013 & Kothari, 2014). Credibility is the means by which the qualitative researcher is in reality of the study findings by ascertaining the quality of being trusted and believed in (Gentles, 2015).  Transferability is the means by which the qualitative researchers show that the researchers study's discoveries apply to different settings (Patton et al., 2000). Qualitative researchers can utilize thick depiction to show that the examination study's discoveries can be applied to different settings, conditions, and circumstances. Confirmability is the level of impartiality in the researcher's study's findings (Taket, 2010 & Creswell 2013). In other words, this implies the findings depend on members' reactions and no likely predisposition or individual inspirations of the researcher. This includes ensuring that researchers' predisposition does not slant the translation of what the respondents said to fit a specific account. To establish confirmability, qualitative researchers give a review trail, which features each progression of data analysis that was made to give a basis to the choices made. This establishes that the research study's findings precisely depict participants' responses.

Dependability is the degree that the study could be rehashed by different researchers and that the discoveries would be predictable. In other words, if an individual needed to repeat your study, they ought to have enough data from your study to do as such and acquire comparable findings as your study did (Kothari, 2014 & Creswell 2015). A qualitative researcher can utilize request review to establish trustworthiness, which

requires an external individual to audit and inspect the research process and the data analysis to guarantee that the findings are predictable and could be rehashed. This study located and verified the EYE teachers in the Nandi County ECDE program officials and Pp2 learner's response if dependable and reliable.

Dependence on one technique as indicated may twist or incline the researcher's image of a specific truth being examined (Taket, 2010 & Creswell 2018). Therefore, this study used triangulation in data generation to ascertain the dependability and reliability of data. Gentle (2015) assert that, triangulation raises the certainty level of the specialist when various tools yield comparable outcomes. The more the methods stand out from one another, the more prominent the researchers' certainty. For example, if the results of a questionnaire compare with the observational schedule of a similar wonder, the more the research will be certain about the findings. Further, triangulation to the researcher is more appropriate when a more all-encompassing perspective on education is looked for which is a case this study tried to investigate; the use of drawing as a pedagogical tool in the acquisition of effective communication in Early Years Education in Kenya. Thus, the information got from all the instruments utilized in this research study were triangulated in the presentation of data.

## 3.10 Data Collection Procedures

Data collection procedures allude to the systematic steps that the researcher follows in the right manner to acquire information from the field (Oso & Onen, 2005 & Creswell 2018). The researcher initially a letter of authorization from Moi University, then a letter from the National Commission for Science, Technology and Innovation, to research the identified region of study. The information for this study were created in four stages. The principal stage included an observation visit to the region of study to

acclimate with the research region and for this study; the EYE schools were first to be contacted and the expectation of consideration to participate in the study after acquiring significant institutional-level information for refining the research. The researchers collaborated with the potential respondents and sought for some data related with the territory of study. The research problem was explained further and focus was made around basic subjects tended to by the questionnaires. Survey questions were created and pre-tested. This lasted one month. The subsequent stage included setting up affinity with important authorities, acquiring research clearance, choosing the respondents. The questionnaires were administered to the chosen respondents and preliminary data analysed. This stage lasted one month and data generated were dissected to distinguish main points of interest that would require more in-depth investigations to enough answer the research questions. This data encouraged the development of choice standards for the individual participants' who would partake in individual case interviews. In the third stage determination of the interview participants was done. The final fourth stage was conducting in-depth face to face interviews including specific participants from the sampled schools and the EYE workplaces. This lasted one month. From that point the final data were analysed. This methodology is as shown in the consecutive illustration. The outline of the four periods of the research process is illustrated in Figure 3.1.

**PHASE 1 Gaining insight of the study area**

Reconnaissance visit
- Familiarization with research area
- Collection of any relevant data
- Refine the research proposal
- Identifying other relevant variables to include in survey questionnaire
- Develop and Pre-test the instruments

**PHASE 2 Administering the questionnaire**

•Obtain research clearance
- Introduced to the schools' officials
- Selection of the study respondents' and actual administration of the questionnaires

**PHASE 3 Phase of Research process**

Selection of case respondents' for the depth Interviews and observation schedule

Editing, Coding, interpretation and Analysis of Data

**PHASE 4 in- depth interviews and filling**

- Actual in depth interviews with individual cases and observation
- Gap filling and verification of some issues Data analysis
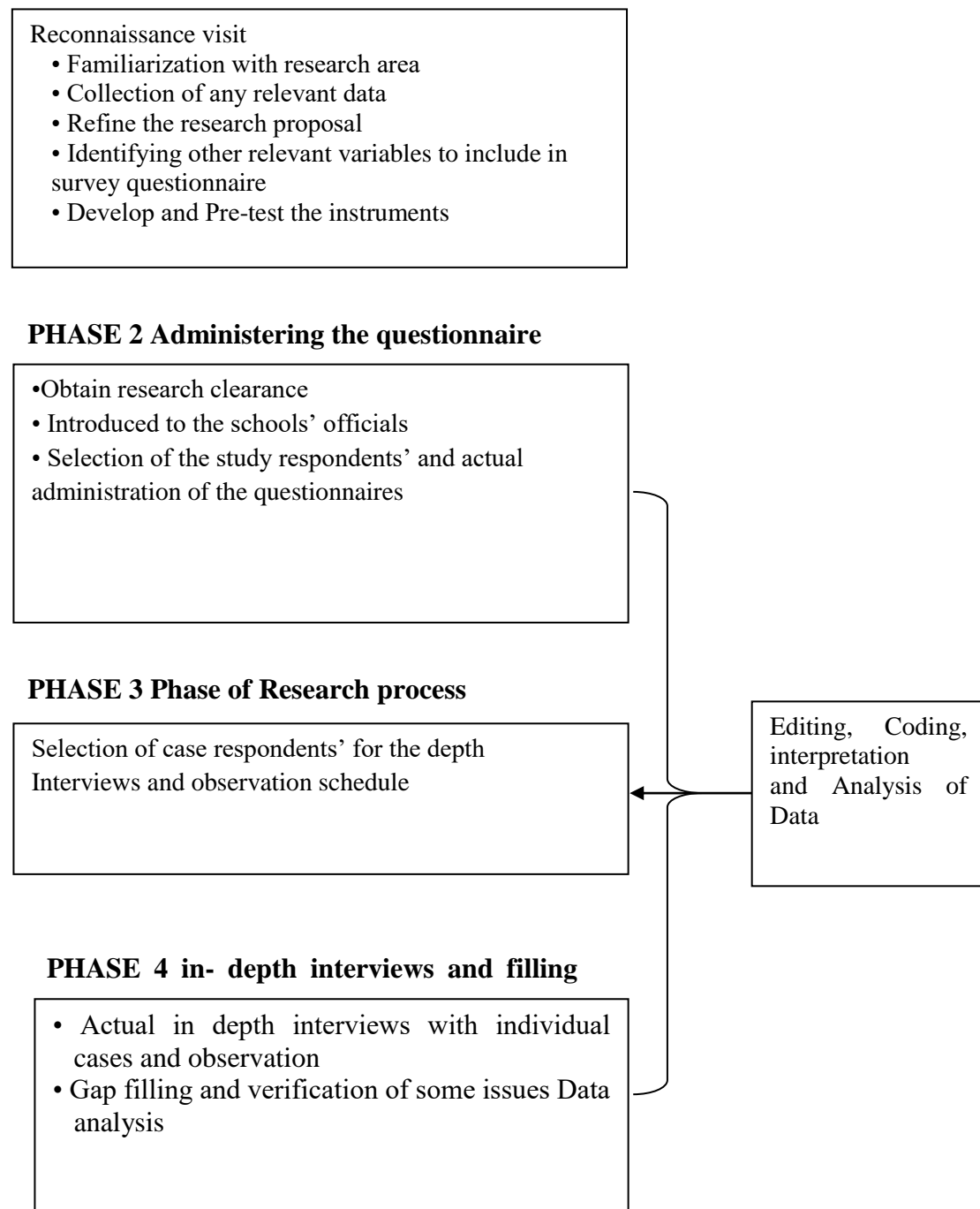
**Figure 3.1: Data collection phases**

### 3.11 Data Processing and Analysis

In order to examine the information collected from the field to make deductions and inferences, data collected were classified, categorized and analyzed per the objectives of the study. Both qualitative and quantitative data analysis techniques were used. The adoption of a multi-methodology strategy was used in the interpretation and understanding of the key research issues. Quantitative data were used to put figures on what existed and what was representative and provide a context for the cases. Qualitative data facilitated the answering of the "how and why" questions by providing explanations (and sometimes even generating new questions) to the variations captured in the quantitative data, thus providing a richer analysis.

### 3.11.1 Qualitative Data Analysis

The analysis of the data began from the field and continued until the end of the research. It included a process of data editing, coding, grouping, classification and utilizing percentages to distinguish key themes and sub-subjects, combined with perusing and re-perusing of the deciphered material to search for meanings, explanations and connections between the concepts. For the more noteworthy mass, a process of cautious and systematic analysis of information gathered from interviews was utilized. Ceaseless reflections on bits of knowledge picked up during the data generation process facilitated translations and linkages of how drawing can be used as an instructive tool in the acquisition of communication skills in the early years' education in Kenya. The conceptual framework guided the interpretation of the data that provide themes to guide the critical understanding and analysis of the views of the respondents to make inferences and draw conclusions. The information collected through the interview schedule was grouped into themes and analyzed using the thematic method and presented in the form of reports. The data gathered from

document analysis were deciphered by the researcher to give voice and significance around the assessment topic (O'Leary, 2013). This fused coding content into topics like how focus group or interview transcripts are analyzed.

### 3.11.2 Quantitative data analysis

While qualitative analysis targets giving in-depth information, the quantitative investigation goes further to test the theory in the study and prove or disapprove it. In many cases, the frequency results will uncover preliminary issues that might be revised before any advanced statistical calculations are done, (Kothari & Gang, 2014). In this study, data was analyzed utilizing descriptive statistics. Descriptive statistics, for this situation, involved the utilization of means, percentages and frequencies. Data analysis was done with the use of SPSS version 22.0 and it was presented in tables, figures and descriptions. The descriptive statistics tools helped in portraying the information and determining the respondents' level of concurrence with the different explanations under each factor.

### 3.12 Ethical Considerations

The ethical issues were highly emphasized to protect the rights of the participants and the researcher. Firstly; the researcher ensured that approval from the School of Education, Moi University and the National Commission for Science, Technology and Innovation was obtained before undertaking the research. The researcher used the approval to negotiate for entry into Nandi County Primary and EYE schools through the relevant authorities.

The participants were informed of the nature and purpose of the research, the procedures used, and the expected benefits to the participants and were required to give their consent to participate. The participants' consent to participate and provide

children's drawings to the researcher voluntarily, free of any coercion or promises of benefits unlikely to result from participation.

The participants were assured of confidentiality and anonymity in all phases of the research and informed of the right to withdraw from the study at any time they choose. The researcher respected the privacy of participants and ensured that schools and personal information were not disclosed. 'Pseudonyms' were used instead of real names of respondents involved to protect the information. During the interviews as well as the classroom photographic activity, the participants were asked for their permission to have the photographs of the classrooms taken during out of class session

Finally, the researcher adhered to the Moi University Research Policy (2004) rules and procedures. The researcher also ensured that wholesale or partial lifting of material published or unpublished from a source without acknowledgment is avoided.

# CHAPTER FOUR

# DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

## 4.1 Introduction

This chapter focuses on data presentation, analysis, interpretation and discussion of data generated by this study. The purpose of this study was to investigate drawing as a pedagogical tool in the acquisition of communication skills in Early Years Education in Kenya. The specific objectives were:

    i. To determine the teacher's pedagogical competency on drawing in the acquisition of effective Communication in Early Years Education

    ii. To examine the nature of the classroom environment for drawing activities in the acquisition of effective communication in Early Years Education

    iii. To determine the use of drawing resources in the acquisition of effective communication in Early Years Education

    iv. To examine the use of learners' drawings in the acquisition of effective communication in Early Years Education

In the first section, a description of the response rate and the demographic information of the participants who participated in this study are presented. In order to facilitate data for analyses, presenting and interpreting in this chapter, the researcher put in mind the use of varied methods of data generation. The researcher used a questionnaire for EYE teacher participants; the interview guide was used to attain responses from the Sub County EYE programme officers participants and a small sample of teachers. Further, an observation schedule was used by the researcher to find out more information by observing the environment and resources of significance to the study. Document analysis was used to probe more the actual activities taking place in the classroom. This

is to engross triangulation of data in a study. According to (Cohen et al., 2013), triangulation is the use of two or more methods of data generation in a study to explain fully any given phenomenon.

The analysis of data was presented, analyzed and interpreted under the following themes; Social-Demography of participants, teachers' pedagogical content knowledge on drawing, nature of classroom environment, use of drawing resources and Use of learners' drawings in the acquisition of communication skills in EYE.

## 4.2 Response Rate

Regarding the response rate, the researcher administered 300 questionnaires to EYE teachers in Nandi County. The researcher further interviewed 6 EYE programme officers and 15 EYE teachers from different sub-counties in Nandi County. The researcher further collected learners' drawings from the sampled Pp2 class in Nandi County. The response rate results for EYE teachers are presented in Table 4.1.

**Table 4.1: Response Rate on questionnaires, interviews and drawings**

| Response Rate | Population | Percentage |
|---|---|---|
| Questionnaire distributed | 300 | 100 |
| Questionnaire returned | 235 | 78.3 |
| Non response | 65 | 21.7 |
| Expected interviews | 21 | 100 |
| Interviews conducted | 20 | 73.1 |
| Childrens' drawings | 300 | 82 |

Out of 300 questionnaires distributed, 235 questionnaires were correctly filled and returned. These gave a response rate of 78.3%. The researcher was able to interview 5 programme officers and 15 EYE teachers giving a response rate of 83.3%, 95.0% and 82% of learners drawing response rate respectively. This corresponds to the guideline of Mugenda & Mugenda, (2003) that, a response rate of 50% is adequate for analysis

and reporting, a 60% return rate is good while 70% and above is very good. This high response rate of 78.3% for EYE teachers is attributed to the researcher's follow up on filling of questionnaires and explaining to the respondents where they could not understand.

This response rate was also in agreement with Groves & Peytcheva, (2008), who assert that high response rates are preferable to reduce the risk of non-response bias and ensure the sample, is representative. Non –response bias is a type of bias that occurs when people are unwilling or unable to respond to a survey due to a factor that makes them differ greatly from people who respond (Koch & Blohm, 2016).

**4.3 Social-Demographic Characteristics of Study Participants**

The key demographic characteristics of the participants included gender, age, teachers' professional qualifications and teachers' length of experiences as presented in this section.

**Table 4.2: Social-Demographic characteristics of the participants**

| Variables | Response | F | Percentage (%) | Total |
|---|---|---|---|---|
| **I. Gender** | Male | 2 | 0.85 | **0.85** |
| | Female | 233 | 99.1 | **99.1** |
| | **Total** | **235** | **100** | **100** |
| **II. Age of the teachers** | Below-25 yrs. | 15 | 6.4 | **6.4** |
| | 26-30 yrs. | 17 | 7.2 | **7.2** |
| | 31-35 yrs. | 47 | 20.0 | **20.0** |
| | 36-40 yrs. | 49 | 20.9 | **20.9** |
| | 41-45 yrs. | 26 | 11.1 | **11.1** |
| | 46-50 yrs. | 55 | 23.4 | **23.4** |
| | Over 51 yrs. | 26 | 11.1 | **11.1** |
| | **Total** | **235** | **100.0** | **100** |
| **III. Teachers professional qualifications** | Proficiency Certificate | 8 | 3.4 | **3.4** |
| | Certificate in ECDE | 9 | 3.8 | **3.8** |
| | Diploma in ECDE | 137 | 58.3 | **58.3** |
| | Bachelors in Early Childhood Education | 14 | 6.0 | **6.0** |
| | Others | 67 | 8.5 | **8.5** |
| | **Total** | **235** | **100** | **100** |
| **IV. The length of the teaching experience** | Below 5 years | 48 | 20.4 | **20.4** |
| | 6-10 years | 34 | 14.5 | **14.5** |
| | 11-15 years | 65 | 27.7 | **27.7** |
| | 16-20 years | 33 | 14.0 | **14.0** |
| | Over 21 years | 55 | 23.4 | **23.4** |
| | **Total** | **235** | **100.0** | **100** |

The findings of the study as presented in Table 4.2 shows that Majority of the respondents 233 (99.1%) were female while, 2 (0.85%) were male. This shows there were larger number of females than males teach in EYE Schools. The study results concur with those of Mann and Mikesell (2006) who discovered that most of ECDE centres have more females than males as their school personnel. Clough and Nutbrown (2007) explored a study by Cook (2005) which sought to establish the reasons behind the low number of men in the early childhood workforce. In the review, they discovered four principal reasons that are frequently used to clarify the staggering under-portrayal of men in the early childhood workforce. It incorporates the following reasons: Career issues, which comprise pay, status and work conditions,

gender-predisposition attitudes, where a profession in early childhood education is by all means an expansion of mothering. It incorporated the Fear of being peered downward on by the relatives, associates/companions and guardians and fear of being looked down as a victim of child abuse. Murundu et al, (2014) have demonstrated that EYE learners' need good role models of the two genders. This is on the grounds that it is significant for suitable gender identification and development in gender role in Early Years Education.

On the age of the participants the investigation discoveries in Table 4.2 demonstrated that a Minority 15 (6.4%) of participants were in the age section of under 25 years. Another 17 (7.2%) of the participants were between 26-30 years old, while 47 (20.0%) were matured somewhere in the range of 31 and 35 years. Further examination noticed that 49 (20.9%) of participants were in the age section of 36-40 years, 26 (11.1%) of participants were in the age section of 41-45 years. Participants who were in the age section of 46-50 years were the Majority 55 (23.4%) and finally, the individuals who were more than 50 years were 26 (11.1%). Okumbe, (2012) contended that the more seasoned individual from staff is, the higher the exhibition and experience up to a particular (age of 55-60) where execution would begin declining due to a decrease in vitality levels because of lively exercises in EYE study halls. EYE learners are vigorous and dynamic, and it would negatively affect the teachers' if they are not vivacious themselves and in great physical well-being. Having numerous educators aged 50 and younger. This implies that, the workforce is equipped to adapt to the elevated levels of activity expected of EYE learner's which is expected to play a apart in the acquisition of effective communication.

On the teachers' Professional qualifications, the findings indicated that, over 225 (95.7%) of all the participants in this study had professional qualification with the lowest being a Proficiency certificate course in EYE. They were the minority 8 (3.4%) and the highest- a bachelor's degree in Early Childhood Education 14 (6%). Only 10 (4.3%) participants were untrained though engaged in teaching at EYE due to teacher shortages and who were under the pay of Parent Association (PA). 9 (3.8%) of participants indicated that they had attained a certificate level in EYE. The study further indicated that the Majority 137 (58.3%) of the participants were Diploma holders while those with a Bachelor's Degree in EYE were 14(6.0%). Lastly, those who noted having other qualifications were 67(28.6%).

On the length of teaching experience, over 79.6 % (187) of them had an experience of over 6 years in teaching in EYE. This refers to the period the teacher has taken in handling a specific area and has thus developed in it. Teaching experience is a valuable assert since it contributes to the knowledge, skills and attitudes needed for a teacher's development and builds on the training a teacher acquired. It provides the teacher with the opportunity to test theory through practices. With more experience, teachers tend to become committed through innovation. A teacher is said to be experienced after completing two years of probationary period and there after confirmed on permanent and pensionable terms (Jomo Kenyatta Foundation, 2007). Teachers in this study had adequate experience to manage EYE school programme.

This supports the finding by Butera, et al, (2009) who acknowledged that experience and length of teaching time impact on the performance of an institution. Moreover Saide (2009) stated that the success of any group is influenced by a staff's experience, gender and age.

## 4.4 Teacher's pedagogical competency on drawing in the acquisition of effective communication in Early Years Education

**Objectives One:** To investigate the teacher's pedagogical competency on drawing in the acquisition of effective communication in Early Years Education.

The first objective of the study sought to explore the teacher's pedagogical competency on drawing and use in the acquisition of effective communication in Early Years' Education. The study used three research instruments to generate data for the benefit of the objective. The questionnaire was answered by the EYE teachers. Interviews were done with teachers of EYE and significant lesson documents such as the schemes of work and lesson plans were analyzed.

The study used statements in a Likert scale that required participants to respond in terms of **SA-** Strongly agree, **A-**Agree, **UN-** Undecided, **D-** Disagree and **SD-** Strongly Disagree. The results are indicated in table 4.3.

**Table 4.3: Teacher's pedagogical competency on drawing in the acquisition of effective communication in Early Years Education**

| Teacher's pedagogical competency on drawing | | SD | D | UN | A | SA | Mean | Sd |
|---|---|---|---|---|---|---|---|---|
| Drawing content knowledge was part of my training in ECDE | F | 22 | 2 | 9 | 72 | 130 | 4.22 | 1.19 |
| | % | 9.4 | .9 | 3.8 | 30.6 | 55.3 | | |
| My classroom drawing decision is determined to a large extent by the depth of my pedagogical content knowledge on drawing, | F | 49 | 2 | 2 | 118 | 64 | 3.62 | 1.43 |
| | % | 20.9 | .9 | .9 | 50.2 | 27.2 | | |
| I do not prefer using drawing in my classroom activities because I am not sure if I am doing it correctly | F | 24 | 2 | 2 | 31 | 176 | 4.42 | 1.24 |
| | % | 10.2 | .9 | .9 | 13.2 | 74.9 | | |
| There is sufficient content in Creative art activity area to help learners acquire communication skills | F | 169 | 18 | 2 | 18 | 28 | 1.87 | 1.47 |
| | % | 71.9 | 7.7 | .9 | 7.7 | 11.9 | | |
| I interpret and give meaning to the learners' drawings | F | 38 | 8 | 20 | 100 | 69 | 3.66 | 1.36 |
| | % | 16.2 | 3.4 | 8.5 | 42.6 | 29.4 | | |
| I prefer to use drawing to support classroom learning activities because learners enjoy drawing effortlessly | F | 25 | 8 | 21 | 96 | 85 | 3.89 | 1.24 |
| | % | 10.6 | 3.4 | 8.9 | 40.9 | 36.2 | | |
| I use the EYE curriculum design to develop the schemes of work and plan drawing activities lessons always | F | 122 | 2 | 56 | 44 | 11 | 2.23 | 1.37 |
| | % | 51.9 | .9 | 23.8 | 18.7 | 4.7 | | |
| Learners cannot acquire Communication skill any better with the use of drawing activities | F | 69 | 2 | 18 | 85 | 61 | 3.29 | 1.59 |
| | % | 29.4 | .9 | 7.7 | 36.2 | 26.0 | | |
| **Valid N** | | **235** | | | | | | |

Data in Table 4.3 showed that, participants who responded to questionnaires were 235. Table 4.3 indicates that 22 (9.4%) of the respondents strongly disagreed and 2(9%) disagreed that drawing content knowledge was part of what the teachers had during teacher training. However, 9 (3.8%) of the participants were undecided about that statement but 72 (30.6%) agreed and a majority of 130 (55.3%) of the participants strongly agreed with the statement that drawing content knowledge was part of

teachers' training as shown by (Mean=4.22, SD=1.19). This implies that teacher training both in college and in short courses offered by the ministry of education are a necessary in utilizing drawing pedagogy that enhances the learners' Communication skill acquisition.

The findings from the Sub County Program Officers interviewed on the training and experience, acknowledged that EYE teachers should have basic professional knowledge in early childhood education that consists of interpretation and meaning making of children's drawings. Programme officers during interview had this to say:

> *'Most of the EYE teachers in my sub-county are trained in ECDE. The least with a proficiency in ECDE and the highest with a degree in Early childhood Education. Majority of these teachers are elderly and have been teaching for more than 13 years, so I can say they are experienced in teaching Early childhood education'* **Po participant serial no. b.**

> *"Some few of my EYE teachers have Bachelor of Education (ECDE) degree and understand what children draw. They make good drawings on charts and display for the children. When children draw, their drawings are also pasted on the classroom wall".* **Po Participant serial no. d**

The findings from an Open-ended question in the questionnaire by EYE teachers on their training and experience had this to say,

> *'I did early childhood in my training and have a diploma certificate in ECDE and we had a subject called Creative Art. Drawing was one of the subjects that we covered'* **EYET Participant serial no. 6**

> *'In as much as we have gained teaching experience, there is still a big need for continuous in-service training for teachers to enable us to cope with the changes in education system'.* **EYET Participant serial no. 3**

> *"There is a need for more in-service workshops for EYE teachers especially for drawing activities. This will enhance the teachers' knowledge in drawing activities on top of the knowledge gained from their earlier training."* **EYET Participant serial no 1**

These results indicate that a large proportion of teachers are trained in EYE in which one of their learning subjects' contents is Creative art in which drawing is embedded.

The excerpts suggest that, that the majority of teachers are trained in early childhood development and pedagogical competency on Creative art. This implied that EYE schools had qualified teachers and that the aspects sought in this study was familiar to them. It also implied that the participants could read, comprehend and respond to the questions in the questionnaire. The findings concurs with Basheka (2010) and World Bank, (2000) who argued that, if education level relates to professionalism, then one can assume that the information provided is valid and reliable.

The excerpt further proposes that teachers need more supplemental classes so as to build confidence in use of drawing. The response by EYE Teachers upheld empirical studies by (Hattie, 2003 & Rockoff, 2004) that a teacher who has been teaching at a specific evaluation level for over five years was emphatically and altogether connected with increased pupil's achievement. This is significant on the grounds that it gives the fundamental knowledge, abilities and confidence required.

The findings further concurred with Law (2016) who analyzed what teachers think about the content Related Experience (CRE) and how confident they can become in its pedagogy. The study discovered that there is a connection between teacher's pedagogical content knowledge on drawing with what learner's realize in their drawing exercises, which if objectively planned for can improve effective Communication acquisition. This study further found out that, more supplemental classes are expected to prepare educators on the utilization of drawing exercises EYE classrooms as indicated by a high 67 (28.6%) of teachers not trained in ECDE as shown in table 4.3. The findings concurred with (Barnett & Hodson 2014) who clarify further the significance of a teachers' pedagogical content knowledge that, it is the teachers' understanding and changes of subject matter content with regards to

encouraging learners into their learning. The findings could additionally be in accordance with (Loughran et al., 2012) that, it is a thought established in beliefs that education requires more than conveying subjects' content to learners and that learning is something beyond retaining data for later accurate regurgitation.

Similarly, the statement on the association between classroom drawing decision and teachers' pedagogical content knowledge was agreed on by the participants with a (M=3.62, SD=1.43). This implies that teachers' competency on drawing plays a critical role in the acquisition of effective Communication making this an essential component of the acquisition of effective communication by EYE learners. The results concur with (Johnston & Goettsch, 2013) who examined aspects of the knowledge base that experienced English as a second language (ESL) teachers use drawing to illustrate in their teaching, primarily in explaining grammar and other language points.

From the interview responses by participants on factors that influence drawing pedagogical content activities a teacher chooses to actively engage learners in, they acknowledged that EYE teachers' decision making in drawing activities is influenced by factors critical to use of drawing. These factors include; the drawing content, drawing knowledge and drawing pedagogy to mention a few. The participants had this to say:

> '*I am not so sure if I am engaging learners in the way they should. I just tell the learners 'Just draw me what you like'. Sometimes, I copy a picture and tell learners to copy exactly like what I have given to them 'EYET* **participant serial no. 9**

> '*I did Creative Art when I was in college. I used to draw pictures though they were not good enough but I draw them anyway. I think I did not do enough practice to give me confidence in use of drawing'* **EYET participant serial no. 6**

*'The knowledge on drawing I received in my training is enough to help me interpret the learners' drawings and make meaning out of it* **EYET participant serial no. 2**

*'I like drawing activities. I understand what learners draw. We practiced lots of drawing in my training and I find it easy to use illustrations in activity areas. Learners like drawings and understand concepts faster when I use them.* **EYET participant serial no. 10**

*'I use drawing a lot in my class to help learners understand the lessons. I think, this is because we were taught well in our training. And also, I find my learners happy when I give them drawing activities'* **EYET participant serial no. 5**

These excerpts suggest that, the content and knowledge of drawing has a significant role on what a teacher does in class on the subject content. When a teacher has sufficient information on an activity area, then using that information for a specific purpose will bring out the desired outcome. In this case, when a teacher has adequate content knowledge on drawing, using drawing will bring out the Communication skill desired. This includes representations, that most useful in teaching creative art (drawing), (Bell et al., 2013). Teachers should have the ability to create connections between Creative art-drawing content areas, knowledge and pedagogy. Teachers' pedagogical content knowledge is important to the improvement of teaching and learning processes.

On teachers' preference using drawing in the classroom activities, they admitted that, the knowledge teachers have on use of drawing is not adequate to engage learners in drawing activities. The statement had 24 (10.2%) and 2 (0.9%) of the participants strongly disagreeing and disagreeing respectively whereas 2 (0.9%) of the participants were undecided while 31 (13.2%) agreed and the majority 176 (74.9%) strongly agreed with the statement. The majority of the participants agreed that teachers prefer using drawing in their classroom activities (Mean=4.429, (SD=1.24). This implies

that teachers prefer to use drawing in classroom activities. The results concur with (Claxton & Carr (2004) who examined what teachers know about Drawing Related Experience (DRE) and how confident they are in their knowledge. Their results indicated that teachers were very confident in their pedagogical content knowledge of DRE. This study implies that targeted teacher development in teaching creative art is a necessary part of attaining and maintaining drawing knowledge required.

The majority 169 (71.9%) of the participants and 18 (7.7) strongly disagreed and disagreed respectively that there's sufficient content on drawing to enhance communication skill acquisition on EYE curriculum design 02 (.9%) were undecided, 18 (7.7%) agreed and 28 (11.9%) strongly disagreed with the statement. The participants however disagreed with the statement that there's sufficient content on drawing to enhance communication skill acquisition on EYE curriculum design (Mean=1.87, SD=1.47). This implies that the EYE teachers suggests that drawing content in the curriculum design is not adequate to enhance communication skill acquisition in EYE. These findings is in agreement with (Jwan, 2016) who argues that content knowledge in a subject plays a critical role in the classroom activities and in the teachers' creative thinking process.

Another 38 (16.2%) of the respondents strongly disagreed, 8 (3.4%) disagreed, 20(8.5%) were undecided, the Majority 100(42.6%) agreed and 69 (29.4%) strongly agreed that they can interpret and give meaning to learners' drawings. Respondents thus agreed that teachers can interpret and give meaning to learners' drawings (Mean=3.66, SD=1.24).

Likewise, 25 (10.6%) of the participants strongly disagreed and 8 (3.4%) disagreed that teachers prefer to use drawing to support learning in classroom activities because

it is enjoyable and learners engage in it effortlessly. 21 (8.9%) of the participants were undecided on the statement. The Majority 96 (40.9%) and 85 (36.2%) of the respondents agreed and strongly agreed. This statement was generally agreed on by participants (Mean=2.23, SD=1.37). This implies that the participants agreed with the statement and that teachers prefer drawing to support learning in classroom activities because it is enjoyable and learners engage in it effortlessly.

Consequently, 2 (0.9%) of the participants strongly agreed that teachers do not use the EYE curriculum design in planning for drawing activities, 11 (4.7%) of the participants only agreed with the statement but 44 (18.7%) were undecided. This statement on teachers uses the EYE curriculum design in planning for drawing activities was however disagreed and strongly disagreed by 56 (23.8%) and the Majority 122 (51.9%) of the participants respectively. The participants disagreed with the statement that teachers do not use the EYE curriculum design for drawing lessons (Mean=3.89, SD=1.24). This implies that teachers are found to be able to plan and prepare drawing activities lesson that can enhance communication skill acquisition.

Lastly, 18 (7.7%) of the participants strongly disagreed that learners can acquire Communication skills any better with the use of drawing, 2 (0.9%) disagreed, 61 (26%) were undecided, the Majority 85 (36.2%) agreed and 69 (29.426%) strongly agreed with the statement. The participants agreed on the statement that teachers think learners can acquire communication skills better with the use of drawing (Mean=3.29, SD=1.59). This implies that learners can acquire Communication skills better with the use of drawing EYE.

The researcher was also interested in finding out through an open-ended question in the questionnaire if the EYE teachers see any possibility of engaging learners in drawing

activities that can enhance communication skill acquisition. The study finding revealed

that a majority of participants strongly agreed on the possibilities of using drawing

activities in their classroom to enhance communication skill acquisition. The

participants through an excerpt had this to say;

> *'...if planned for and organized well drawing can be used to help children tell stories of their drawings. This way can enhance communication skill acquisition'.* **EYET participant serial no. 12**

> *'If a teacher plans to achieve a specific objective, then he or she will arrange the teaching learning resources and environment as well as the lesson activities to achieve the objective'.* **EYET participant serial no. 12**

> *'... the new curriculum has acquisition of communication skills in other activity areas but with the use of drawing, Communication skill can be more achievable'.* **EYET participant serial no. 5**

The excerpts in the open-ended question in the questionnaire response suggested that

the Majority 218 (92.8%) of the participants saw the possibilities of communication

skills acquisition if objectively planned for. This is further supported by the comments

as summarized by the table below.

**Table 4.4: Themes and Sub-themes Elicited on Teachers' pedagogical competency on drawing in the acquisition of effective communication summarized**

| Thematic Area | Questions Asked | Themes | Sub- themes (Responses) N=15 (100%) |
|---|---|---|---|
| Teachers' Competency on drawing | 1. What does drawing mean? | **Meaning of drawing** | 15(100%) - all teachers were able to explain the meaning of the drawing |
| | 2. Was drawing content part of your drawing content training? | **Training on drawing** | 15(100%) - all teachers indicated that training was part of their subject content. |
| | 3. Is there sufficient content in Creative art activity area to help learners acquire Communication skills? | **Content of drawing activities in Curriculum design** | 15(100%)-all teachers complained of insufficient content in Creative Art activity areas for enhancing communication skill acquisition. |
| | 4. What challenges do you face in drawing activities? | **Challenges teachers face in use of drawing activities** | -Lack of sufficient time -Inadequate resources -Overcrowding and insufficient physical facilities. -Lack of in-service training. - Negative teacher attitude towards drawing -Lack of teacher commitment. |
| | 5. What Communication Skills can be acquired by use of drawing in EYE? | **Suggestions by identifying Communication skills acquired through drawing** | -Oral -Listening -Writing -Gestural |

The results in Table 4.4 suggests that, all participants interviewed were able to explain the meaning of drawing and that all participants indicated that training was part of their subject content in their training curriculum. The participants reported that, there is inadequate drawing content allocated in EYE Curriculum design. On the question on challenges, all participants reported of insufficient resources that included; lack of

sufficient time, inadequate writing resources, overcrowding, insufficient physical facilities, lack of refresher courses, negative attitude towards drawing by the teachers and lack of teacher commitment to drawing among others.

The researcher further delved with the suggestions teachers would give on effective Communication that can be acquired by use of drawing in EYE. Most participants (86%) agreed that Oral Communication skill would highly be enhanced by drawing activities preceded by listening skill, writing and gestural skill development respectively. This implied that, drawing activities can be effectively planned purposely to support the acquisition of effective communication. This is further in line with the Piaget theory on cognitive development that concluded that '*one reason why ECD learners failed to make powerful answer construction was that teachers used manipulative and vocabulary that did not guide processes of the children in ways that helped to make connections with previously learned knowledge' (*Dequara 2019). In this context, teacher's pedagogical competency on drawing aids learners to acquire a language of communication with the learners and further notes that, teachers should provide more opportunities that allow learners to express themselves irrespective of their cognitive levels.

The full participation by the teachers and early childhood sub-county officials was extremely useful in this research. They gave in-depth study on how drawing is utilized from numerous ways to enhance learner's effective communication achievement. The learner's dynamic involvement also contributed immensely to this study through their cooperation during observation activities. The learner's drawings with the purpose of the research, assisted significantly in the final data analysis.

### 4.4.1 Regression Analysis for Teacher's Pedagogical competency on drawing

The study examined teacher's pedagogical competency on drawing in the acquisition of learner's effective Communication in Early Years' Education. Table 4.5 presents the results of regression analysis.

**Table 4.5: Regression Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|----------|-------------------|----------------------------|
| .415 | .172 | .168 | .47591 |

a. Predictors: (Constant), Teacher's pedagogical competency on drawing
b. Dependent Variable: Acquisition of effective Communication in Early Years Education

Model summary gives the coefficient of determination ($R^2$) which shows the extent of the difference in the dependent variable (effective Communication) that is predictable from the independent variable (Teachers' pedagogical competency on drawing) and relationship coefficient (R) shows the level of relationship between the effective Communication (dependent variable) and Teachers' pedagogical competency on drawing (independent variable). The results presented in Table 4.5 present the fitness of the model used of the regression model in clarifying the study phenomena.

Teacher's pedagogical competency on drawing was found to be good in influencing the acquisition of Communication skills in Early Years Education in Kenya. This is upheld by the coefficient of determination otherwise called the R square of .172. This implies the Teacher's pedagogical competency on drawing clarifies 17.2% of the variations in the dependent variable. The outcomes further suggest that the model applied to interface the relationship of the factors was satisfactory. Adjusted R2 is a changed form of $R^2$ that has been adjusted for the quantity of predictors in the model by less than chance. The adjusted $R^2$ of which was adjusted slightly lower than the $R^2$ value was a definite indicator of the connection between the independent and the

dependent variable since it is sensitive to the addition of unessential variables. The adjusted $R^2$ shows that the model explains 16.8% of the adjustments in the acquisition of effective Communication in Early Years Education in Kenya.

### 4.4.2 Assessing the Fit of the Regression Model

The study examined whether the multi-regression model was a good fit for the data. Analysis of Variance (ANOVA) was conducted to see whether the Acquisition of Communication Skills in Early Years Education can be anticipated without depending on Teachers' pedagogical competency on drawing. The results of the Analysis of Variance (ANOVA) are shown in Table 4.6.

**Table 4.6: Results of ANOVA**

|  | Sum of Squares | Df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Regression | 10.951 | 1 | 10.951 | 48.451 | .000a |
| Residual | 52.773 | 233 | .226 |  |  |
| Total | 63.724 | 234 |  |  |  |

**a. Predictors: (Constant), Teacher's pedagogical competency on drawing**
**b. Dependent Variable: Acquisition of effective Communication in Early Years Education**

Table 4.6 gives the results on the analysis of variance (ANOVA). The outcome shows that the overall model was statistically significant as supported by a p estimation of 0.000 which is lesser than the degree of significance critical p estimation of 0.05. Further, the outcome suggests that the Teacher's pedagogical competency on drawing is a good predictor of Acquisition of effective Communication in Early Years Education. This was upheld by an F statistic of 48.451 and the revealed p value (0.000) which was not exactly the conventional probability of 0.05 degree of significance.

### 4.4.3 Regression Coefficients

Regression of coefficients results in Table 4.7 shows that s' pedagogical competency has a significance and positive influence on acquisition of effective communication in Early Years Education ($\beta=0.422$, $p=0.000$).

**Table 4.7: Regression Analysis Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | **B** | **Std. Error** | **Beta** | **T** | **Sig.** |
| 1 (Constant) | .683 | .244 | | 2.799 | .000 |
| Teacher's pedagogical competency on drawing | .422 | .061 | .415 | 6.953 | .000 |

The optimal model was;

**Y =0.683+4.22X₁**

Where:

Y represents Acquisition of effective Communication in Early Years Education, dependent variable

$X_1$ represents Teacher's pedagogical competency on drawing

From the regression model computed in Table 4.9, the research hypotheses were tested using a level of significance of $P=(<0.05)$. The research aimed to test the hypothesis with an intention of failing to reject or rejecting the relationship between independent and the dependent variable.

**H₀₁**: Teachers' pedagogical competency on drawing has no significant influence in the acquisition of effective communication in Early Years Education. The regression results in Table 4.7 indicate that there is a significant relationship between the teachers' pedagogical competency on drawing activities in the acquisition of effective communication in Early years Education with a beta coefficient of 0.422 and p= 0.000. The study rejected the hypothesis.

## 4.5 Nature of the Classroom Environment for Drawing in the Acquisition of effective Communication in EYE

**Objective Two:** The study sought to examine the nature of the classroom environment for drawing activities in the acquisition of effective communication in the Early Years Education

The study used the questionnaires that was answered by the EYE teachers'. Interviews were done with teachers of EYE and direct observation of the classroom was done. The first questions that opened up this section in the questionnaire was aimed at finding out the opinions of teachers on the quality of light in the classroom whether bright enough to aid visual activities in the classroom or insufficient to support drawing activities. The research statements were in form of a scale: The teachers were to respond in terms of sufficient and not sufficient. The results are indicated in table 4.8

**Table 4.8: Nature of the Classroom Environment for drawing**

| Classroom Environment | | Sufficient | Not Sufficient | Mean | Sd |
|---|---|---|---|---|---|
| Lighting (Natural & quality) | F | 193 | 42 | 1.18 | 0.38 |
| | % | 82.1 | 17.9 | | |
| Space within the classroom | F | 165 | 70 | 1.30 | 0.46 |
| | % | 70.2 | 29.8 | | |
| Size of the classroom | F | 176 | 59 | 1.25 | 0.43 |
| | % | 74.9 | 25.1 | | |
| Cleanliness | F | 178 | 57 | 1.24 | 0.43 |
| | % | 75.7 | 24.3 | | |
| Accessibility of drawing resources | F | 75 | 160 | 1.68 | 0.47 |
| | % | 31.9 | 68.1 | | |
| Learning Corners | F | 141 | 94 | 1.40 | 0.49 |
| | % | 60.0 | 40.0 | | |
| Sitting arrangements | F | 200 | 35 | 1.15 | 0.36 |
| | % | 85.1 | 14.9 | | |
| Organization of the classroom | F | 186 | 49 | 1.21 | 0.41 |
| | % | 79.1 | 20.9 | | |
| Ventilation (Quality of air) | F | 228 | 7 | 1.03 | 0.17 |
| | % | 97.0 | 3.0 | | |
| Chalk board Position and Visibility | F | 221 | 14 | 1.06 | 0.24 |
| | % | 94.0 | 6.0 | | |
| **Valid N** | | | **235** | | |

Data analysis in Table 4.8 shows that a majority (82.1%) of the participants noted that lighting was sufficient in the classroom environment but (17.9%) of the participants noted that lighting was not sufficient. The participants nonetheless agreed that lighting is sufficient (Mean=1.18, SD=0.38). This implies that lighting was sufficient in the classroom environment. The finding concurs with Research that indicates that, learners exposed to more natural light (i.e., daylight) in their classrooms perform better than learners exposed to less natural light (Edwards & Torcelli, 2002; Tanner, 2011). Although incorporating more daylight into classrooms may be beneficial, it should be done carefully, to avoid visual discomfort and temperature increases (Benya, 2001).



**Picture plate 3: Natural lighting and fresh air through the windows**

The results suggest that, majority 193 (82.1%) of the schools have adequate lighting while others 42 (17.9%) have poor lighting depending on the kind of infrastructure of the school. It is also observed in the picture on plate 3 in appendix VII section. The picture describes the nature of a classroom floor, walls, windows and desks. This kind of a classroom is not supportive of writing or drawing activities because of inadequacy of lighting shadows are cast on the work surface.

The majority (97%) of the participants noted that the quality of air through the ventilation in the classroom is sufficient and fresh whereas (13%) said ventilation in the classrooms was not sufficient to the classroom could not get enough fresh air making the classroom stuffy. The participants agreed that ventilation in the classrooms was sufficient (Mean=1.03, SD=0.17). The findings concur with Striker and Kimmel (2001) that suggested that sufficient ventilation in the classroom promotes healthy fresh air, which promotes good health on both the teacher and the learners lessening the incidences of airborne communicable diseases in the classroom.

The majority (74.9%) of the participants noted that the size of the classroom was sufficient while (25.1%) indicated as not sufficient. Participants still noted that the size of the classroom was sufficient (Mean=1.25, SD=0.43). This implies that the classrooms had sufficient size. The classroom environment is one of the indicators of the physical environment in EYE settings, to a big extent, room size, furniture and quality of the infrastructure will determine the kind and amount of resources that can be accommodated in the space as well as the number of learners within the classroom (Chepkonga, 2017). The illustration in the picture plate below is an indicator of a classroom environment that does not support drawing activities in a school as is observed.

**Picture plate 4: Classroom environment not supportive for drawing**

The picture plate 4 shows the status of some schools which are not supportive for drawing. More examples are indicated in the appendix VI picture plate 10, 11 and 13.

The majority (75.7%) of the participants noted that cleanliness in the classrooms was sufficient. On contrary, (24.3%) said cleanliness is not sufficient. The participants still believed that cleanliness in the classroom is still sufficient (Mean=1.24, SD=0.43). this implies that cleanliness is fundamental to every class environment. The finding concurs with (Okudo & Omotuyole, 2014) who found out that learning in Early Childhood Education settings requires that learners interact with their environment as well as learning various activities that includes cleanliness and arrangements space available.

A majority (68.1%) of the participants, indicated that access to drawing materials in the classroom is not sufficient and (31.9%) said it is sufficient. The participants,

however, agreed that access to drawing resources is sufficient (Mean=1.68, SD=0.47). This implies that learners have limited access to drawing resources in the classroom. The learners at this age are active in driving their own learning process therefore, it is imperative to provide adequate space and resources to explore in a direct, hands-on manner Ajayi et al., (2010).

The results also concur with (Liwakala, 2003) carried out in Mpika, Zambia, reported that; an attractive classroom with talking walls such as interesting notice boards and charts around the room, visual teaching aids such as pictures, diagrams and world maps should be made accessible to the learners. These resources play significant role in assisting the learners to learn effectively and enhance effective communication acquisition.

A majority (60%) of the participants noted that learning corners in the classrooms are sufficient although (40%) said it is insufficient. participants agreed that learning corners in the classrooms were sufficient (Mean=1.40, SD=0.49).

A majority (85.1%) of the participants noted that sitting arrangements in the classrooms are sufficient while (14.1%) thought sitting arrangements are not sufficient but ultimately the respondents said that sitting arrangement in the classroom was sufficient (Mean=1.15, SD=0.36). The findings concur with (Malunga, 2007) who observed that investigation on the use of sign language by regular teachers demonstrated in relation to the learning environment that, the best possible conditions for drawing and writing were quiet places with good sitting arrangement. The organized seating arrangements organizes the mental structures of the learners while the quietness promotes the learners' concentration on their ideas.

The researcher delved more to find out the nature of classroom environment, organization of the classroom and the use of drawing resources if adequate to support drawing activities. This included the sitting arrangement, accessibility to drawing resources and learning corners. Use of pencils/ crayons and paper among others. The participants through an open- ended question in the questionnaire had this to say through an excerpt;

> 'We have sufficient natural lighting coming into the classroom, sometimes in a sunny day we need curtains to dim a little bit to avoid too much lighting in the classroom'. **EYET Participant serial no 7.**

Another participant had this to say;

> 'Our classroom requires to be lighted because of few and small windows. This makes the classroom stuffy and makes the classroom uncomfortable for drawing. **EYET Participant serial no 2.**

> "Sitting and learning corners organization proves to be challenging to me because Space is limited in my classroom. This is because of many learners and the kinds of desks I have are not adjustable and hard to arrange to fit some class activities like drawing. **EYET Participant serial no 9.**

These findings propose that association of a classroom as a basic factor in drawing and creative exercises as well. This is further observed in appendix **V,** Plate 1 and 3. These results concurred with (Liwakala, 2003) who found that the sitting arrangement was important that learners sat on seats so that they could see both the teachers and their companions however much as could be expected. This attributed to the way that the learners could see the different signs, lip-read and decipher non-verbal communication as they were in full view on all members in the classroom. It was additionally upheld by (Ademokoya, 2008) in a study entitled classroom communication and placement of learners' in an inclusive class carried out in Nigeria found that to help improve results of learners with hearing disability, it was significant that, their immediate encounters in the classroom were understood. This is

further in concurrence with (Adams, 2006) that a decent setting is a significant component in effective EYE learning.

The majority (79.1%) of the participants noted that the organization of the classroom is adequate but (20.9%) agreed that the organization of the classroom was not adequate and still majority believed that arrangement was adequate (Mean=1.21, SD=0.41). The findings concur with (Brooks, 2003) who asserts that children need many opportunities to draw, interpret, and revise their drawings; therefore, the teaching and learning environment must offer support, time, space, clarity, well ventilated and opportunity for children to achieve this aim. Eighth, (70.2%) of the participants indicated that space within the classroom was sufficient but (29.8%) of the participants noted that it was not sufficient and even though, participants still agreed that space with the classroom was sufficient (Mean=1.30, SD=0.46). This implies that the school had sufficient space. The study reveals through direct observation that there was no separate room for drawing activities because the learners used the same classroom and tasks for all activity area content.

The findings further revealed that, the Sub-County EYE program officers believed that a professional teacher, has quality organizational skills of the classroom space because they work from the content knowledge perspective. The EYE program officer's participant during an interview had this to say:

> "*The EYE teacher's organizational skills have a strong influence on the classroom education because s/he knows what space is fitting for the preschoolers as per their age and abilities*" **Program officer serial no d**

These results suggest that, trained teacher has adequate skill for arranging space and resources for drawing activities in EYE. The findings concur with Chepkonga (2017) who asserts that the quality of learning space in a classroom setting is critical to

effective teaching and learning processes. A body known as the Council of Educational Facility Planners International offers its advisory recommendations on space requirements. This body however argues that certain critical factors such as geography, curriculum, and type of building ought to be taken into account when determining classroom size (Lippman, 2010). As illustrated in the picture plate below:



**Picture plate 5: Classroom size and space supportive for drawing activities**

Lastly, the majority (94%) of the participants noted that the chalkboard position and visibility in the classroom are sufficient but only (6%) of the participants noted as not sufficiently visible. The participants agreed however that chalkboard position and visibility in the classroom were sufficient (Mean=1.06, SD=0.24). This implies that the chalkboard serves an important role and has been positioned to serve its' purpose as a constant example of neat planned work to be well executed. It is observed that clean work, better writing, figuring and drawing arc displayed the chalkboard. Karsenti, (2016) supported Davis' (2009) observation that the blackboard is mostly used in the classroom lessons and it should be planned to be used in explanations, demonstrations, summaries and children's exercises. This makes the chalkboard positioning a critical factor in the learning process.

The study was also interested in finding out the chalkboard positioning, visibility and the general organization of the classroom and this is what the EYE program officers participant through an interview had to say in an excerpt;

> *'The chalkboard is always positioned in front and is visible to learners in class. The problem arises when the learners are too many and some end up straining to see the board. It is a requirement to plan and organize a classroom to face the chalkboard.* **Programme officer serial no. F**

This excerpt suggests that, the chalkboard is strategically positioned in a direction the teacher sees best visible for the learners. The exempt that the teacher organizes the learners sitting positions to face the chalkboard that is always set in front of the class further communicates this. This is in line with the organization of classroom environment and is one of the indicators of the physical environment in EYE settings as supported by (Karsenti, 2016). Attached is a picture plate on chalkboard positioning is illustrated below;
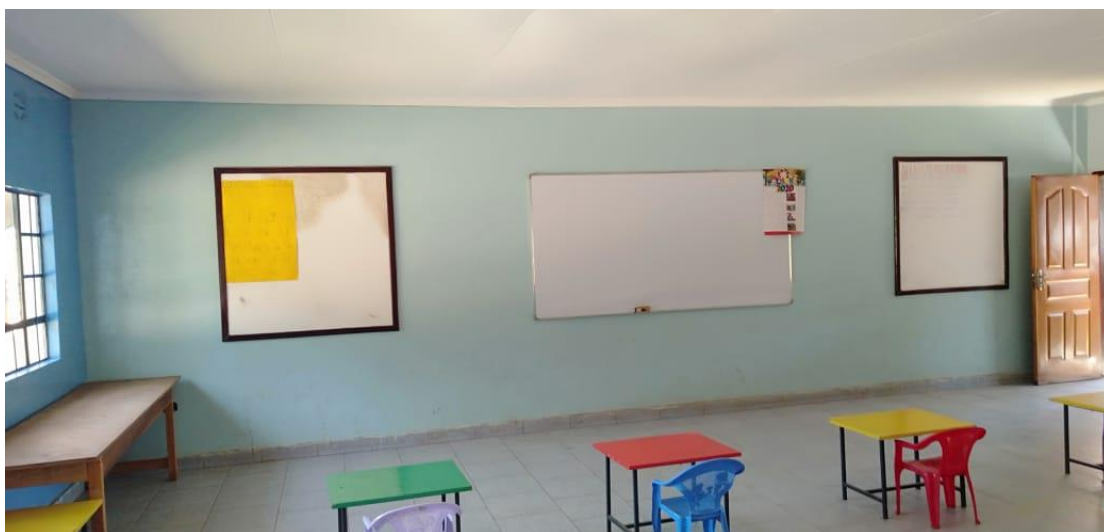


**Picture plate 6: Chalkboard positioning**

In direct observation of the classroom context, drawing is seen as an aid of illustration and activity to keep learners busy. The findings further agreed with Lyster, (2017) in direct observation of an early year's classroom that, when children draw gathered

around a table, they reveal that there is a wide range of communicative practices used to challenge the learners into exploratory activities that generates discussions and ideas. This includes: drawing of objects, disagree or collaboratively decide on what to draw and how to draw it. Inform the others about the content of their drawings and the meaning of their symbols, narrate stories, guess the meaning of their peers' symbols, and occasionally copy others' symbols. All these put together enhances communication skill acquisition in EYE. In situations where there is inadequate resources, drawing activities becomes unachievable.

Further, the standard classroom sizes are still far from the reality as has been stipulated to accommodate the space of resources as well as the number of learners, (Republic of Kenya, 2017). The Kenya Early Years Education Service Standard Guidelines (2006) prescribe minimum space requirements per child in early education centers and recommends a standard classroom size of 8 meters by 6 meters that should hold a maximum of 25 children. It also recommends the provision of a chair and table for the teacher as well as a cupboard in every classroom. This is of course in addition to children-size tables and chairs which must also be suitable and appropriate for use by learners with special needs. With an indoor space or environment, there are two important considerations. The first one is its fixed features which includes; the shape and size of the room, position of the door and windows, and any built-in space for storage such as shelves. The second consideration is the movable or semi-fixed features in the room. These features include the arrangement of learning materials and furniture, room texture and color (Chepkonga, 2017). Education authorities prescribe minimum space requirements per learner in early education centers. The picture plate below gives us a summary of an ideal size of the classroom, children-size tables and

chairs which are suitable and appropriate for use by learners and space within the classroom as illustrated below:



**Picture plate 7: Classroom environment**

**Table 4.9: Themes and Sub- themes Elicited on nature of classroom environment in the acquisition of effective Communication summarized on table 4.**

| Thematic area | Questions Asked | Themes | Sub- themes (Responses) N=15 (100%) |
|---|---|---|---|
| **Nature of classroom environment** | 1. What does classroom environment mean? | **Meaning of the Classroom Environment** | 15(100%) - all teachers were able to explain the meaning of classroom environment. |
| | 2.Does classroom environment play a role in the Communication skill acquisition | **Suggestions for YES/or No and how responses** | 15(100%) - all teachers felt that Classroom environment has a vital role in the acquisition of communication skills-(Oral and listening, writing and gestural). |
| | 3. What challenges do you face in classroom environment in communication skill acquisition? | **Challenges facing the acquisition of Communication skill acquisition?** | -Inadequate space, lighting, ventilation -Inadequate furniture, old broken not child size -The quality of the floor is poor - Roofing makes noise when raining -Overcrowding and insufficient physical facilities. |
| | 4. What suggestion would you give to overcome the challenges in a classroom environment? | **Suggestions to overcome the classroom environment challenges on Communication skills acquisition** | -Seek and advice the school management on infrastructure challenges -Challenging learner in Critical Creative thinking for self-expression -Practice active speaking and listening -Reflective learning opportunities |

The Early Years Education teachers' (EYET) responses to in-depth interviews further revealed that, there is a relationship between the nature of classrooms used by learners and the acquisition of communication skills. This implies that a teacher can create a safe classroom environment where learners feel comfortable to express their ideas. Learners are able to enjoy their learning experiences hence exploration of activities and communication of ideas are enhanced. Social interaction is also an important aspect enhancing communication skill development. Learners share ideas and tell

stories of their drawings. As observed, 59 (25.1%) schools within Nandi County have infrastructural challenges such as in adequate space within the classroom, poor lighting and ventilation and use of desks and benches without tables. To overcome the challenges mentioned, the study suggested that, school management should be advised on infrastructure challenges to use the Kenya standard guidelines of designing EYE schools. This will cater for the adequacy in ventilation and lighting, the quality of floors as well as the recommended classroom spacing needed. Further, the study suggests to challenge learners into Critical Creative thinking for individual self-expression and Practice active narration based on their drawing. Teachers can provoke the learners into reflective learning opportunities because this will promote class discussions thus enhancing communication skill acquisition. This is in line with (Bruce, 2010 and Eliot, 2006) that better outcomes in EYE classroom lie more on the ability of qualified teachers to create a high-quality pedagogic environment that made the difference in teaching and learning processes. It was likewise seen that learners have a better possibility of developing a positive attitude to learning through the high-quality encounters in the EYE learning environment which concurs with the study in Sweden by (Taguma et. al. 2013) which discovered that preschool teachers who provided a favorable classroom setting were more effective in achieving quality teaching and learning.

The classroom should have specific learning areas such as Creative art corner where learning can engage in creative activities which includes drawing. Further, the prepared environment ought to have sufficient space, clean, and pleasant appearance, straightforward and genuine, where every element exists for a reason so as to help in the in the acquisition of learning and the self's self-expressions. This promotes

socialization and communication skills naturally. The next section is regression analysis for the nature of classroom environment for drawing activities.

## 4.5.1 Regression Analysis for Nature of the Classroom Environment for drawing activities

The study examined nature of classroom environment for drawing activities and use in the acquisition of learner's effective communication in Early Years' Education**.** Table 4.10 presents the results of regression analysis.

**Table 4.10:Regression Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| .513 | .264 | .262 | .44877 |

a. Predictors: (Constant), Nature of the Classroom Environment for drawing activities
b. Dependent Variable: Acquisition of effective Communication in Early Years Education

Model summary gives the coefficient of determination ($R^2$) which shows extent of the variance in the dependent variable that is predictable from the independent factor and correlation coefficient (R) shows the level of relationship between the dependent and independent factors. The results presented in Table 4.10 present the fitness of model utilized on the regression model in explaining the phenomena of the study.

Nature of classroom condition for drawing exercises was found to be an important variable influencing the acquisition of effective communication in Early Years Education in Kenya. This is upheld by coefficient of determination otherwise called the R square of .264. This implies that the nature of classroom environment for drawing exercises explain 26.4% of the variations in the dependent. The results further infer that the model applied to interface the relationship of the variables was good. Adjusted $R^2$ is a modified variant of R2 that has been adjusted for the quantity of predictors in the

model by less than chance. The adjusted R2 of which was somewhat lower than the R2 value was an exact pointer of the connection between the independent and the dependent variable since it is sensitive to the addition of irrelevant variables. The adjusted $R^2$ indicates that 26.2% of the adjustments in acquisition of effective communication in Early Years Education in Kenya are clarified by the model.

### 4.5.2 Assessing the Fit of the Regression Model

The study examined whether the multiple regression model was a good fit for the data. Analysis of Variance (ANOVA) was conducted in order to find out if Acquisition of effective Communication in Early Years Education can be predicted without relying on nature of classroom environment. The results of Analysis of Variance (ANOVA) are shown in Table 4.11.

**Table 4.11: Results of ANOVA**

|  | Sum of Squares | Df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Regression | 16.799 | 1 | 16.799 | 83.412 | .000a |
| Residual | 46.925 | 233 | .201 |  |  |
| Total | 63.724 | 234 |  |  |  |

a. Predictors: (Constant), Teacher's pedagogical competency on drawing
b. Dependent Variable: Acquisition of effective Communication in Early Years Education

The findings of the study indicate that the connection between nature of the classroom environment and use in the acquisition of student's communication skills in Early Years' Education was measurably noteworthy (F=83.412; p< 0.05). This infers that the regression model was a good fit for the data. Thus nature of the classroom environment impacts acquisition of Communication Skills in Early Years Education.

### 4.5.3 Regression Coefficients

Relapse of coefficients brings about Table 4.12 shows that nature of classroom environment impacts positively and significantly the acquisition of effective communication in Early Years Education ($\beta$=0.417, p=0.000).

**Table 4.12: Regression Analysis Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| 1    (Constant) | .624 | .193 | | 3.233 | .000 |
| Nature of classroom environment | .417 | .046 | .513 | 9.133 | .000 |

The optimal model was;

**$Y = 0.624 + .417X_1$**

Where:

Y represents Acquisition of effective Communication in Early Years Education, dependent variable

$X_1$ represents Nature of classroom environment

From the regression model registered in Table 4.12, the research hypothesis were tested using a significance level of 0.05. The research aimed to test the hypothesis with an aim of failing to reject or rejecting the relationship between the independent and dependent variable.

$H_{02}$: The nature of the classroom environment has no significant impact on the acquisition of effective communication in Early Years Education. The regression results in Table 4.12 show that there is a significant connection between the Nature of the classroom condition in the acquisition of effective communication in Early Years Education with a $\beta$ coefficient of 0.417 and p= 0.000. The study rejected the hypothesis.

These results are in line with Law (2016) who examined what teachers think about drawing related experience (DRE) and how confident they are in their knowledge. Results showed that teachers were extremely certain about their insight into DRE.

## 4.6 Use of Drawing Resources in the Acquisition of effective Communication in EYE

**Objective Three:** The study sought to determine the Use of drawing resources in the acquisition of effective communication in Early Years Education.

The questionnaire was answered by the EYE teachers', Interviews were done with teachers of EYE, available resources were observed and significant lesson documents that included the Curriculum design, Schemes of work and lesson plans were analyzed.

The first question aimed at finding out the opinions of teachers on the availability of Professional documents that support drawing activities in EYE. The research statements were in form of a scale. The teachers were to respond in terms of available and used, available not used, not available and I don't know. The results are indicated in table 4.13.

**Table 4.13: Use of Drawing Resources in the acquisition of effective communication**

| Availability and Use of Drawing Resources | | Available Not used | Available used | Mean | Sd |
|---|---|---|---|---|---|
| EYE Curriculum | F | 33 | 202 | 1.859 | .3215 |
| | % | 14.0 | 85.9 | | |
| Schemes of work | F | 61 | 174 | 1.7404 | .43934 |
| | % | 26.0 | 74.0 | | |
| Lesson plans | F | 91 | 144 | 1.6128 | .48816 |
| | % | 38.7 | 61.3 | | |
| Pencils/ Pens /Markers/ Crayons | F | 28 | 207 | 1.8809 | .32466 |
| | % | 11.9 | 88.1 | | |
| Erasers | F | 58 | 177 | 1.7532 | .43207 |
| | % | 24.7 | 75.3 | | |
| Drawing books/ papers | F | 87 | 148 | 1.6298 | .48389 |
| | % | 37.0 | 63.0 | | |
| Charcoal | F | 45 | 190 | 1.8085 | .39431 |
| | % | 19.1 | 80.9 | | |
| Sticks | F | 43 | 192 | 1.8170 | .38747 |
| | % | 18.3 | 81.7 | | |
| Valid N | 235 | | | | |

The study findings in Table 4.13, shows that ,33 (14.0%) of the participants indicated that they have the Curriculum designs but do put them in use while the Majority 202 (85.9) indicated that the curriculum designs were available and used during drawing activities (Mean=1.859, SD=.3215). This is in agreement with Syomwene et al., (2017) that in order to teach according to the Early Childhood curriculum, teachers need to understand subjects matter deeply and flexibly so that they can help the learners map their ideas, relate one idea to the other and re-direct their thinking to create an effective learning process. It further noted that teachers need to see how ideas connect across fields of learning and everyday life.

61 (26.0%) of the participants indicated that they have the schemes of work but do put them in use while 174 (74.0) indicated that the schemes of work were available and used during drawing activities (Mean=1.7404, SD=.4393). They had evidence indicating their use in preparation of schemes of work. The findings agree with (Otunga

et al., 2011) that planning for instruction is an important component for a successful lesson delivery.

91(38.7%) of the participants indicated that they have the lesson plans and in use while a Majority 144 (61.3%) indicated that they have the lesson plans but do not use in drawing activities (Mean=1.612, SD=.4881). This study finding agrees with that of Syomwene et al (2017), in her research study on teacher preparedness in curriculum delivery processes. She concluded that some teachers did not make schemes of work or lesson plans during their lesson deliveries instead; majority of them used teachers' books directly without the assistance of learning aids which was an indication of unpreparedness in subject content. The findings further reveal that lesson plans were available but with limited content on use of drawing. This indicates that there is a seeming lack of seriousness by teachers when it comes to the use of a lesson plan as a teaching document in EYE.

A Majority 207 (88.1%) of the participants indicated that crayons/ pens/ markers pens were available and used during drawing though 28 (11.9%) indicated Crayons/marker pens are not available for use and the participants agreed that indeed Crayon/pens/markers are available for use (Mean=1.8809, SD=.32463). The findings reveal that pens and markers pens were available and used during drawing. The results concur with Njoroge (2000) in a study on factors affecting availability, acquisition and utilization of resources in the teaching of English in selected secondary schools in Kenya found that unavailability of educational resources like pens and markers pens hinders effective utilization.

The Majority 207 (88.1%) of the participants noted that pencils were available for use in drawing whereas 28 (11.9%) indicated that pens were not available for use and the

respondents confirmed that indeed pencils were available for use in drawing (Mean=1.8809, SD=0.32466). The findings reveal that pencils were available for use in drawing. The results concur with Romiszowski (2015) & Patel (2018) that reveals the shortage of instructional resources.

The researcher propped the participants further through an open-ended question in the questionnaire on the extent of use of drawing pencils and crayons in teaching, this is what the participants had to say through an excerpt;

> *"I have been teaching in EYE for many years and i rarely use the crayons and color because we don't have them. Many times, you I don't get the exact material such as crayons. Apart from the few pencils and erasers, I have nothing else'.* **EYET Participant serial no. 5**

> *"My choice as an EYE teacher to use the drawing resources depends on if the drawing resources are available or not'.* **EYET Participant serial no.7.**

This absolved suggestions that, teachers do not have resources to give to their learners for drawing exercises. The findings were upheld by (Adams, 2013) that the utilization of resources in pre-schools is fundamental in that, it promotes experiential learning. Anning et al (2012) noticed that the use of resources is a higher priority than quantity of the resources. This is further, supported by (Cohen et al., 2013) who points out that it is not making resources accessible to schools that matter but getting the available resources used by teacher's and learners to get content learned. The accessibility of teaching and drawing materials reflects on the quality of teaching of the subject content. This is on the grounds that the vast majority of the resources assume a significant part in the comprehension of ideas and bestowing skills to the learners. This infers those similar materials utilized in typical classes are likewise utilized in drawing exercises for there are no particular drawing resources utilized in light of its

inaccessibility. The study, notwithstanding, indicated that there are specific things students draw regularly that mirror their comprehension of their surroundings.

A greater part 177 (75.3%) of the participants showed that erasers were accessible and being utilized in drawing however 58 (24.7%) of the participants erasers are not accessible for use. The participants correspondingly concurred that erasers were accessible for use in drawing (Mean=1.7532, SD=0.43207). The findings reveal that eraser were accessible and being utilized in drawing. Kitheka (2005) repudiates the findings noting that schools with plentiful resources may not generally use them effectively and therefore does not raise the learner's level of performance. Then again, schools with restricted resources may use what they have effectively and this may support drawing (learning) experiences thus learners ought to have the option to maximize and use accessible resources to sufficiently achieve educational objectives.

The Majority 148 (63.0%) of the participants noticed that drawing papers were accessible and utilized in drawing albeit 87 (37%) noted papers were not accessible for use and the respondents concurred that drawing papers were accessible for use in drawing (Mean=1.6298, SD=0.48389). The findings reveal that drawing papers were accessible and utilized in drawing. The outcomes agree with (Akisanya, 2010) who remarked on instructional resources like drawing papers state they are significant in light of the fact that the objective of any school relies upon sufficient flexibly and use of physical and material resources among others as they enhance legitimate teaching and learning the motivation behind why this study is significant.

A majority 190 (80.9%) of the participants indicated that charcoal was available and used in drawing while 45 (19.1%) of the participants indicated charcoal as not available for use and lastly, majority but majority agreed that charcoal is available for use

(Mean=1.8085, SD=0.39431). The findings reveal that charcoal was available and used in drawing. The results concur with (Murundu et al., 2010) that the utilization of available resources is more important than the quantity.

Lastly, the majority 192 (81.7%) of the participants noted that sticks were available and used in drawing on dust though 43 (18.3%) of the participants indicated as sticks not available for use and likewise, majority of the respondents agreed that sticks for drawing on dust were available for use (Mean=1.8170, SD=0.38747). The findings reveal that sticks were available and used in drawing.

Direct observation in the classroom was done to get a better grasp of how learners engage in drawing activities and what they use for their drawing. The study sought to determine the availability and use of drawing resources in the classroom. Which includes the teaching process, the teachers' rapport with the learners and the nature of the classroom environment. This study revealed that most EYE schools, had a narrow range of drawing materials for EYE learners and with very limited quantity. This was observed to inhibit proper planning for lessons because it depends on what is or not available for classroom lesson use. It was further observed that, drawing resources available in most schools included; sticks, pencils, natural colors found in the environment, crayons and writing books. The results concur with (Owoeye & Yala 2010), in some instances any writing tools that leaves a mark on a surface is useful for drawing. Adams (2013) writing on teachers' reliance on pencils and crayons and crayons stated that, those seeking to improve the quality of education in instructional materials would inevitably lead to changes in actual teaching.

These observations were used as a follow up on questions that had risen from the questionnaires and in-depth interviews as part of the validity process by cross-checking

how the professed values and beliefs synchronized with the actual actions of the respondents in their social context (Creswell, 2014). This method was used because the researcher was able to get a real-life situation by watching what respondents' actively engaged in. Observations revealed that, drawing can be used to mediate communication skill acquisition in preschools effectively. The observation provided the opportunity to research a preschool setting environment during 'Creative activities time'.

It was also observed that the EYE curriculum design, schemes of work and lesson plans documents were utilized effectively in most schools. Drawing activities were observed that it does not permit enough time to be absorbed, practiced, and reflect upon the vast amount of pedagogical content knowledge that a drawing teacher must obtain.

Teachers prepare lessons to help them create high-quality, on-target plans. It was also observed that a few of the teachers plan to base on the academic, social, physical and emotional needs of the learners to ensure that the learners remain creative and imaginative. Teachers' come up with teaching strategies that best facilitate their learners as they focus on the number of learners in their classrooms. They also have a time plan to ensure the best time to do drawing lessons considering prerequisites the learners need to master based on the timetable provided.

Finally, the study revealed that teachers assemble learning materials needed for the lesson to ensure it is successful. An assessment and evaluation of the lesson was done to see if the lesson was successful and whether the learners were interested in the lesson, if they enjoyed the class activities, if learning took place, what did not work and what they could do differently next time. Teachers confirmed that they prepare daily Lesson Plans on drawing entailing the specific activities and content they will teach during drawing activities. This includes; lesson objectives, procedures for

delivering instruction, methods of assessing their learners, learners' groupings and learning resources needed to carry out in their lesson plans in the content area.

### 4.6.1 Professional document analysis

In this study, these documents were singled out as able to identify drawing activities in an EYE. The study examined lesson plans of teachers in Creative art content rich in drawing activities Table 4:14 indicate the availability of this document during the exercise.

### 4.6.2 Report on availability of curriculum design, schemes of work and lesson plans

The study found out that out of the 15 teachers interviewed 12 of them had all the relevant documents including schemes of work, curricula design and lesson plans. Out of the 12 teachers who had them, 8 of them used them effectively with an evidence of drawing activities while the rest did not. This finding agrees with that of (Syomwene et al., 2017) that in adequate preparation is an impending tragedy in the learning process. This is further verified by Kerich et al, (2014) who point out that, scheming is an individual teacher's activity because its design requires the consideration of the learners' specific characteristics and also the availability of aspects such as teaching resources which are not uniformly available in all schools.

A further inquiry through interviews on the reasons for a show of lack of commitment in planning for drawing activities by participants exposed some of the following selected individual responses from participants:

> *'Sometimes I just ask learners to draw something just to keep them busy because we do so much in the classroom to help learners but the county government does not seem to care about the teacher. This does not bring out the best from most of us teachers who frequently feel under -paid, overloaded and have to deal with high number of*

*learners in deplorable teaching environments. **(EYET Participant serial No. 8)***

*'There are a lot of challenges on resources. It is difficult to plan for what you know you don't have. Whatever suggestions I give on drawing is based on drawing resources available'. **(EYET Participant serial No.5)***

*'There is little supervision of the work we do here not only from the head but also from County officials. So often times I feel overwhelmed by work and tired, so I just let children draw pictures of their choice'. **(EYET Participant serial No.2)***

*'The government does not involve us when they begin new programmes such as EYE curriculum design but later on organize in adequate shallow in-service training, how do they expect us to implement these programmes successfully? **(EYET Participant serial No.15)***

*'To be honest I don't prepare lesson plans because it's a waste of time- I have the plan in my head because I'm an experienced teacher having been teaching for now over 15 years in ECDE." **(EYET Participant serial No.11)***

From the above excerpt, the use of drawing in EYE were facing a number of challenges such as ; inadequate resources, learner enrolment, little supervision of teachers work, little or no government-teacher involvement when new projects are to be started in schools and that these subjects have a number of implementation challenges. This study's findings agree with those of researchers such as Okongo et al (2015) who also list several Challenges facing EYE classrooms especially on availability of teaching and learning resources.

On the other hand, participants who had these documents through an interview had positive responses on planning for drawing activities as revealed from the following selected individual teacher exhorts:

*"I like teaching and I always make an effort to do my work professionally. Planning helps me systematically present teaching content. I often use drawing to introduce and illustrate learning concepts in class **(EYET Participant serial No. 14)***

*'I have my learners' interest at heart and I'm aware that in subjects that includes drawings activities even if we lack resources, I make sure that I buy a bit of Crayons and pencils then share them out to my learners'. I'm proud to make a difference in a child's life even if it's just a little difference'.* (**EYET Participant serial No. 09**)

*'This school has a head teacher of EYE who maintains the standards of professionalism. This makes me to just make sure I develop all necessary documents or else I lose my job".* (**EYET Participant serial No. 01**)

The excerpt above, can be used to indicate reasons that can motivate teachers so as to ensure that they plan and thus prepare for instruction. This includes ensuring that teachers love the teaching profession of working with Children in EYE. Mwaka et al, (2014) point out that scheming and lesson planning is an individual teacher's activity because it is in grafted in the EYE curriculum design. It has a consideration of the learner's specific characteristics and the availability of aspects such as teaching resources expected for lesson delivery. Though these curriculum resources may not be available uniformly across in all schools. The study revealed that most teachers did not have evidence of adequate lesson preparation as per the rules and regulations laid down by the (MoE, 2002) which stipulates that a teacher must have professional documents, which include lesson preparation before going to teach in any class because it acts as a guide to be followed in the teaching process. MoE (2008) noticed that, learning in ECDE centers enable learners to develop effectively. It focuses on that the learning environment ought to be sorted out to address the issues of the learners without in-depth comprehension. With the utilization of resources, young learners relate what they learn with the genuine aspects. Along these lines, drawing resources empowers students to open up their psyche creativity their innovative- ness just as their wide scope of reasoning abilities. To guide learners to open up their ideas, the teachers should ask them leading questions on related thoughts and resources required. These findings are further in accordance with (Bitok et al. 2014) who states that more consideration is

needed to the provision of adequate facilities, resources and in the solution for educators to utilize thoughts on the utilization of accessible, available and fitting resources in the arrangement of ECD educational problems. This is further upheld by Piaget's cognitive constructivism hypothesis that teachers engaged in the utilization of drawing resources can either present activities to individual learner or to a group of learners. This allows the learners to explore, manipulate or explain their intended actions thus enhancing their acquisition of communication skills.

### 4.6.3 Regression analysis for use of drawing resources

The study analyzed the Use of drawing resources and use in the acquisition of acquisition of communication skills in Early Years' Education. Table 4.15 presents the consequences of relapse examination.

**Table 4.15: Regression Model Summary**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-----|----------|-------------------|---------------------------|
| 1 | .527[a] | .278 | .275 | .44445 |

a. Predictors: (Constant), Use of drawing resources
b. Dependent Variable: Acquisition of effective Communication in Early Years Education

Model summary gives the coefficient of determination ($R^2$) showing the extent of the difference in the dependent variable that is predictable from the independent variable and correlation coefficient (R) shows the level of relationship between the dependent and independent variables. The outcomes presented in Table 4.15 present the fitness of the model utilized of the regression model in explaining the study phenomena.

The use of drawing resources were discovered to be acceptable factors affecting the acquisition of effective communication in Early Years Education in Kenya. This is upheld by the coefficient of determination otherwise called the R square of .527. This implies that the nature of the classroom environment for drawing exercises clarifies

52.7% of the variations in the dependent. The findings further suggest that the model applied to connect the relationship of the factors was good. The adjusted R2 is a modified version of R2 that has been adjusted for the number of predictors in the model by less than chance. The adjusted R2 of which was marginally lower than the R2 value was an exact indicator of the relationship between the independent and the dependent variable since it is sensitive to the addition of irrelevant variables. The adjusted R2 indicates that 27.8% of the adjustments in the acquisition of effective communication in Early Years Education in Kenya are clarified by the model.

### 4.6.4 Assessing the fit of the regression model

The study examined whether the multi-regression model was a good fit for the data. Analysis of Variance (ANOVA) was conducted so as to find out whether the acquisition of communication skills in Early Years Education can be predicted without depending on use of drawing resources. The results of the Analysis of Variance (ANOVA) are shown in Table 4.16.

**Table 4.16: Results of ANOVA**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|-------|----------------|-----|-------------|--------|-------------------|
| 1  Regression | 17.698 | 1 | 17.698 | 89.592 | .000[b] |
| Residual | 46.026 | 233 | .198 | | |
| Total | 63.724 | 234 | | | |

The findings from Table 4.16 demonstrate the relationship between the children's use of drawing and communication achievement in Early Years' Education was factually critical (F=89.592; p 0.05). This infers that the relapse model was a solid match for the information and consequently utilization of drawing activities in the acquisition of effective communication.

### 4.6.5 Regression Coefficients

The coefficients of regression results in Table 4.17 shows that the use of drawing resources influence positively and significantly the acquisition of effective communication in Early Years Education ($\beta$=0.501, p=0.000).

**Table 4.17: Regression Analysis Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| 1   (Constant) | .284 | .222 | | 1.279 | .000 |
| Use of drawing resources | .501 | .053 | .527 | 9.465 | .000 |

The optimal model was;

**Y =0.284+.501X$_1$**

Where:

**Y** represents the Acquisition of effective Communication in Early Years Education, the dependent variable

**X$_1$** represents Use of drawing resources

From the regression model computed in Table 4.17, the hypotheses of the research were tested utilizing a degree of significance of 0.05. The research aimed to test the hypothesis with an intention of failing to reject or rejecting the connection between the independent and the dependent variable.

**H$_{03}$**: Use of drawing resources have no significant influence on the acquisition of effective communication in Early years Centers. The regression results in Table 4.17 show that there is a significant connection between use of drawing resources and acquisition of effective communication in Early Years Education with a beta

coefficient of 0.501 and significance of (p= 0.000). The study rejected the hypothesis. These results concur with (Okudo & Omotuyole, 2014) who found that learning instructions in Early Childhood Education settings necessitates that student communicate with their environment while learning different activities.

## 4.7 Use of Learners Drawings in the acquisition of effective communication in EYE

**Objective Four:** The study finally sought to establish the use of learner's drawings in the acquisition of effective communication in Early Years Education.

The study used three research instruments to generate data for the benefit of the objective. The questionnaire was answered by the EYE teachers. Interviews were done with teachers of EYE and significant documents on learner's drawings were analyzed. The first statements that unwrapped up this section in the questionnaire was aimed toward finding out what students of 4 years old decide to communicate in their drawing. The research statements in the questionnaire were in form of a Likert scale: The teachers were to respond in terms of a **SA**- Strongly agree, **A**-Agree, **UN**-Undecided, **D**- Disagree and **SD**- Strongly Disagree. The results are indicated in Table 4.17.

**Table 4.18: Use of Learners Drawings in EYE**

| Use of Learners Drawings in EYE | | SD | D | UN | A | SA | Mean | Sd |
|---|---|---|---|---|---|---|---|---|
| 1. Learners communicate what they know through drawing examples, Family members | F | 9 | 2 | 9 | 94 | 121 | 4.34 | 0.90 |
| | % | 3.8 | .9 | 3.8 | 40.0 | 51.5 | | |
| 2. Learners enjoy drawing objects that they love within their environment and so showing originality examples Domestic animals | F | 9 | 7 | 1 | 55 | 163 | 4.51 | 0.95 |
| | % | 3.8 | 3.0 | .4 | 23.4 | 69.4 | | |
| 3. Learners' drawings do not represent things or objects in their environment examples wild animals | F | 84 | 93 | 7 | 33 | 18 | 2.18 | 1.27 |
| | % | 35.7 | 39.6 | 3.0 | 14.0 | 7.7 | | |
| 4. Learners' drawing shows creativity in representation examples Cars and houses | F | 9 | 7 | 1 | 75 | 143 | 4.43 | 0.95 |
| | % | 3.8 | 3.0 | .4 | 31.9 | 60.9 | | |
| 5. Learners understand better when using drawing | F | 101 | 74 | 15 | 32 | 13 | 2.07 | 1.24 |
| | % | 43.0 | 31.5 | 6.4 | 13.6 | 5.5 | | |
| 6. Learners show originality and creativity in their drawing | F | 14 | 34 | 1 | 96 | 90 | 3.91 | 1.22 |
| | % | 6.0 | 14.5 | 0.4 | 40.9 | 38.3 | | |
| 7. There is no evidence of communication skills development of learners in the drawing activities lessons | F | 121 | 87 | 5 | 18 | 4 | 1.71 | 0.96 |
| | % | 51.5 | 37.0 | 2.1 | 7.7 | 1.7 | | |
| 8. Drawing makes learner more imaginative and expressive examples Ogre and giant | F | 9 | 26 | 7 | 85 | 108 | 4.09 | 1.13 |
| | % | 3.8 | 11.1 | 3.0 | 36.2 | 46.0 | | |
| **Valid N** | **235** | | | | | | | |

Table 4.18 shows that 9 (3.8%) of the participants strongly disagreed that learners communicate what they know such as father, Mother, brother sister, grand- father grand-mother through drawing, 2 (0.9%) disagreed, 9 (3.8%) were undecided while 94 (40%) and 121 (51.5%) of the participants agreed and strongly agreed respectively with the statement. The majority of the respondents strongly agreed that learners communicate what they know through drawing (Mean=4.34, SD= 0.9). This implies that drawing makes it easy for learners to bring out of their memory's creativity and originality of

ideas and communicating them through drawing. The results concur with Lai (2013) who asserts that children's drawing is influenced the world around them.

The study sought to find out what learners choose to communicate in EYE through drawing. This is what the participants through an interview excerpt had to say;

> *'Children of this age like drawing things that they know either from home or school environment. Some of the things they like drawing include, father, mother, brother sister, cat, dog, cow car and houses.* **EYET Participant serial no. 3**

> *'The common pictures that children in my class draw are in their environment. They draw things that they know and experience from both the home and school environment. Such as pictures of the father, mother, brother sister, cat, dog, cow, car, house and most importantly the things they like and they enjoy talking about their drawing'.* **EYET Participant serial no 6.**

> *'The pictures I have seen children draw are what is common in their environment, though I have not really been keen to know deeper than that'.* **Po participant serial no. f**

As observed in picture Plate no. 8.

**Picture Plate 8: Drawing of a 5-year-old girl Noni**

Picture plate 8 suggests that whatever a learner chooses to draw is influenced by what they know as a reality around them. Plate 8 as observed has pictures of 2 cups, a main 2 houses and a kitchen, cat, table, cow, sheep, sun, ball, boy and girl. The learners often rely on memories of their experiences and sometimes bring out imaginations based on the narratives within the environment. Anning (2014) confirms that, learners pictorial presentations include self (learner her/himself) usually drawing themselves as a form of identity or self-expression, and they can draw the figure of a man or a boy, a

woman or a girl to represent gender, as well as drawing several things that are of interest to them, like cars, buildings, family, trees, cultural events and many more. These findings are in line with Parker, et al, (2013) that, in drawing, children first have to engage a cognitive process and select the most appropriate idea to illustrate. The second step is to organize the cognitive structures into a possible model and move to the third step of creating an internal model then proceed to sketching on a surface. All these representations are made through drawing to communicate with the others of significance around them.

On top of that, 84 (35.7%) of the participants strongly disagreed, 7 (3%) disagreed, 1 (0.4%) were undecided, 55 (23.4%) agreed and lastly 163 (69.4%) of the participants strongly agreed that learners enjoy drawing objects that they love within their environment such as cow, sheep, hen, duck, car and lorry hence demonstrating pleasure in their creativity and imagination. Respondents agreed on the statement that learners enjoy drawing objects that they love and are meaningful from within their environment therefore pleasurably communicating their original experiences (Mean=4.51, SD=0.95). This implies that drawing objects makes it easier for the learners to express their experiences bringing out pleasure and meaning in their creativity and originality of thought. The findings concur with Wrightson (2009) noted that from the age of 5 to 7 years of age, children represent the human figure with some of its parts in the form of matchstick figures or schemas. When propped further on their drawing, the learners were able to explain using words the picture they have drawn though using very limited words but the researcher observed the pleasure of expression of their drawings.

The study further delved to find out from the participants' if the learners enjoy drawing objects in their environment with creativity and originality of thought. This is what the participants through an interview had to say;

> *'Preschool children draw and draw with joy. They enjoy drawing and are happy when given time to draw anything they like. Their drawings are based on how they perceive their environment thus bringing out how they see and understand their environment'.* ***EYET Participant serial no.2***

The finding in this excerpt implies that, learners enjoy drawing activities. As observed, is a pleasurable activity for the learners. The excerpt further suggested that children of EYE take pleasure in drawing pictures of significance to them and being informed by the environment, they are in. This is further, supported by Lyster, (2017) that drawing is a pleasurable activity in early year's education. These findings can also be in line with Valentine, (2015) that explains that creativity and imagination is characterized by the ability to perceive the world in new ways, to find hidden patterns, to make connections between seemingly unrelated phenomena, and to generate solutions. The whole process is pleasant to the one engaged in it.

Further, the statement that learners' drawings do not represent things or objects in their environment was strongly disagreed on by 84 (35.7%) of the participants and disagreed on by 93(39.6%) of the participants. Of the total participants, 7 (3%) were undecided, 33 (14%) agreed and 18 (7.7%) strongly agreed that learners' drawings do not represent things or objects in their environment such as airplane and train. . Respondents however, disagreed that learners' drawings do not represent things or objects in their environment (Mean=2.18, SD=1.27). This implies that drawing represents things or objects in the world around them. The findings agree with Matthews, (2003) who asserts that drawing helps learners to understand symbols, signs and representations which later become crucial in their encounter with signs and

symbols in home and school which implies that children use signs and symbols as the basis of their language and communication skill development. Matthews further emphasized that when learners begin to draw and paint, they begin an intellectual journey of creativity and imagination having drawn their ideas from the world around them, which comprises musical, linguistic, logical, mathematical, and aesthetic aspects of development.

Also, 9 (3.8%) and 7 (3%) of the participants strongly disagreed and disagreed respectively that the learner's drawing shows creativity in representation. Only 1 (0.4%) participant was undecided if the learner's drawing shows creativity in representation. Notwithstanding, however, 75 (31.9%) agreed and 143 (60.9%) strongly agreed that the learners' drawing shows creativity in representation. Respondents agreed that the learners' drawing shows creativity in representation (Mean=4.43, SD=0.95). The findings concur with Malchiodi (1998) pointed out that; a child's drawing is thought to reflect his inner world of originality and imagination, which shows various feelings and information in connection with his psychological status and interpersonal style.

On top of that, 101 (43%) of the participants strongly disagreed that learners understand better when using drawing activities, 74 (31.5%) agreed, 15 (6.4%) were undecided, 32 (13.6%) disagreed and 13 (5.5%) of the participants strongly disagreed with the statement. The participants though disagreed that learners understand better when using drawing activities (Mean=2.07, SD=1.24). This implies that the use of drawings makes learners have a better understanding of the classroom concepts. The findings concede with (Lowenfeld, 1965 & Osei, 2013) who declared that a child's artistic expressions are documentation of his personality since children exhibit their

characteristics in their art performance. This implies that children can exhibit elements of cognitive and emotional characteristics in the kind of drawings they make. These findings agreed with (Danko-McGhee & Slustsky, 2003) that art helps children to communicate their understanding and interpretations of the world before they can express themselves verbally, and feelings expressed in arts often communicate better than words.

Moreover, Learners do not show any creativity and originality in the classroom drawing activities statement had 14 (6%) strongly disagreeing to it and 34 (14.5%) disagreeing but only 1 (0.4) participant was undecided about this statement. But, 96 (40.9%) and 90 (38.3%) of the participants agreed and strongly agreed that learners show creativity and originality in their drawing activities. The majority thus agreed that learners are creative and original thinkers and represent the world around them as they perceive (Mean=3.91, SD=1.22). The findings concur with (Lowenfeld & Brittain, 1987) who emphasized that when children can construct and communicate what they have known and understood as a reality in their way.

Further, 121 (51.5%) of the participants strongly agreed, 87 (37.0%) agreed, 5 (2.1%) were undecided, 18 (7.7%) disagreed and lastly 4 (1.7%) strongly disagreed that there is no evidence of communication skills development of learners in the drawing activities lessons. The participants yet disagreed on the statement that there is no evidence of communication skills development of learners in the drawing activities lessons (Mean=1.71, SD=0.96). Drawing makes one develop his/her communication skills. The findings concur with (Brooks, 2006) who asserts that drawing offers learners', the opportunity to express and control their inner feelings. The various indicators exhibited in children's drawing, when well observed, helped determine the

status of the child's emotions at a particular time. For example, a child in a happy mood can make bold drawings to indicate his happiness. In accordance with this, communicating with others during the process of drawing promotes children's social-emotional growth and development therefore children communicate their feelings and experiences as they socialize with other learners.

The findings further agreed with (Parker et al, 2013), who said that, learners who are imaginative and creative are able to communicate and express themselves to others of significance around them. They explain further that, these learners are able to use the knowledge, skills and values acquired in the learning process to create new ideas that result in expressions. Learners unconsciously show that there are movements and interrelations among the different symbols in their drawing. Adams (2013) argues that, learners invent a variety of graphic devices to represent connections and changes, such as arrows, lines, circles, etc. Children consciously handle the graphic area, example, (they place the symbols at particular positions on the paper sheet or repeat the same symbols at different positions in their drawing) to construct complex meanings.

Finally, 9 (3.8%) of the participants strongly agreed that drawing makes the learner more imaginative and expressive more in drawings for example drawing of ogres and giants, 26 (11.1%) also agreed with the statement. Seven (3%) of the participants were undecided about this statement that drawing makes the learner more expressive in drawings ogres and giants while 85 (36.2) and 108 (36%) of the participants disagreed and strongly disagreed with that statement. Majority of the participants agreed that drawing makes the learner more imaginative and expressive for example drawing of ogres and giants (Mean=4.09, SD=1.13)

The researcher propped further the participants to know if drawing makes learners more imaginative and expressive in their communication. This is what participants through an interview excerpt had to say;

> '*Children are very creative and uses imaginations. They can choose to draw anything that they understand. Like the story of an ugly ogre. I told the children the story of an ogre and after discussions; I asked them to draw an ogre. Children came up with different pictures and explained using words how their ogre looked like. This shows children can express themselves creatively using their imaginations'.* **EYET Participant serial no. 15**

> '*It looks like children were born that way. Original in their drawing, just the way they understand they try express themselves in that manner'.* **EYET participant serial no 7.**

> *Children just like drawing whatever comes to their minds. This way I can say they are both creative and imaginative in their drawing.* **EYET participant serial no. 2**

> *When children are encouraged to draw what they would like to draw, each one of them comes up with an idea and the idea could be the same in most children, but when the draw each child's idea will look different. That makes me believe children's' are uniquely creative and imaginative'.* **EYET serial no 13**

As observed in picture plate 9;



**Picture plate 9: Drawing of items by a 4 and half years old- Neth**

The excerpt and plate b. suggests that learners are naturally creative and imaginative. These findings agree with (Abdi & Zarezad, 2016) that teachers should rouse learners to use imaginations during drawing activities and thereby create that connection between their thoughts and impression of their work then they will communicate with pleasure their works. These findings can also be in line with the definition of creativity and imagination that it refers to the ability to imagine things that may not be real, to form pictures in the mind of objects/ places that one has not seen or experienced, and turn those pictures into real things (Valentine, 2015). It is further confirmed by Johnston & Goettsch, (2013) that it refers to formation of mental images of things that are not present to the senses, or that are never wholly perceived in reality, and creating physical representations of those images. This explains that imagination only exists or happens in the mind, and it remains in the mind of the learner.

Drawing in this study is seen as a function of creativity and imagination and hence the ability to form new images and sensations in the mind of a learner and to turn them into reality as confirmed by British Council, (2016). These findings are contradicting with Hall, (2015) that argued that most of the time, children combine their symbols with symbols they derive from their environment, does not mean creativity but the way they view their environment. Danko-McGhee & Slustsky, (2003) refutes that statement and affirms that, whatever the learners draw is what they have seen and conceptualized from their environment and expresses it creatively thus, communicating their understanding and interpretations of their world before they can express themselves verbally. Murundu, (2014), further supports this that, drawing is the most relevant way through which children learn and communicate.

This is further in accordance with Piaget's constructivism theory that posits that learning ought to be experiential, participatory and arise from the learner's interests. This is anchored in the activity-based methodology supported in this drawing which permits learners to have an independent mind and articulate their thoughts through imaginations and a creative mind. This encourages the learners' to creatively have an independent mind and develop critical reflection and communication skills. Learners appreciate drawing objects that they love within their environment henceforth showing an imaginative and creativity. This makes it a natural form of expression to the learners to communicate their encounters joyfully and with meaning in their communication process, which this study emphasizes and concludes as the seedbed of communication skills acquisition in EYE. Below is a summery on themes and sub-themes elicited on content of learners' drawings.

**Table 4.19: Themes and Sub- themes Elicited on Use of learners' drawings in the acquisition of effective Communication**

| Thematic area | Questions Asked | Themes | Sub- themes (Responses) N=15 (100%) |
|---|---|---|---|
| **Use of learner's drawings** | 1. What do 4-year-old learners choose to communicate? | **Picture Drawings content** | 15(100%) - all teachers were able to describe the pictures of learners (Cow, goat, car, house, hut, mother, father, brother, sister). |
| | 2. Do learners show any creativity and imaginations in their drawing communication? | **Suggestions for YES/ or No responses** | 15(100%) - all teachers felt that Children's drawings are their original thoughts and ideas demonstrated through drawing |
| | 3. What challenges do 4-year-old learners often face in communication? | **Challenges learners face in communication** | -Oral barriers -Perception barriers- interpretation -Listening barriers-keen to |
| | 4. What suggestion would you give to overcome communication challenges among 4-year-old learners? | **Suggestions to overcome communication challenges that 4-year-old learners often encounter.** | -Engaging learners in drawing activities -Challenging learners in Critical Creative thinking -Practice active speaking and listening -Open-ended drawings -Reflective learning opportunities |

The findings in Table 4.19 indicate that, 100% of teachers were able to interpret and describe the pictures of learners as Cow, goat, car, house, hut, mother, father, brother, sister among others. It was noted that the content of learners is drawn from their environments both at school and home. It was also noted that, 100% of teachers felt that Children's drawings are their original thoughts and ideas demonstrated through drawing. The challenges 4-year-old learners are likely to face, teachers gave their views and among the possible challenges are: Oral barriers, -Perception barriers-interpretation and Listening barriers. Based on this finding, teachers can plan the lesson activities to assist the young learners overcome the challenges identified through the following suggestions: Engaging learners in drawing activities, Challenging learners in Critical Creative thinking, Practice active speaking and listening activities. This should Open-ended drawings activities as well as Reflective learning opportunities will enhance communication skill acquisition in EYE. The study suggested that, these activities when used regularly and persistently can enhance the acquisition of communication skills in early years education.

Consequently, learners ought to be given open–ended opportunities to utilize drawing as a medium to make their intentions known. This is in accordance with past studies like (Anning & Ring, 2004) who reasoned that drawing gives little youngsters chances to communicate to many others stories and use them to communicate with others in their lives. This concurs with Piaget's hypothesis which sets that learning ought to be experiential, participatory and arises from the student's interests. This further is upheld by Lowenfield's stages of art development that shows that learner's has distinct characteristics at each stage of development. This study sought to investigate what the EYE learners choose to communicate in their drawings.

**4.7.1 Regression analysis for the Use of learner's drawings**

The study examined the use of learner's drawings in the acquisition of learner's effective communication in Early Years' Education. Table 4.20 presents the results of regression analysis.

**Table 4.20:Regression Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-----|----------|-------------------|----------------------------|
| 1 | .495[a] | .246 | .242 | .45426 |

a. Predictors: (Constant), Use of learner's drawings
b. Dependent Variable: Acquisition of effective Communication in Early Years Education

Model summary gives the coefficient of determination ($R^2$) which shows the extent of the variance in the dependent variable that is predictable from the independent variable and correlation coefficient (R) shows the level of relationship between the dependent and independent factors. The results presented in Table 4.20 present the fitness of the model utilized of the regression model in clarifying the study phenomena.

Use of learner's drawings was found to be satisfactory factors affecting the acquisition of effective communication development in Early Years Education in Kenya. This is upheld by the coefficient of determination otherwise, the R square of .495. This implies that the classroom setting for drawing exercises clarifies 49.5% of the varieties in the dependent. The results further infer that the model applied to interface the relationship of the factors was agreeable. Adjusted $R^2$ is a modified variant of $R^2$ that has been adjusted for the number of indicators in the model. The adjusted $R^2$ of which was marginally lower than the $R^2$ value was an exact indicator of the connection between the dependent and independent variable since it is sensitive to the addition of immaterial variables. The adjusted $R^2$ shows that 24.6% of the changes in

the acquisition of communication skills in Early Years Education in Kenya are clarified by the model.

### 4.7.2 Assessing the fit of the regression model

The study inspected whether the multi-regression model was a good fit for the data. Analysis of Variance (ANOVA) was conducted so as to see whether the Acquisition of effective Communication in Early Years Education can be predicted without depending on the use of the learner's drawings. The results of the Analysis of Variance (ANOVA) are showed in Table 4.21.

**Table 4.21: Results of ANOVA**

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| 1  Regression | 15.645 | 1 | 15.645 | 75.820 | .000[b] |
| Residual | 48.079 | 233 | .206 | | |
| Total | 63.724 | 234 | | | |

a. Predictors: (Constant), Use of learners drawings
b. Dependent Variable: Acquisition of effective Communication in Early Years Education

The findings of the study indicate that the relationship between the use of learner's drawings and the acquisition of effective communication in Early Years' Education was statistically significant (F=75.820; p< 0.05). This implies that the regression model was a good fit for the data. Hence, the use of drawing resources influence the acquisition of effective Communication in Early Years Education.

### 4.7.3 Regression Coefficients

The regression of coefficients results in Table 4.22 shows that the use of learner's drawings has a positive and significant influence on the Acquisition of effective Communication in Early Years Education (β=0.392, p=0.000).

**Table 4.22: Regression Analysis Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | .713 | .192 | | 3.71 | .000 |
| | Use of learner's drawings | .392 | .045 | .495 | 8.707 | .000 |

The optimal model was;

**Y =0.713+.392X₁**

Where:

Y represents Acquisition of effective Communication in Early Years Education, dependent variable.

$X_1$ represents Use of learner's drawings.

## 4.8 Testing the Assumptions of Multiple Regression

The following multiple regression assumptions were tested;

### 4.8.1 Homoscedasticity assumption

Residual plots of standardized predicted values against standardized residual values are used to test for homoscedasticity as showed in the pattern. Figure 4.1 shows that the variance of residuals is constant. Thus, there was no heteroskedasticity problem.
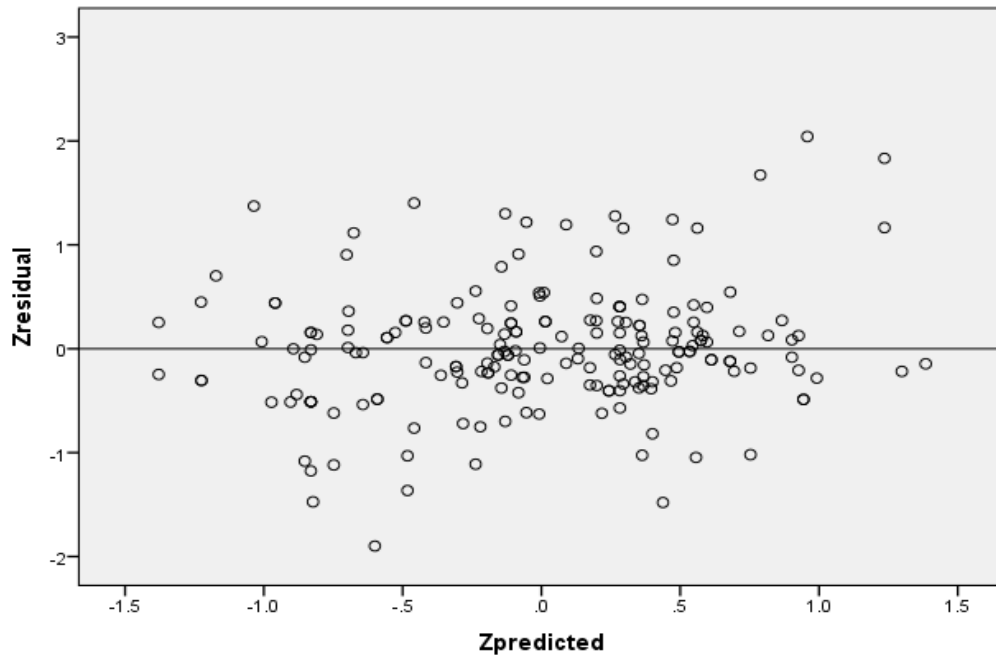
**Figure 4.1:** **Residual plots of Regression standardized Residuals against Regression Standardized Predict Value**

## 4.8.2 Normality assumption

Normal Probability plots and Kolmogorov-Smirnov were used to find out if residuals follow normal probability distribution.
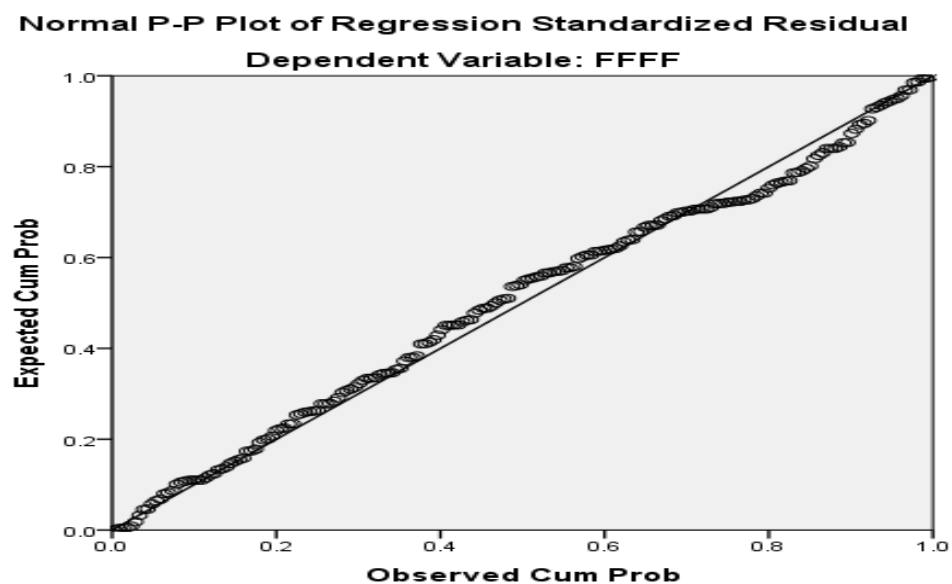


**Figure 4.2: Normal P-P Plot of Regression Standardized Residual**

The plotted points of residuals in the normal probability plot are almost along the straight line from the lower left to the upper right of the graph. This implies that our data is normally distributed.

**Table 4.23: Normality Test**

| Variable | Kolmogorov- Smirnov Statistic | Sig |
|---|---|---|
| Teacher's pedagogical competency | 1.325 | 0.061 |
| Nature of classroom environment | 0.821 | 0.632 |
| Use of drawing resources | 0.758 | 0.705 |
| Use of learner's drawings | 0.892 | 0.640 |
| Acquisition        of        effective | 0.799 | 0.745 |

The data is considered to originate from a normal distribution if the significance value is more prominent than 0.05. Table 4.24 shows that all our sample values were above 0.05. This means that our data is normally distributed.

### 4.8.3 Multi-collinearity assumption

Supposition of multi-collinearity infers that there is no connection between independent variables in the data. The study tested multi-collinearity presumption by utilization of tolerance and variance inflation factor (VIF). Tolerance underneath 0.1 or VIF higher than 10 demonstrates multi-collinearity problems. There is a potential problem if tolerance is underneath 0.2. Results of Analysis are shown in Table 4.24.

**Table 4.24: Collinearity Statistics**

| | Tolerance | VIF |
|---|---|---|
| Teacher's pedagogical competency on drawing | .987 | 1.013 |
| Nature of classroom environment | .949 | 1.054 |
| Use of drawing resources | .998 | 1.002 |
| Use of learner's drawings | .981 | 1.019 |

The use of drawing assets had the most minimal correlation with other independent variables (tolerance=0.998; VIF= 1.002). The teacher's pedagogical competency on drawing had the second-lowest relationship with other independent variables (tolerance=0.987; VIF=1.013). Use of learner's drawings had the second highest correlation with other independent variables (tolerance= 0.981; VIF=1.019). Use of drawing resources had the most elevated correlation with other independent variables (tolerance=0.949; VIF= 1.054). The tolerance level was near 1 and VIF was likewise near 1. This far from the limit of 0.1 and 10 for resilience and VIF respectively. Accordingly, no independent variable was eliminated from the study.

### 4.8.4 Independence of Residuals Assumption

The assumption of independence of residuals implies the estimations of the residuals are independent. This infers that the perceptions or individual data highlighted are uncorrelated. Autocorrelation happens if residuals are correlated. The study utilized the Durbin-Watson measurement to test for autocorrelation. The value of the Durbin – Watson coefficient was 1.639. The estimation of the Durbin-Watson coefficient draws near to 0 when autocorrelation is positive of error terms and is over 2 when autocorrelation is negative. The suggested edge of the Durbin-Watson value is 1.5-2.5. Consequently, the Durbin-Watson Coefficient of 1.639 shows that perceptions are within the threshold.

### 4.9 Inferential Analysis

This section puts over the relationship between independent variables and the dependent variable and also the influence of the independent variable on the dependent variable. Therefore, the section presents the results of both correlation and multiple regression analysis.

**4.9.1 Pearson Correlation on Teacher's Pedagogical competency on drawing in the acquisition of effective communication in early year's education**

The connection between teacher's pedagogical competency on drawing and the use of effective communication in the Early Years centre was determined. Table 4.26 presents the results of the correlation analysis.

**Table 4.25: Pearson Correlation on Teacher's Pedagogical competency on Drawing and Acquisition of effective Communication in Early Years Education**

|  |  | Acquisition of effective Communication in Early Years Education |
|---|---|---|
| Teacher's pedagogical competency on Drawing | **Pearson correlation** | .415 |
|  | **Sig. (2-tailed)** | .000 |

The findings show that teacher's pedagogical competency on drawing in the acquisition of effective communication in the Early Years Education had a positive and factually significant relationship (r= 0.415; p<0.01). These results agree with (Sakellari et al., 2014) who investigated children s' perception of the ideal hospital. The authors noticed a significant result of utilizing the method for drawing. Children's portraits reflected the physical aspects of a hospital setting as opposed to other elements such as, the interaction between nurses which they determined as being more difficult to draw. Their perceptions recommend that we have to recognize the challenges of drawing unique concepts and complex ideas, for example, emotions, relationship or other aspects of children's encounters. These are not tangible items which can be seen and replicated from the real world.

**4.9.2 Pearson correlation between nature of classroom environment for drawing the Acquisition of effective Communication in early years education**

There is a connection between the idea of the Classroom Environment for Drawing and the Acquisition of effective Communication in Early Years Education.

**Table 4.26: Pearson correlation between nature of classroom environment for drawing the Acquisition of effective Communication in early years education**

|  |  | Acquisition of effective Communication in Early Years Education |
|---|---|---|
| Nature of Classroom Environment for Drawing | Pearson correlation | .513 |
|  | Sig. (2-tailed) | 0.001 |

The findings of the study indicate a positive and statistically significant relationship between the nature of the classroom environment for drawing and the acquisition of communication skills in Early years Education (r=0.513; p< 0.01). The study results concur with (Johnston & Goettsch, 2013) who examined aspects of the knowledge base that experienced English as a second language (ESL) teachers draw on in their teaching, primarily in giving explanations of grammar and other language points. The results indicated that these three categories of knowledge are intertwined in complex ways as they are played out in the classroom and teacher thinking. This knowledge base and the actions it leads to are further seen to be fundamentally process-oriented. It is argued that the knowledge base itself should be integrated into language teacher education programs and that it is complex and process-oriented nature needs to be taken into account in language teacher education curriculum design.

**4.9.3 Pearson correlation between the use of drawing resources in the acquisition**

**of effective communication in early years education**

The study further sought to determine the relationship between the use of drawing resources in the acquisition of effective communication in Early Years Education. The outcome of the analysis is as shown in Table 4.28.

**Table 4.27: Pearson Correlation between Use of Drawing Resources in the Acquisition of effective Communication in Early Years Education**

|  | Acquisition of effective Communication in Early Years Education | |
| --- | --- | --- |
| Use of Drawing Resources | Pearson correlation | .527 |
|  | Sig. (2-tailed) | .000 |

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

The study established that there exists a positive and statistically (r=0.527; p< 0.01) relationship between the use of drawing resources and acquisition of effective communication in Early years Education. The findings concur with (Chepkonga 2017) who asserts that the quality of the learning environment in the classroom setting is critical to effective teaching and learning processes in the classroom.

**4.9.4 Pearson Correlation between Use of Learners Drawings in the Acquisition of**

**effective Communication in Early Years Education**

In addition, the study analyzed the relationship between the use of Learners Drawings and the Acquisition of effective Communication in Early Years Education. Table 4.28 illustrates the results.

**Table 4.28: Pearson Correlation between the Use of Learners Drawings in the Acquisition of effective Communication in Early Years Education**

|  |  | Acquisition of effective Communication in Early Years Education |
| --- | --- | --- |
| Use of Learners Drawings | Pearson Correlation | .495 |
|  | Sig. (2-tailed) | .000 |

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

It was noticed that there exists a positive and statistically significant (r=0.495; p < 0.01) connection between use of learner's drawings and acquisition of Communication Skills in early years education. The investigation agrees with (Ogott & Odera, 2014) who did a study on "Utilization of technological resources in the acquisition of language skills in Gem Sub-County, Kenya". The study found that teachers', accessibility to resources and infrastructural support influenced the acquisition of language skills.

It was observed that, there exists a positive and statistically significant (r=0.495; p < 0.01) relationship between use of learner's drawings and acquisition of communication skills in early years education. The study concurs with (Ogott & Odera, 2014) who did a study on "Use of technological resources in the acquisition of language skills in Gem Sub-County, Kenya". The study found that teacher preparedness, availability of technology resources and administrative support influenced the acquisition of language skills.

## 4.10 Regression Analysis for Overall Model

The study examined drawing as a pedagogical tool in the acquisition of effective communication in Early Years Education in Kenya**.** Table 4.30 presents the results of multiple regression analysis.

**Table 4.29: Multiple Regression Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| .675 | .456 | .446 | .38825 |

a. Predictors: (Constant), Teacher's pedagogical competency on drawing, Nature of classroom environment, use of drawing resources and use of learner's drawings
b. Dependent Variable: Acquisition of effective Communication in Early Years Education

The findings as shown in Table 4.30 indicate that the relationship between examined drawing as a pedagogical tool in the acquisition of effective communication in Early Years Education in Kenya, focused on this study and sustainability was positive ($R2 = 0.456$). The findings indicate that 45.6% of the variation in the Acquisition of effective Communication in Early Years Education is accounted for by the four independent variables in the study while 54.4% of the Acquisition of effective Communication in Early Years Education resulted from other factors not included in the study.

### 4.10.1 Assessing the Fit of Multiple Regression Model

The study examined whether the multiple regression model was a good fit for the data. Analysis of Variance (ANOVA) was conducted in order to find out if the Acquisition of effective Communication in Early Years Education can be predicted without relying on the specific variables examined in the study. The results of the Analysis of Variance (ANOVA) are shown in Table 4.30.

**Table 4.30: Results of ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Regression | 29.055 | 4 | 7.2638 | 48.18929 | .000a |
| Residual | 34.669 | 230 | .1507 | | |
| Total | 63.7243 | 234 | | | |

a. Predictors: (Constant), Teacher's pedagogical competency on drawing, Nature of classroom environment, Use of drawing resources and Use of learner's drawings
b. Dependent Variable: Acquisition of effective Communication in Early Years Education

The findings of the study indicate that the relationship between the independent variables and the dependent variable was statistically significant (F=48.18929; p< 0.05). This implies that the multiple regression models were a good fit for the data. Hence teacher's pedagogical competency on drawing, Nature of classroom environment, Use of drawing resources and Use of learner's drawings influence the Acquisition of effective Communication in Early Years Education.

### 4.10.2 Regression Coefficients

Regression of coefficients results in Table 4.32 shows that teachers' pedagogical competency on drawing has a positive and significant influence on the Acquisition of effective Communication in Early Years Education ($\beta$=0.206, p=0.000). It was further established that the Nature of the classroom environment has a positive and significant influence on the Acquisition of effective Communication in Early Years Education ($\beta$=0.245, p=0.000). The use of drawing resources were found to have a positive and significant influence on the Acquisition of effective Communication in Early Years Education ($\beta$=0.180, p=0. 003). Finally, the use of learner's drawings was found to have a positive and significant influence on the Acquisition of effective Communication in Early Years Education ($\beta$=0.188, p=0.000). Therefore, the overall regression results imply that there is a positive and significant relationship between the teachers' pedagogical competency on drawing, nature of classroom environment, use of drawing resources and use of learner's drawings and Acquisition of effective Communication in Early Years Education.

**Table 4.31: Regression Analysis Coefficients**

| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | .982 | .253 | | 3.873 | .000 |
| Teacher's pedagogical competency on drawing | .206 | .054 | .323 | 3.838 | .000 |
| Nature of classroom environment | .245 | .045 | .262 | 5.426 | .000 |
| Use of drawing resources | .179 | .060 | .166 | 2.990 | .003 |
| Use of learner's drawings | .188 | .046 | .189 | 4.052 | .000 |

The optimal model was;

$$Y = 0.982 + 0.206X_1 + 0.245X_2 + 0.179X_3 + 0.188X_4$$

Where:

Y represents Acquisition of effective Communication in Early Years Education, dependent variable

$X_1$ represents Teacher's pedagogical competency on drawing

$X_2$ represents Nature of classroom environment

$X_3$ represents Use of drawing resources

$X_4$ represents Use of learner's drawings

**4.11 Hypotheses Testing**

From the regression model computed in Table 4.31, the research hypotheses were tested utilizing the significance level of the coefficients. The research aimed to test the hypothesis with the aim to test the theory with a point of reject or rejecting the connection among dependent and independent variables. The hypothesis theory for the study included; Teachers' pedagogical competency on drawing, Nature of classroom environment, Use of drawing resources and the use of learner's drawings has a statistically significant relationship.

**H$_{01}$**: Teachers' pedagogical competency on drawing have no statistical significant influence on the acquisition of effective communication in Early Years Education. The regression results in Table 4.32 indicate that there is a significant relationship between the teachers' pedagogical competency on drawing in the acquisition of effective communication in Early years Education with a beta coefficient of 0.982 and significance of (p= <0.05). The study rejected the hypothesis. These results concur Di Leo's (2013) who worked on significant adults in children's drawing practices drew attention to the, 'contrasting cultures of home and school'. In the context of school, drawing was primarily a seat-based activity, and not considered 'proper work' but rather a time-filler.

**H$_{02}$**: The nature of the classroom environment has no statistical significant influence on the acquisition of effective communication in Early Years Education. The regression results in Table 4.31 indicate that there is a significant relationship between the Nature of the classroom environment in the acquisition of effective communication in Early Years Education with a beta coefficient of 0.245 and significance of (p= < 0.05). The study rejected the hypothesis. These results concur with Law (2016) who examined what teachers know about drawing related experience (DRE) and how confident they are in their knowledge. Seventy-three middle school physical education teachers completed a 3-part cognitive DRE test and a self-efficacy questionnaire that required responses to statements about how confident they were in passing a DRE instructional test. Results indicated that teachers were very confident in their knowledge of DRE.

**H$_{03}$**: Use of drawing resources have no statistical significant influence on the acquisition of effective communication in Early years Centers. The regression results in Table 4.31 indicate that there is a significant relationship between the Use of drawing

resources and acquisition of effective communication in Early Years Education with a beta coefficient of 0.180 and significance of (p= <0.05). The study rejected the hypothesis. These results concur with (Okudo & Omotuyole, 2014) who found that learning instruction in Early Childhood Education settings requires that pupils interact with their environment while learning various activities.

$H_{04}$: The use of learner's drawings has no statistical significant influence on the acquisition of effective communication in Early Years Education. The regression results in Table 4.31 indicate that there is a significant relationship between use of learner's drawings and acquisition of effective communication in Early years education with a beta coefficient of 0.188 and significance of (p= <0.05). The study rejected the hypothesis. These results concur with (Ogott & Odera, 2014) on their study on "Use of technological resources in the acquisition of language skills in Gem Sub-County, Kenya". The study found out that, teacher preparedness, availability of technology resources and administrative support had an influence on the acquisition of language skills.

**Table 4.32: Summary of Hypotheses Test Results**

|  | **Hypothesis** | **Coif** | **p-value** | **Decision** |
|---|---|---|---|---|
| Hypothesis $H_{01}$ | Teacher's pedagogical competency on drawing has no statistical significant influence in acquisition of effective communication in Early Years Education. | .206 | .000 | Rejected |
| Hypothesis $H_{02}$ | Nature of the classroom environment for drawing has no statistical significant influence in the acquisition of effective communication in Early Years Education. | .245 | .000 | Rejected |
| Hypothesis $H_{03}$ | Use of drawing resources has no statistical significant influence in acquisition of effective communication in Early Years Education. | .180 | .003 | Rejected |
| Hypothesis $H_{04}$ | Use of learner's drawings has no statistical significant influence in acquisition of effective communication in Early Years Education. | 0.188 | 0.000 | Rejected |

**4.12 Chapter Summary**

In this chapter, the results were analyzed, interpreted and presented with respect to the objectives of the study.

The findings were presented quantitatively and qualitatively and it showed that most of the teachers of EYE are trained, professionally qualified and some have rich experience while others have limited experience to carry out drawing activities in an EYE classroom. It also emerged that the classroom organization has limited infrastructural facilities but the teachers learned how to use the available infrastructure in support of learning in all activity areas.

The study revealed discrepancies in the drawing resources at the EYE schools, especially those recommended by the curriculum design that should be used in drawing lessons. Some of the resources are expected to be purchased though some schools find it difficult to allocate resources for purchasing adequate amounts of drawing items. Finally, the study identified what children choose to include in communicating their use in drawing activities.

Further, this research tested the hypothesis with the aim to test the theory with a point of accepting or rejecting the connection among dependent and independent variables. The hypothesis theory tested for the study included; Teachers' pedagogical competency on drawing, Nature of classroom environment, Use of drawing resources and the use of learner's drawings has a statistically significant relationship thus rejecting the hypothesis statement.

## CHAPTER FIVE

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

### 5.1 Introduction

This chapter presents the summary of the findings, conclusions and recommendations that are derived from the findings presented in chapter four. The procedure for treating the recommendations will be first to present relevant objectives this study set to establish, and re-established findings by making a summary presentation and then the conclusion and recommendation. Thereafter there will be the latter part of the chapter that will involve the presentation of suggestions for further research and recommendations for policy and practice.

### 5.2 Summary of the Findings

The study findings on demographic information from the respondents revealed that the majority of the participants 223 (99.1%) who participated in the study were female. This gave an indication that very few male teachers teach in ECDE schools. The study findings indicated that respondents who were in the age bracket of 46-50 years were 55 (23.4%) which is a significant age group in teaching at ECDE in terms of care provision to learners which includes understanding the learners needs. From the study, Majority the EYE teachers are qualified and meet the threshold of teaching the EYE learners. The least qualified were those who had no training in EYE (4.3%). Those with a proficiency certificate in ECDE were (3.4%) while another (6%) had a Bachelor's degree. The study further noted a Majority (58.3%) are diploma holders in ECDE. On teaching experience, a majority (65.1%) of the ECDE teachers have been teaching for at least 10 years. This is an indication that most EYE teachers have gained a lengthy experience in teaching in EYE. The findings of the research have demonstrated how drawing can be an effective tool of communication in EYE and the

active role teachers' pedagogical competency on drawing play in promoting learner's communication skill acquisition as summarized in the next section.

### 5.2.1 Teachers' pedagogical competency on drawing in the acquisition of effective communication in Early Years Education

The first objective of this study was to assess teacher's pedagogical competency on drawing in the acquisition of effective communication in Early Years Education. This study revealed that, teachers need more refresher courses and training to improve their pedagogy in creative art and especially in drawing activities. It further revealed that, there is a statistically significant positive relationship between the teachers' pedagogical competency on drawing and the acquisition of communication skills in EYE ($\beta1=0.206$, $p<0.05$). This implies that, teachers' pedagogic competencies on drawing plays a role in the acquisition of effective communication in EYE. This therefore will have an influence on the learners' acquisition of effective communication in the light of 100% learner transition to the next level.

### 5.2.2 Nature of classroom environment for drawing in the acquisition of effective communication in Early Years Education

The study findings on the Nature of classroom environment setting for drawing activities in the acquisition of effective communication in Early Years Education revealed that; a decent classroom setting empowers teachers to decipher knowledge and aptitudes to learner's without struggling. This is on the grounds that a helpful domain is center for drawing exercises just as the acquisition of effective communication. The study revealed, there is a significant positive correlation between the idea of classroom condition and the acquisition of communication skills ($\beta2=0.245$, $p<0.05$). Teachers should make the EYE classroom setting more

child-centered as proposed by UNICEF's current initiative for ECDE classroom environment which recommends that work areas and seats ought to be detached so that the seating arrangement can be varied to permit more communication among learner's and between the learner's and their teachers'.

### 5.2.3 Use of drawing resources the acquisition of effective communication in Early Years Education

The study findings on use of drawing resources in the acquisition of effective communication in Early Years Education revealed that the following drawing resources are significant on the grounds that the objective of any school relies upon satisfactory flexible and use of physical and material resources. Drawing resources, among others enhance drawing and consequently improve acquisition of communication skills. The study revealed that, there is a relationship between the use of drawing resources and the acquisition of effective communication ($\beta3=0.180$, $p<0.05$). This study suggests that, drawing resources are critical instruments in learner's acquisition of effective communication.

### 5.2.4 Use of learners' drawings in the acquisition of effective communication in Early Years' education

Drawing has been distinguished as one area through which learners' can communicate their ideas freely. This empowers them to gain early symbols that will progress after some time into writing abilities. The study revealed a statistically significant positive relationship between use of learner's drawings and the acquisition of communication skills ($\beta4=0.188$, $p<0.05$). This suggests that, learners communicate through drawing objects that are common inside their environment subsequently showing what they know and how much they know on their environments. Hence, drawing permits the

learners to share and convey thoughts and ideas with the significant 'other' individuals around them.

## 5.3 Conclusion

In light of the outline of the findings the following conclusions were made; the study revealed that, teachers' pedagogical competency on drawing enhances the acquisition of communication skills in early years Education. The study's first objective was to find out whether teachers pedagogical competency on drawing explains the relationship with the acquisition of effective communication in EYE. From the study findings, it indicated that there's a relationship between teachers pedagogical competency and effective communication acquisition. This is shown by the P-value $=(<.05\%)$ indicating the relationship is significant between the two variables. The thematic results also showed that most teachers (86%) agreed that both receptive and expressive Communication skill would highly be enhanced by drawing activities. This findings are further supported by Piagets theory that focuses not only on understanding how children acquire knowledge, but also on understanding the nature of intelligence that learners have.

The study's second objective was to find out whether the nature of classroom environment explains the relationship with the acquisition of effective communication in EYE. From the study findings, it indicated that there's a relationship between the nature of classroom environment with the acquisition of effective communication. This is shown by the P-value=$( <0.05\%)$ indicating the relationship is significant between the two variables. The thematic results also showed that most participants agreed that a teacher can create a safe classroom environment where learners feel comfortable to open up and express their ideas. This can highly enhance communication skill

acquisition. This is supported by Piaget's cognitive development theory that is characterized by prepared surroundings that everything the child comes in contact with would lead to independent learning therefor a need of communicating the learnt experiences will be necessary.

The study's third objective was to find out whether the use of drawing resources explains the relationship with the acquisition of effective communication in EYE. From the study findings, it indicated that there's a relationship between the use of drawing resources with the acquisition of effective communication. This is shown by the P-value= (<0.05%) indicating the relationship is significant between the two variables. The thematic results showed that most participants agreed that, most EYE schools, had a narrow range of drawing materials for EYE learners to use and with very limited quantity. The study revealed that, this inhibits proper planning for lessons because it depends on what is or not available for classroom lesson use. The study observed that, if these resources were made available, it will highly enhance effective communication acquisition. This is further upheld by Piaget's cognitive constructivism hypothesis that posits that, learning should be practical, and should arise from the learner's interests. This allows the learner to explore for themselves and express self through creativity and imagination resources.

The study's fourth objective was to find out whether the use of learners' drawings explains the relationship with the acquisition of effective communication in EYE. From the study findings, it indicated that there's a relationship between the learners drawings and effective communication acquisition. This is shown by the P-value = (<0.05%) indicating the relationship is statistically significant between the two variables. The thematic results also showed that 100% of participants felt that Children's drawings are

their original thoughts and ideas demonstrated through drawing and agreed that both receptive and expressive Communication skill would highly be enhanced by their drawing. This findings further supported Piaget's stages of child development that indicates that, through developmentally suitable interactions with the materials, teachers can model desired outcomes and support learners to acquire necessary skills and knowledge in which effective communication   acquisition in EYE is enhanced.

**5.4 Recommendations**

The following are the recommendations of this study:

1)  Out of this research, the researcher recommends that teachers' need to recognize the use of drawing as a heuristic strategy not only for learning concepts but also for communication achievement and recommends further training be given to teachers especially on use of scribbles/ drawings in teaching and learning processes.

2) The researcher also recommends for quality classroom environments that supports learning in Early Years Education classrooms as is as evident in Appendix viii.

3) The researcher recommends drawing resources of all kinds and varieties to be provided to Early Years Education schools and should be made easily accessible to teachers and learners to stimulate their interest in drawing activities.

4) The study further recommends that teachers should facilitate more exposure to learners by engaging resource persons for storytelling, role playing and taking the learners to places of significance to actively build on their knowledge and experience. This becomes a seedbed for generation of ideas for expression.

The study concludes by recommending teachers training on use of drawing, creativity and imagination and learner's drawing be adopted and used as a heuristic strategy by EYE teachers in enhancing effective communication in EYE.

Therefore, an approval by the KICD curriculum developers is important for its adoption as a heuristic strategy for early years education learning since it is significant in enhancing effective classroom communication.

## 5.5 Suggestions for Further Studies

The study has identified the following areas which can be used for further research studies;

i. A qualitative investigation in the use of language as a pedagogical tool in the acquisition of communication skills in early years education.

ii. In-depth research on the influence of Creative activities on Pre- Schools' performance in EYE activity areas.

iii. An exploration on the influence of drawing in preschools in other activity areas using a qualitative design.

**REFERENCES**

Abdi, D., & Zarezad, N. (2016). The Effect of Story-generated Task on Fluency of Young Iranian EFL learners in Speaking. *Journal of Education,1*(2),5-10.http:// doi.org /1469

Adams, E. (2006). Drawing attractions: a comprehensive store of ideas, reports, explanations and strategies for using drawing as a means of engaging people with heritage and can be used by educators in a wide range of environments and cultural settings. *Journal of Campaign for Drawing.* https://doi.org/10.4324/9781315767697

Ademokoya, J. A. (2008). Classroom communication and placement of the deaf child in an inclusive class. *Journal of Human Ecology*, *23*(3), 203-209. https://doi.org/10.1080/09709274.2008.11906072

Ajayi, I. A., Ekundayo, H. T., & Osalusi, F. M. (2010). Learning environment and secondary school effectiveness in Nigeria. *Studies on Home and Community Science*, *4*(3), 137-142. https://doi.org/10.1080/09737189.2010.11885312

Akinsanya, O. (2010). Differential Distribution and Utilization of Human and Material Resources on Students' Academic Performance in Secondary Schools in Ogun State. *African Journal for the Study of educational issues*, *3*(4), 157-163. https://doi.org/10.11648/j.ijsedu.20150301.11

Alexander, D., & Lewis, L. (2014). Condition of America's Public-School Facilities: 2012-13. First Look. NCES 2014-022. *National Center for Education Statistics*, *8*(2), 63-72. https://doi.org/2014022

Allan, E. J., & Madden, M. (2006). Chilly classrooms for female undergraduate students: A question of method? *The Journal of Higher Education*, *77*(4), 684-711. https://doi.org/10.1080/00221546.2006.11772311

Allen, M. A., & Fischer, G. J. (1978). Ambient temperature effects on paired associate learning. *Ergonomics*, *21*(2), 95-101. https://doi.org/10.1080/00140137808931700

Altbach, P. G. (1993). The dilemma of change in Indian higher education. *Higher Education*, *26*(1), 3-20. https://doi.org/3447875

Alter-Muri, S. B., & Vazzano, S. (2014). Gender typicality in children's art development: A cross-cultural study. *The Arts in psychotherapy*, *41*(2), 155-162. https://doi.org/10.1016/j.aip.2014.01.003

Andiema, N. C. (2016). Effect of Child Centred Methods on Teaching and Learning of Science Activities in Pre-Schools in Kenya. *Journal of Education and Practice*, *7*(27), 1-9. https:// doi.org/1115813

Anning, A. (1999). Learning to draw and drawing to learn. *Journal of Art & Design Education*, *18*(2), 163-172. https://doi.org/10.1111/1468-5949.00170

Anning, A. (2002). Conversations around young children's drawing: The impact of the beliefs of significant others at home and school. *International Journal of Art & Design Education*, *21*(3), 197-208. https://doi.org/10.1386/2.3.1951

Anning, A. (2014). Is working together working. *An introduction to early childhood studies, 10*(8), 255-267. https://doi.org/10.4335/12.3.373-391/2014

Anning, A., & Ring, K. (2004). *Making sense of children's drawings*. McGraw-Hill Education. https://doi.org/493242

Anning, B., Arbon, V., Robertson, B., & Thomas, G. (2012). Celebrating and sustaining Indigenous knowledges through higher education. *World Indigenous Nations Higher Education Consortium Journal*, (2012)27-45. https://doi.org/ 0000-0002-2910-3703

Archer, L., DeWitt, J., Osborne, J., Dillon, J., Willis, B., & Wong, B. (2012). Science aspirations, capital, and family habitus: How families shape children's engagement and identification with science. *American Educational Research Journal*, *49*(5), 881-908. https://doi.org/10.3102/0002831211433290

Arthur, J., & Martin, P. (2006). Accomplishing lessons in postcolonial classrooms: Comparative perspectives from Botswana and Brunei Darussalam. *Comparative education*, *42*(02), 177-202. https://doi.org/10.1080/03050060600628009

Asiabaka, I. P. (2008). The need for effective facility management in schools in Nigeria. *New York science journal*, *1*(2), 10-21. https://doi.org/10.4314/6217

Bae, B. (2012). Children and teachers as partners in communication: Focus on spacious and narrow interactional patterns. *International Journal of Early Childhood*, *44*(1), 53-69. https://doi.org/10.1007/s13158-012-0052-3

Ball, D. L., & Bass, H. (2000). Interweaving content and pedagogy in teaching and learning to teach: Knowing and using mathematics. *Multiple perspectives on the teaching and learning of mathematics*, *4*, 83-104. https://doi.org/10.1111/j.1949-8594.2008.tb17803

Ball, D. L., Lubienski, S. T., & Mewborn, D. S. (2001). Research on teaching mathematics: The unsolved problem of teachers' mathematical knowledge. *Handbook of research on teaching*, *4*, 433-456. https://doi.org/2006-07986-041

Ball, S. J. (1998). Big policies/small world: An introduction to international perspectives in education policy. *Comparative education*, *34*(2), 119-130. https://doi.org/10.1080/03050069828225

Ball, S. J. (2003). *Class strategies and the education market: The middle classes and social advantage*. Routledge. https://doi.org/10.4324/9780203218952

Barnett, J., & Hodson, D. (2014). Pedagogical context knowledge: Toward a fuller understanding of what good science teachers know. *Science Education*, *85*(4), 426-453. https://doi.org/10.1002/1017

Barnett, W. S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. *The future of children*, 25-50. https://doi.org/10.2307/1602366

Barnett, W. S., Jung, K., Yarosz, D. J., Thomas, J., Hornbeck, A., Stechuk, R., & Burns, S. (2008). Educational effects of the Tools of the Mind curriculum: A randomized trial. *Early childhood research quarterly*, *23*(3), 299-313. https://doi.org/10.1016/2008.03.001

Barrett, M. D., Beaumont, A., & Jennett, M. (1985). *Some children do sometimes do what they have been told to do: Task demands and verbal instructions in children's drawings*. Cambridge University Press. https://doi.org/10.2466/70.2.663

Basheka, B. C., & Bisangabasaija, E. (2010). Determinants of unethical public procurement in local government systems of Uganda: a case study. *International Journal of Procurement Management*, *3*(1), 91-104. https://doi.org/10.1504/2010.029777

Bell, J. J., Hardy, L., & Beattie, S. (2013). *Enhancing mental toughness and performance under pressure in elite young cricketers: A 2-year longitudinal intervention*: Correction to Bell et al. (2013). https://doi.org/10.1037/0033129

Benya, J. R. (2001). *Lighting for Schools*. National Clearinghouse for Educational Facilities, Washington, DC. https://doi.org/10.1.1.871.1469

Bitok, E. B. (2014). Teachers' preparedness in integrating information and communication technology in biology classrooms in Uasin Gishu County, Kenya. *Journal of Research & Method in Education (IOSR-JRME)*, *4*(6), 45-53. https://doi.org/23800

Bitok, E. C., Tonui, B., Chepsiror, P., & Too, J. (2014). *Resource capacities supporting thematic approach in teaching ECDE centres In Uasin Gishu County*. http://doi.org/123456789/604

Black, M. M., Walker, S. P., Fernald, L. C., Andersen, C. T., DiGirolamo, A. M., Lu, C., ... & Devercelli, A. E. (2017). Early childhood development coming of age: science through the life course. *The Lancet*, *389*(10064), 77-90. http://doi.org/10.1016/S0140-6736(16)31389-7

Board, U. A. T. B. C. (2002). Progress toward a new standard on classroom acoustics for children with disabilities. http://doi.org/10.34917/3335730

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational researcher*, *33*(8), 3-15. http://doi.org/3699979.

Boyce, C., & Neale, P. (2006). *Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input*. http://doi.org/10-20210331

Brice, A. E. (2012). Minority recruitment and retention for universities: Bilingual special education faculty. *Multicultural Learning and Teaching*, *7*(1). http://doi.org/10.1515/2161-2412.1100

Bristow, S. F., & Patrick, S. (2014). An International Study in Competency Education: Postcards from Abroad. Competency Works Issue Brief. *International Association for K-12 Online Learning,9*(2),232-240. http://doi.org/843526

Brittain, W. L (1999). Becoming Japanese: Manga, children's drawings, and the construction of national character. In *Visual Arts Research, 25*(2), 48-60. http://doi.org/ 10.1002/9781118963418.childpsy221

Brittain, W. L. (1979). *Creativity, art, and the young child*. Prentice Hall. http://doi.org/40171094

Brooks, G. (2003). Sound sense: the phonics element of the National Literacy Strategy: *A report to the Department for Education and Skills, 1*(7), 98-113. http://doi.org/ 10.1080/03055698.2016.1148587

Brooks, M. (2006). Drawing: The consequential progression of ideas. *New Zealand Research in Early Childhood Education*, *9*(4), 51-66. http://doi.org/ 10.3316/168687

Bruce, T., & Meggitt, C. (2010). *Child Care and Education*, 2nd Edition. Routledge. http://doi.org/10.4324/9781315559100

Bryman, A., & Bell, E. (2015). *Business research methods.* (Vol. 4th). *Glasgow: Bell & Bain Ltd*. http://doi.org/10.1007/978-3-319-16976-7/27

Burgess, B., & Kaya, N. (2007). Gender differences in student attitude for seating layout in college classrooms. *College Student Journal*, *41*(4), 940-947. http://doi.org/816817

Burke, C. (2015). "Play in focus": Children researching their own spaces and places for play. *Children Youth and Environments*, *15*(1), 27-53. http://doi.org/10.7721/15.1.0027

Butera, G., Czaja, C., Daniels, J., Goodman, G., Hanson, M., Lieber, J., and Palmer, S. (2009). Factors that influence the implementation of a new preschool curriculum: implications for professional development. Early Education and Development, 20 (3), 456-481. http://doi.org/10.1080/10409280802506166

Camfield, L. (2011). 'From School to Adulthood'? Young People's Pathways Through Schooling in Urban Ethiopia. *The European Journal of Development Research*, *23*(5), 679-694. http://doi.org/10.1057/ejdr.2011.33

Castelli, D., & Williams, L. (2017). Health-related fitness and physical education teachers' content knowledge. *Journal of Teaching in Physical Education*, *26*(1), 3-19. http://doi.org/ 02735024

Cerny, B. A., & Kaiser, H. F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioral Research*. http://doi.org/10.1207/s15327906mbr12013

Chan, L., Zi Juan, C., & Lai Foon, C. (2015). Chinese preschool children's literacy development: from emergent to conventional writing. *Early Years*, *28*(2), 135-148. http://doi.org/10.1080/09575140801945304

Chau, C. L. (2014). *Positive technological development for young children in the context of children's mobile apps* (Publication No.18750) (Doctoral dissertation, Tufts University).

Chebet, S. B. (2016). *Attitudes of pre-school teachers towards early childhood development and education curriculum in Bomet central sub-County, Bomet County* (Publication No. 418916013) (Doctoral dissertation, Moi University).

Chepkonga, M. C. (2017). Influence of learning facilities on provision of quality education in early childhood development centres in Kenya. *International Journal of Education and Research*, *5*(6), 15-26. http://doi.org/123456789/698

Chepkwony, C. C., Kafwa, N. V., Kisilu, A. S., & Kenya, E. (2018). Organization of Learning Environment in Teaching Language Activities: A Focus on ECD Learners. *Organization*, *9*(15). http://doi.org/234641657

Cheryan, S., Ziegler, S. A., Plaut, V. C., & Meltzoff, A. N. (2014). Designing classrooms to maximize student achievement. *Policy Insights from the Behavioral and Brain Sciences*, *1*(1), 4-12. http://doi.org/55213549/14

Chick, J. K. (1996). Safe-talk: Collusion in apartheid education. *Society and the language classroom*, 21-39. http://doi.org/10.21832/9781853598265-007

Chiriswa, P. (2002). An investigation into the probable factors responsible for poor performance in Kenya Certificate of Secondary Education (KCSE) in Vihiga District of Western Province, Kenya. *MED Kenyatta University Kenya*. http://doi.org/123456789/8976

Chirkunova, E. K., Kireeva, E. E., Kornilova, A. D., & Pschenichnikova, J. S. (2016). Research of instruments for financing of innovation and investment construction projects. *Procedia Engineering*, *153*, 112-117. http://doi.org/82549211

Chisholm, L., & Fuller, B. (1996). Remember people's education? Shifting alliances, state- building and South Africa's narrowing policy agenda. *Journal of Education Policy*, *11*(6), 693-716. http://doi.org/10.1080/0268093960110604

Claxton, G., & Carr, M. (2004). A framework for teaching learning: the dynamics of disposition. *Early years*, *24*(1), 87-97. http://doi.org/10.1080/09575140320001790898

Clough, P., & Nutbrown, C. (2007). A student's guide to methodology 2nd edition. http://doi.org/10034/596533

Coates, E., (2016). The essential role of scribbling in the imaginative and cognitive development of young children. *Journal of Early Childhood Literacy*, *16*(1), 60-83. http://doi.org/10.1177/1468798415577871

Cohen, D. K., Raudenbush, S. W., & Ball, D. L. (2003). Resources, instruction, and research. *Educational evaluation and policy analysis*, *25*(2), 119-142. http://doi.org/10.3102/01623737025002119

Cohen, J. (2017). Maker principles and technologies in teacher education: A national survey. *Journal of Technology and Teacher Education*, *25*(1), 5-30. http://doi.org/172304/2017

Cohen, L., & Manion, L. (2017). K. (Keith RB Morrison. *Research methods in education*. http://doi.org/10.1080/02188799708547745

Cohen, L., Manion, L., & Morrison, K. (1994). Educational research methodology. *Athens: Metaixmio*. http://doi.org/123456789/824

Cohen, L., Manion, L., & Morrison, K. (2013). *Research methods in education*. Routledge. http://doi.org/10.1177/0733464814527033

Cook, V. (2016). *Second language learning and language teaching*. Routledge. http://doi.org/10.4324/9781315883113

Cooper, D.R., & Schindler, P.S. (2003). Business research methods (8th ed.). New York: McGraw-Hill. Corsaro, 2009). http://doi.org/123456789/32836

Corsaro, W.A. (2009). Peer culture. In J. Qvortrup W.A. Cosaro, & M-S. Honig (Eds)., *The Palgrave Handbook of Childhood Studies*. London: palgrave Macmillan. http://doi.org/10993/11991

Cox, C. B. (1992). *The Great Betrayal: memoirs of a life in education*. Chapmans Publishers. http://doi.org/10.3316/ielapa.725845839123116

Cox, E. (2005). For better, for worse: the matching process in formal mentoring schemes. *Mentoring & Tutoring: Partnership in Learning*, *13*(3), 403-414. http://doi.org/10.1080/13611260500177484

Cox, E. (2005b). *The Pictorial World of the Child.* Cambridge University Press, Cambridge. http://doi.org/2006-02869-000

Cox, M. V. (2013). *Children's drawings of the human figure*. Psychology Press. http://doi.org/10.4324/9780203775707

Cox, M. V., & Cox, M. (2014). *Drawings of people by the under-5s*. Routledge. http://doi.org/10.4324/9781315043210

Creswell, J. D. (2017). Mindfulness interventions. *Annual review of psychology*, *68*, 491-516. http://doi.org/10.1146/042716-051139

Creswell, J. D., & Lindsay, E. K. (2014). How does mindfulness training affect health? A mindfulness stress buffering account. *Current Directions in Psychological Science*, *23*(6), 401-407. http://doi.org/10.1177/0963721414547415

Creswell, J. W. (2003). *Research Design: Qualitative. Quantitative, and mixed methods*. http://doi.org/11515/7748

Creswell, J. W. (2012). *Educational research: planning. Conducting, and evaluating*. http://doi.org/10.1080/18117295.2017.1369274

Crosser, S. (2005). Characteristics of thinking. *Early Childhood News*. http://doi.org/1502050398817235

Dale, E. (1969). *Audiovisual Methods in Teaching*. http://doi.org/201300627155

Danko-McGhee, K., & Slutsky, R. (2003). Preparing Early Childhood to Use Art in Teachers the Classroom. *Art Education*, *56*(4), 12-18. http://doi.org/3194059

Darwin, C. (1877). A biographical sketch of an infant. *Mind*, *2*(7), 285-294. http://doi.org/10.1093/mind/os-2.7.285

Deguara, J. (2015). *Meaning-making in young children's drawings* (Publication No. 707067) (Doctoral dissertation, University of Sheffield).

Deguara, J. (2019). Young children's drawings: A methodological tool for data analysis. *Journal of Early Childhood Research*, *17*(2), 157-174. http://doi.org/10.1177/1476718X18818203

Delanty, G. (1997). *Social science: Beyond constructivism and realism*. U of Minnesota Press. http://doi.org/10.1515/9781400831296-024

Delanty, G. (2003). Ideologies of the knowledge society and the cultural contradictions of higher education. *Policy Futures in Education*, *1*(1), 71-82. http://doi.org/10.2304/pfie.2003.1.1.9

Delanty, G. (2011). Varieties of critique in sociological theory and their methodological implications for social research. *Irish Journal of Sociology*, *19*(1), 68-92. http://doi.org/10.7227/IJS.19.1.4

Dembélé, M. (2003). Teacher education in Sub-Saharan Africa: Learning from within and from without to improve policy and practice. *Background paper commissioned by ADEA in the framework of the Challenge of Learning Study. Paris: ADEA*. http://doi.org/ 10.1.1.457.5253

Deshingkar, P., & Start, D. (2003) 'Seasonal migration for livelihoods in India: Coping, accumulation and exclusion', ODI Working Paper 220. London: Overseas Development Institute. http://doi.org/49675190/56.pdf?1476751452

Di Leo, J. (2013). *Young children and their drawings*. Routledge. http://doi.org/10.4324/9780203766163

Dockrell, J. E., & Shield, B. M. (2006). Acoustical barriers in classrooms: The impact of noise on performance in the classroom. *British Educational Research Journal*, *32*(3), 509-525. http://doi.org/10.1080/01411920600635494

Driscoll, A., & Nagel, N. G. (2008). *Early childhood education, birth-8: The world of children, families, and educators*. Allyn & Bacon. http://doi.org/114-1-10-20111220

Driscoll, A. and Nagel, N. 2002. *Early childhood education birth-8: The world of children, families, and educators*, Boston: Allyn & Bacon. http://doi.org/1840.16/3417

Duncan, P. A. (2013). *Drawing as a method for accessing young children's perspectives in research.* http://doi.org/1893/17258

Duncan, P. A. (2015). Pigs, Planes, and Play-Doh: Children's Perspectives on Play as Revealed through Their Drawings. *American Journal of Play*, *8*(1), 50-73. http://doi.org/1080013

Duruji, M. M., Azuh, D. E., & Oviasogie, F. O. (2014). *Learning environment and academic performance of secondary school students in external examinations: a study of selected schools in Ota.* http://doi.org/10.1.1.965.3759

Earthman, G. I. (2004). Prioritization of 31 criteria for school building adequacy. http://doi.org/10.1.1.231.7213

East African Community Curriculum Harmonization Structures and Framework (2013). http://doi.org/10.32865/fire2018439

Edwards, C. P., Gandini, L., & Forman, G. E. (Eds.). (1998). *The hundred languages of children: The Reggio Emilia approach--advanced reflections*. Greenwood Publishing Group. http://doi.org/425855

Edwards, L., & Torcelli, P. (2002). *A Literature Review of the Effects of Natural Light on Building Occupants*. Golden, CO: National Renewable Energy Laboratory. http://doi.org/10.1.1.505.7585

Egan, G. (2013). *The skilled helper: A problem-management and opportunity-development approach to helping*. Cengage Learning. http://doi.org/1994-97032-000

Einarsdottir, J., Dockett, S., & Perry, B. (2009). Making meaning: Children's perspectives expressed through drawings. *Early child development and care*, *179*(2), 217-232. http://doi.org/10.1080/03004430802666999

Ekwama, M. B. (2003). Problems facing the field of special education in Nigeria and the way forward. *Journal of Research in special Education*, *6*(1), 27-36. http://doi.org/123456789/1177

Elliot, R. S. (2006). *Antenna theory and design*. John Wiley & Sons. http://doi.org/10.1080/00207216808938103

Emmer, E. T., Evertson, C. M., & Anderson, L. M. (1980). Effective classroom management at the beginning of the school year. *The elementary school journal*, *80*(5), 219-231. http://doi.org/10.1086/461192

Emmer, E. T., Evertson, C. M., & Worsham, M. E. (2003). *Classroom management for elementary teachers*. Allyn and Bacon. http://doi.org/1218148

Evans, G. W., & Maxwell, L. (1997). Chronic noise exposure and reading deficits: The mediating effects of language acquisition. *Environment and behavior*, *29*(5), 638-656. http://doi.org/10.1177/0013916597295003

Even, R. (1993). Subject-matter knowledge and pedagogical content knowledge: Prospective secondary teachers and the function concept. *Journal for research in mathematics education*, 94-116. http://doi.org/10.2307/749215

Falchikov, N. (2013). *Improving assessment through student involvement: Practical solutions for aiding learning in higher and further education*. Routledge. http://doi.org/10.4324/9780203220993

Farokhi, M., & Hashemi, M. (2011). The analysis of children's drawings: social, emotional, physical, and psychological aspects. *Procedia-Social and Behavioral Sciences*, *30*, 2219-2224. http://doi.org/10.1016/j.sbspro.2011.10.433

Fisher, D. L. (1978). *Functional literacy and the schools*. National Institute of Education. http://doi.org/151760

Foks-Appelman, T. L. (2012). *Draw Me a Picture: The Meaning of Children's Drawings and Play from the Perspective of the Analytical Psychology*. Foxap scriptus. http://doi.org/31282

Fraser, H., Mushin, I., Meakins, F., & Gardner, R. (2018). Dis, That and Da Other: Variation in Aboriginal Children's Article and Demonstrative Use at School. In *Language practices of Indigenous children and youth* (pp. 237-269). Palgrave Macmillan, London. http://doi.org/10.1057/978-1-137-60120-9_10

Freeman, M. (2017). The value and values of children's rights. In *Children's Rights* (pp. 91-106). Routledge. http://doi.org/10.4324/9781315557007-8

French, D., & Richards, M. (Eds.). (2003). *Media education across Europe*. Routledge. http://doi.org/10.4324/9780203204801-15

Fuller, J. (1996). *News values: Ideas for an information age*. University of Chicago Press. http://doi.org/10822/889814

Gains, P., & Graham, B. (2011). Making space for expressive and creative writing in African primary schools: a two-site action research study in Kenya and South Africa: report. *Reading & Writing-Journal of the Reading Association of South Africa*, *2*(1), 77-94. http://doi.org/10.10520/EJC131507

Gardner, H. (2006). *The development and education of the mind: The selected works of Howard Gardner*. Routledge. http://doi.org/10.4324/9780203019689

Gaskins, S., Miller, P. J., & Corsaro, W. A. (1992). Theoretical and methodological perspectives in the interpretive study of children. *New Directions for Child and Adolescent Development*, *1992*(58), 5-23. http://doi.org/10.1002/cd.23219925803

Geelen, H. (2010). *Bookbird: A Journal of International Children's Literature*, *48*(2), 36. http://doi.org/10.1353/bkb.0.0261

Gentle, K. (1985). *Children and art teaching*. Taylor & Francis. http://doi.org/10.1111/1468-5949.00170

Gentles, S. J., Charles, C., Ploeg, J., & McKibbon, K. A. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. *The qualitative report*, *20*(11), 1772-1789. http://doi.org/51086690

Gichuba, C., & Opatsa, R. N. R.(2010). *General methods of teaching young children and material development*. http://doi.org/123456789/10509

Gichuki F.W (2013). "Influence of Immediate Preschool Environment on Curriculum Implementation in Public Preschools in Mirangine District, Nyandarua County, Kenya".Unpublished Med project, University of Nairobi. http://doi.org/123456789/60704

Gilbert, L. R., Spears Brown, C., & Mistry, R. S. (2017). Latino immigrant parents' financial stress, depression, and academic involvement predicting child academic success. *Psychology in the Schools*, *54*(9), 1202-1215. http://doi.org/10.1002/pits.22067

Gold, A. G., & Gujar, B. R. (1994). Drawing pictures in the dust: Rajasthani children's landscapes. *Childhood*, *2*(1-2), 73-91. http://doi.org/10.1177/090756829400200106

Goodnow, J. J. (1977). *Children drawing*. Harvard University Press. http://doi.org/10.4159/harvard.9780674492158

Government of Kenya, (2014). Guidelines for the alternative family care in Kenya. http://doi.org/123456789/665

Gray, J. R., Grove, S. K., & Sutherland, S. (2016). *Burns and Grove's The Practice of Nursing Research-E-Book: Appraisal, Synthesis, and Generation of Evidence*. Elsevier Health Sciences. http://doi.org/88325

Grice, H. P. (1969). Utterer's meaning and intention. *The philosophical review*, *78*(2), 147-177. http://doi.org/ 1969/0078/0002/0147/0177

Groves, R. M., & Peytcheva, E. (2008). The impact of nonresponse rates on nonresponse bias: a meta-analysis. *Public opinion quarterly*, *72*(2), 167-189. http://doi.org/10.1093/poq/nfn011

Guardino, C., & Antia, S. D. (2012). Modifying the classroom environment to increase engagement and decrease disruption with students who are deaf or hard of hearing. *Journal of Deaf Studies and Deaf Education*, *17*(4), 518-533. http://doi.org/10.1093/deafed/ens026

Hall, E. (2015). The ethics of 'using' children's drawings in research. In *Visual Methods with Children and Young People* (pp. 140-163). Palgrave Macmillan, London. http://doi.org/10.1057/9781137402295_10

Harms, T., Clifford, R. M., & Cryer, D. (2014). *Early childhood environment rating scale*. Teachers College Press. http://doi.org/10.8077/3751-8

Harris, K. (2017). *Teachers and classes: A Marxist analysis* (Vol. 28). Routledge. http://doi.org/10.4324/9781315407425

Hastings, N., & Schwieso, J. (1995). Tasks and tables: The effects of seating arrangements on task engagement in primary classrooms. *Educational Research*, *37*(3), 279-291. http://doi.org/10.1080/0013188950370306

Hattie, J. (2003). *Teachers Make a Difference, What is the research evidence*? http://doi.org/10.1.1.461.7518

Hawkins, R. (2002). *Ten lessons for ICT and education in the developing world*. http://doi.org/2002_ch04

Heinnioch, R. (1988). *Instructional Media*. http://doi.org/41.89.160.13:8080

Heschong, L. (1999). *Daylighting in Schools: An Investigation into the Relationship Between Daylighting and Human Performance*. Submitted by the Heschong Mahone Group to Pacific Gas and Electric, on behalf of the California Board for Energy Efficiency Third Party Program. http://doi.org/10.1080/09603123.2018.1535056

Heward, W. L., & Wood, C. L. (2006). *Exceptional children: An introduction to special education*. Pearson Education/Merrill/Prentice Hall. http://doi.org/990019233630402368/61

Heylighen, F. (1993). Selection criteria for the evolution of knowledge. In *Proc. 13th Int. Congress on Cybernetics* (pp. 524-528). http://doi.org/10.1.1.32.2294

Hirvonen, N. (2019). What is a Good School like? Malawian Primary Teachers' and Students' Perceptions on the Ideality of the. *age*, *3*, 5. http://doi.org/123456789/22022

Holcomb, R. (1967). *Total communication Theory*,*28*(4), 384-394 http://doi.org/10.1044/0161-1461.2804.384

Hongi, Njagi, Wekulo and Ngware (2018) Is Kenya Education ready for change? http://doi.org/10.4324/9780429499272

Howes, C., Burchinal, M., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2008). Ready to learn? Children's pre-academic achievement in pre-kindergarten programs. *Early childhood research quarterly*, *23*(1), 27-50. http://doi.org/10.1016/j.ecresq.2007.05.002

Hsiao, H. S., Chang, C. S., Lin, C. Y., & Hu, P. M. (2014). Development of children's creativity and manual skills within digital game- based learning environment. *Journal of Computer Assisted Learning*, *30*(4), 377-395. http://doi.org/10.1111/jcal.12057

Hungi, N., Njagi, J., Wekulo, P., & Ngware, M. (2018). Effects of language of instruction on learning of literacy skills among pre-primary school children from low-income urban communities in Kenya. *Early Childhood Education Journal*, *46*(2), 187-199. http://doi.org/10.1007/s10643-017-0850-1

Hygge, S. (2003). Classroom experiments on the effects of different noise sources and sound levels on long- term recall and recognition in children. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *17*(8), 895-914. http://doi.org/10.1002/acp.926

Ibrahim, T. (2005). Global citizenship education: Mainstreaming the curriculum? *Cambridge Journal of Education*, *35*(2), 177-194. http://doi.org/10.1080/03057640500146823

IDRA. (2017). IDRA transition to teaching program: 15-year synthesis. San Antonio, TX: Intercultural Development Research Association. http://doi.org/10.24974/amae.13.3.452

James, A., & Prout, A. (2003). *Constructing and reconstructing childhood: Contemporary issues in the sociological study of childhood*. Routledge. http://doi.org/10.4324_9780203362600

Jayaratne, T. E. (1993). The Value of Quantitative Methodology. *Social research: Philosophy, politics and practice*, 109. http://doi.org/11693/68518

Jennings, G. R. (2010). Research processes for evaluating quality experiences: Reflections from the 'experiences. *The tourism and leisure experience: Consumer and managerial perspectives*, *44*, 81. http://doi.org/10.21832/9781845411503-008

Johannesen, B. (2014). *Confirmation Bias in the Evaluation of Children's Projective Drawings* (Publication No. 3736735) (Doctoral dissertation, William James College).

Johnston, B., & Goettsch, K. (2013). In search of the knowledge base of language teaching: Explanations by experienced teachers. *Canadian Modern Language Review*, *56*(3), 437-468. http://doi.org/10.3138/cmlr.56.3.437

Barahona M. (2016). *Exploring models of team teaching in initial foreign/second language teacher education: a study situated collaborations, Australian journal of Teacher Education-* ro.ecu.edu.au http://doi.org/10.3316/ielapa.313809259966067

Karsenti, T. (2016). The Interactive Whiteboard: Uses, Benefits, and Challenges. A Survey of 11,683 Students and 1,131 Teachers. *Canadian Journal of Learning and Technology* 42.5: 1-22. http://doi.org/178020/2016

Kafyulilo, A. C., Rugambuka, I. B., & Moses, I. (2012). The implementation of competency-based teaching approaches in Tanzania: The case of pre-service teachers at Morogoro Teachers Training College. *Universal Journal of Education and General Studies*, *1*(11), 339-347. http://doi.org/10.4314/majohe.v4i2.13

Kalle, G. (2018). Paternalism towards children. In *the Routledge handbook of the philosophy of childhood and children* (pp. 123-133). Routledge. http://doi.org/10.4324/9781351055987-12

Kara, F. (2015). Use of the Drawing-Writing Technique to Determine the Level of Knowledge of Pre-Service Teachers Regarding Renewable Energy Sources. *Journal of Education and Practice*, *6*(19), 215-225. http://doi.org/327668120

Karaka, J., Nyangasi, L., & Guthii, M. (2004). *Understanding science teachers guide.* Nairobi: Longhorn. http://doi.org/11295/76110

Karen Machover (1949) *Personality projection in the drawing of the human figure* http://doi.org/10.1037/11147-000

Kariuki, K. I. (2018). *Adequacy of Teacher Characteristics, Classroom Facilities and Materials Associated with Quality Early Childhood Development and Education in Nakuru County, Kenya.* http://doi.org/123456789/20061

Kato, A., & Weaver, (2017). *Insights for Measuring Social Value: Classification of Measures Related to the Capabilities Approach.* http://doi.org/10.1007/s11266-017-9912-7

Kaul, S. (2007). Measuring retail service quality: examining applicability of international research perspectives in India. *Vikalpa*, *32*(1), 15-26. http://doi.org/10.1177/0256090920070102

Kaya, N., & Burgess, B. (2007). Territoriality: Seat preferences in different types of classroom arrangements. *Environment and Behavior*, *39*(6), 859-876. http://doi.org/10.1177/0013916506298798

Kellogg, R, & O'Dell, S. (1970). *The psychology of children's art* 1967 San Diego, Calif. Psychology Today http://doi.org/990000115880402368/61

Kenya Early Years Education Service Standard Guidelines (2006)

Kenya Institute of Curriculum Development, (KICD) (2017). Basic Education Curriculum Framework. Published by KICD, Kenya http://doi.org/11295/102417

Kerlinger, F. (2013). *Foundation of behavior research.* 2nd Ed. New Delhi: Subject Publication. http://doi.org/10.1.1.301.8390

KIE (2006). *Handbook for Early Childhood Development and Education Syllabus*. Nairobi: KIE. http://doi.org/10.1080/10901020903084256

Kinuthia, W. (2009). Educational development in Kenya and the role of information and communication technology. *International Journal of Education and development using ICT*, *5*(2). http://doi.org/188086/2009.

Mertens, W., Pugliese, A. and Recker, J., (2017). Quantitative Data Analysis. Cham: Springer International Publishing. http://doi.org/10.1007/978-3-319-42700-3_4

Kitahara, R., & Matsuishi, T. (2007). *Research on children's drawings*. http://doi.org/265573408/07

Kitheka, A. M. (2005). Factors contributing to students' poor performance in the Kenya Certificate of Secondary Education. *Kenyatta University: Unpublished Master's Thesis*. http://doi.org/123456789/2216

Kiveu, N., & Maiyo, J. (2009). *The impact of cost sharing on internal efficiency of public secondary schools in Ndivisi division, Bungoma district.* http://doi.org/10.5897/ERR.9000357

Klatte, M., Bergström, K., & Lachmann, T. (2013). Does noise affect learning? A short review on noise effects on cognitive performance in children. *Frontiers in psychology*, *4*, 578. http://doi.org/10.3389/fpsyg.2013.00578

Klepsch, M., & Logie, L. (1982). *Children draw and tell: An introduction to the projective uses of children's human figure drawings*. Psychology Press. http://doi.org/10.1037/1076-898X.4.2.163

Knight, L. M. (2009). Mother and child sharing through drawing: Intergenerational collaborative processes for making artworks. *International Art in Early Childhood Research Journal*, *1*. http://doi.org/0003-4063-9071

Kochhar, S. K. (1990). *Methods and techniques of teaching.* Sterling Publishers Private Limited. http://doi.org/

Koh, J. H. L., Chai, C. S., Benjamin, W., & Hong, H. Y. (2015). Technological Pedagogical Content Knowledge (TPACK) and design thinking: A framework to support ICT lesson design for 21st century learning. *The Asia-Pacific Education Researcher*, *24*(3), 535-543. http://doi.org/

Kohn, A. (1996). The trouble with character education. *Yearbook-National Society for The Study of Education*, *96*, 154-162. http://doi.org/

Komba, S. C., & Mwandanji, M. (2015). Reflections on the implementation of competence-based curriculum in Tanzanian secondary schools. http://doi.org/

Koppitz, E. M. (1968). *Psychological evaluation of children's human figure drawings.* Grune & Stratton. http://doi.org/

Korir, C., Mutea, Z., & Ayodi, N. (2016). *Effect of Teachers Understanding of Use of Drawing on Pre School Children Oral Literacy Development in Bomet County-Kenya.* http://doi.org/

Kothari, C. R. (2008). Research methodology, methods and techniques (pp. 109-110). *New Delhi: New Age Inter-national (P) Limited.* http://doi.org/

Kothari, C. R., & Gang (2014). *Research methodology: Methods and techniques.*

Kress, G. (1997) *Before Writing: Rethinking the Paths to Literacy.* London: Routledge http://doi.org/

Lai, V. T. C. (2013). *The inner world of bereaved children: A qualitative approach to understanding how children from three to seven-years-old experience the death of a parent.* Saybrook University. http://doi.org/

Law, N. (2016). Teacher learning beyond knowledge for pedagogical innovations with ICT. In *International handbook of information technology in primary and secondary education* (pp. 425-434). Springer, Boston, MA. http://doi.org/

Lehman-Frisch, S. (2012). *Authier J. Y. Et dufaux F.,«Les enfants et la mixité sociale dans les quartiers gentrifiés à Paris, Londres et San Francisco», Dossier d'études*, (153). http://doi.org/

Lewis, D., & Greene, J. (1983). *Your child's drawings... their hidden meaning.* Hutchinson. http://doi.org/

Lieber, J., Butera, G., Hanson, M., Palmer, S., Horn, E., Czaja, C., ... & Odom, S. (2009). Factors that influence the implementation of a new preschool curriculum: Implications for professional development. *Early education and development*, *20*(3), 456-481. http://doi.org/

Light, P. H., & McEwen, F. (1987). Drawings as messages: The effect of a communication game upon production of view-specific drawings. *British Journal of Developmental Psychology, 5*, 53–59. http://doi.org/10.1111/j.2044-835X.1987.tb01041

Lippman, P. (2010). Evidence-Based Design of Elementary and Secondary Schools: A Responsive Approach to Creating Learning Environments. New York, NY: John Wiley & Sons, Inc. http://doi.org/

Liwakala, P. C. (2003). *Inclusive Schooling in Enabling Education Network (EENET)(2003) Researching our experience: a collection of writing by teachers in Mpika Zambia.* http://doi.org/

Llinares, S. (2000). Prospective teachers, future teachers: a proposal of preservice primary education in mathematics education. In *Proceedings ICMI*. http://doi.org/

Loughran, J., Berry, A., & Mulhall, P. (2012). Understanding and developing science teachers' pedagogical content knowledge, Sense Publishers. http://doi.org/

Loughran, J., Berry, A., & Mulhall, P. (2012). *Understanding and Developing Science Teachers' Pedagogical Content Knowledge* (Vol. 12). Springer Science & Business Media. http://doi.org/

Lowenfeld, B. (1965). *Non-visual Art*. University of California Extension Media Center. http://doi.org/

Lowenfeld, V., & Brittain, L. Creative and MentalGrowth, (New York: Mac-millan, 1957). *Lowenfeld3Creative and Mental Growth1957*. http://doi.org/

Lowenfeld, V., & Brittain, W.L. (1957, 1987). *Creative and mental growth*. New York: Macmillan Boston: Back Bay Books http://doi.org/

Lowenfield V., Britain W.L.(1987). *Creative and mental growth.* – New York: Macmillan publishing company, 1987. – 215 p. http://doi.org/

Luquet, G.H. (1969). *The children's drawing.* Porto: Editora do Minho. http://doi.org/

Lyster, R. (2017). *Learning and teaching languages through content: A counterbalanced approach* (Vol. 18). John Benjamins Publishing. http://doi.org/

Lyster, R. (2017). *Content-based language teaching*. Routledge. http://doi.org/

Machover, K. (1949). *Personality projection in the drawing of the human figure: A method of personality investigation*.

Mack, N. (2005). *Qualitative research methods: A data collector's field guide*.

Malchiodi, C. A. (1998). *Understanding children's drawings*. Guilford Press.

Malunga, T. (2007). *An Investigation on the use of sign language and oral language by regular teachers. Teaching Hearing impairment children* (Doctoral dissertation, unpublished master's thesis–University of Oslo–Norway).

Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. Sage publications.

Matthews, J. (2003). *Drawing and painting: Children and visual representation*. Sage.

Mawere, M. (2011). *African belief and knowledge systems: a critical perspective*. African Books Collective.

McCroskey, J. C., & Richmond, V. P. (2015). Willingness to communicate: A cognitive view. *Journal of Social Behavior and personality*, *5*(2), 19.

McLaughlin, K. A., The studyridan, M. A., Tibu, F., Fox, N. A., Zeanah, C. H., & Nelson, C. A. (2015). Causal effects of the early caregiving environment on development of stress response systems in children. *Proceedings of the National Academy of Sciences*, 201423363.

McNiff, K. (1982). Sex differences in children's art. *Journal of Education*, 271-289.

Melo-Pfeifer, S. (2017). Drawing the plurilingual self: how children portray their plurilingual resources. *International Review of Applied Linguistics in Language Teaching*, *55*(1), 41-60.

Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded from" Case Study Research in Education.".* Jossey-Bass Publishers, 350 Sansome St, San Francisco, CA 94104.

Merriam, S. B. (2015). Qualitative research: Designing, implementing, and publishing a study. In *Handbook of research on scholarly publishing and research methods* (pp. 125-140). IGI Global.

Mertens, D. M. (2005). *Quality criteria in qualitative research.* Pattons version.

Mertens, D. M. (2017). Transformative research: personal and societal. *International Journal for Transformative Research*, *4*(1), 18-24.

Metin, S., & Aral, N. (2020). The drawing development characteristics of gifted and children of normal development. *Cypriot Journal of Educational Sciences*, *15*(1), 73-84.

Mewborn, D. (2001). Teachers content knowledge, teacher education, and their effects on the preparation of elementary teachers in the United States. *Mathematics Teacher Education and Development*, *3*(1), 28-36.

Mingers, J. (2001). Combining IS research methods: towards a pluralist methodology. *Information systems research*, *12*(3), 240-259.

Mingers, J. (2010). Multi-methodology. *Wiley Encyclopedia of Operations Research and Management Science*.

Ministry of Education (2008): ECDE handbook. K.i.e government press nairobi.

Montessori, M. (1907). *House of children: a planet without schools or teachers.*

Montessori, M. (1989). *Peaceful Children, Peaceful World: The Challenge of Maria Montessori*. Parent Child Press.

Moon, J. (2007). *Critical thinking: An exploration of theory and practice*. Routledge.

Morrison, J. W. (2001). Early care and education in Ghana. *Childhood Education*, *77*(4), 214-218.

Mosima, E. O., & Patrick, K. M. (2018). Socio-cultural linguistic aspect: a critical analysis of the impact of socio-cultural linguistic aspects of teacher-learner interaction on English language learning on secondary school learners in Kenya. *European Journal of Literature, Language and Linguistics Studies*.

Mueni, K. N. (1999). *A Critical Study of Methods Used to Teach History and Government in Secondary School in Kenya*. Unpublished, HD Kenyatta University.

Mugenda & Mugenda, 2007). Collected data will then be examined for completeness, comprehensibility consistency and reliability,

Mugenda, O., & Mugenda, A. G. (2003). *Research methods*. Nairobi. Accelerated Actors.

Mulder, M. (2017). Competence and the Alignment of Education and Work. In *Competence-based Vocational and Professional Education* (pp. 229-251). Springer, Cham.

Murundu, Z. O., Indoshi, F. C., & Okwara, M. O. (2010). School based factors influencing implementation of early childhood development and education curriculum. *Educational Research (ISSN: 2141-5161) Vol*, *1*(9), 382-389.

Murundu, Z. O., Okwara, M. O., & Odongo, B. C. (2014). *Role of teachers in integration of play in early childhood development and Education curriculum*.

NACECE (1999). *Guidelines for early childhood development in Kenya*. Nairobi: KIE, Kenya.

NACECE (2000). *Early childhood education.* Nairobi: East African Educational Publishers.

Nathan, M. J., & Koedinger, K. R. (2000). An investigation of teachers' beliefs of students' algebra development. *Cognition and Instruction*, *18*(2), 209-237.

National Board for Professional Teaching Standards. (NBTS). (1998). Early Childhood/Generalist Standards (Arlington, Va.: NBPTS).

National council for curriculum and assessment (NCCA) (2009). Aistear *Creatchuraclam na Luath-Oige.* The Early childhood curriculum framework http://www.ncca.biz/Aistear/pdfs/PrinciplesThemes_ENG/PrinciplesThemes_ENG.pdf

National Council for Curriculum and Assessment (NCCA). (2007). *Guidelines for Teachers of Students with General Learning Disabilities.*

National Council for Curriculum and Assessment (NCCA). (2009). *Aistear: The early childhood curriculum framework.*

National Partnership for Excellence and Accountability in Teaching (NPEAT) (2003). "Principles of Effective Professional Development," *Research Brief* (Alexandria, Va.: Association for Supervision and Curriculum Development, 2003). Vol. 1, No. 15.

Nau, D. (1995). Mixing methodologies: Can bimodal research be a viable post-positivist tool. *The qualitative report*, *2*(3), 1-5.

NCC (1989) Introducing the National Curriculum Council. York: NCC.

Ng'asike, J. T. (2004). Teachers use of play as medium for bridging preschool children's mathematical experiences. A study of Kasarani Division, Nairobi, Kenya. *Unpublished MEd Thesis, Kenyatta University*.

Ngala, F. B. (1997). *Management of teachers and its influence on pupil academic achievement. A Case Study of Primary Schools in Eldoret Municipality.* Unpublished M. Phil. Thesis. Moi University, Eldoret.

Ng'asike, J. T. (2012). Training of Science Teachers for Early Childhood and Primary Grades in Kenya. *New Zealand Journal of Teachers' Work*, *9*(1).

Nikolov, R., Shoikova, E., & Kovatcheva, E. (2014). Competence based framework for curriculum development. *Bulgaria: Za bukvite, O" pismeneh*.

Njoroge, W. (2000). Aims and objectives of physical education in schools ignored. *The People*, *28*(1), 12-13.

Noddings, N. (2002). *Educating moral people: A caring alternative to character education*. Teachers College Press, PO Box 20, Williston, VT 05495-0020 (paperback: ISBN-0-8077-4168-X, $21.95; cloth: ISBN-0-8077-4169-8, $48).

Norbury, C. F., Gooch, D., Wray, C., Baird, G., Charman, T., Simonoff, E., ...& Pickles, A. (2016). The impact of nonverbal ability on prevalence and clinical presentation of language disorder: evidence from a population study. *Journal of Child Psychology and Psychiatry*, *57*(11), 1247-1257.

Ntheketha, S. K., Mwangi, S., & Ajuoga, M (2016). *Utilization of Instruction Resources on Teaching Basic Literacy Skills in English Language in Public Pre-Schools in Wote Zone, Makueni County, Kenya*.

Nyakwara, B. (2009). *Administration and Management of ECDE Programmes.* Nairobi: London.

Odulaja, G., & Ogunwemimo, K. (1989). *Teachers Attitude Towards Biology Practical with Particular Reference to School certificate Biology practical Examinations. A case study of Lagos. B.Sc project Report, University of Lagos*.

OECD (2011), Education at a Glance 2011: OECD Indicators, OECD Publishing. http://dx.doi.org/10.1787/eag-2011-en

Ogott, G. O., & Odera, F. Y. (2014). Use of Technological Resources in the Acquisition of Language skills in Early Childhood Development and Education programmes in Gem Sub-County, Kenya. *International Journal of Academic Research in Progressive Education and Development*, *3*(4), 1-13.

Okech, J. G., & Asiachi, A. J. (1992). *Curriculum development for schools.* Educational Research and Publications.

Okelo, K. O. (2017). *Teacher Characteristics That Influence Development of Oral Language Skills Among Pre-Primary School Pupils in Nairobi City County, Kenya* 56(3), 156-205.

Okongo, R. B., Ngao, G., Rop, N. K., & Nyongesa, W. J. (2015). Effect of Availability of Teaching and Learning Resources on the Implementation of Inclusive Education in Pre-School Centers in Nyamira North Sub-County, Nyamira County, Kenya. *Journal of Education and Practice*, *6*(35), 132-141.

Okudo, A. R., & Omotuyole, C. (2014). Enhanced Learning Environment and Its Implications on The Pre-School Children's Language Performance. *European Scientific Journal*, *10*(7).

Okumbe, J. A. O. (2001). *Human resources management: An educational perspective.* Educational Development and Research Bureau.

Olaniyan, D. A., & Ojo, L. B. (2008). Challenges against implementation of introductory technology curriculum in Nigerian Junior Secondary Schools. *European Journal of Scientific Research*, *24*(1), 112-118.

O'Leary, M. (2013). *Classroom observation: A guide to the effective observation of teaching and learning.* Routledge.

Ondimu, S. M. (2018). *Teachers' Preparedness for Implementation of the Competency Based Curriculum in Private Pre-schools in Dagoretti North Sub-county, Nairobi City County* (Doctoral Dissertation, University of Nairobi).

Oni, J. (1995). Educational resources: An introduction. *Abeokuta: Gbemi Sodipo Press Limited*.

Ordonez, C. (2004, June). Vertical and horizontal percentage aggregations. In *Proceedings of the 2004 ACM SIGMOD international conference on Management of data* (pp. 866-871). ACM.

Orina, W. M. (2001). *Availability, Acquisition and Utilization of Instructional Resources for teaching Geography in selected secondary schools in Central Kisii District.* Unpublished Master of Education Thesis, Kenyatta University.

Osei, M. (2013). Illustration of self-concept through drawings: The perspective of the child in an orphanage. *International Journal of Innovative Research and Studies*, *2*, 762-779.

Oso, W. Y., & Onen, D. (2005). *A general guide to writing research proposal and report: A handbook for beginning researchers.* Kisumu, Kenya: Option Press and Publishers.

Owala, Z. M., Odongo, B., & Raburu, P. A. (2016). *Motivational factors influencing teachers job performance in pre-school centres in Kenya.*

Owoeye and Yala (2010). *School facilities and academic achievement of secondary schools agricultural science in Ekitii state. Nigeria*, www.ccsenel.org/ass Asian Siciak sciences. Vol, 7 (7). July 2011.

Packman, W., Kelley, E., Rudolph, B., Long, J., Wallace, J., Hsu, M., ... & Field, N. (2017). Projective drawings of individuals grieving the loss of a pet. *Art Therapy*, *34*(1), 29-37.

Pagello, F. (2016). Before the "Comics": On the Seriality of Graphic Narratives during the Nineteenth Century. *Belphégor. Littérature populaire et culture médiatique*, (14).

Papandreou, M. (2014). Communicating and thinking through drawing activity in early childhood. *Journal of Research in Childhood Education*, *28*(1), 85-100.

Parker, A. E., Mathis, E. T., & Kupersmidt, J. B. (2013). How is this child feeling? Preschool-aged children's ability to recognize emotion in faces and body poses. *Early Education & Development*, *24*(2), 188-211.

Patton, W. (2001). Career education: What we know, what we need to know. *Australian Journal of Career Development*, *10*(3), 13-19.

Pawlowska, D. K., Westerman, J. W., Bergman, S. M., & Huelsman, T. J. (2014). Student personality, classroom environment, and student outcomes: A person–environment fit analysis. *Learning and Individual Differences*, *36*(3), 180-193.

Pelto, P. J. (2015). What is so new about mixed methods? *Qualitative Health Research*, *25*(6), 734-745.

Perry, N. E. (1998). Young children's self-regulated learning and contexts that support it. *Journal of educational psychology*, *90*(4), 715.

Pianta, R., & Walsh, D. (2014). *High-risk children in schools: Constructing sustaining relationships*. Routledge.

Piaget,J.(1958) The growth of logical thinking from childhood to Adolescence. AMC, 10,12

Piaget, J. (1973) *The child and reality*

Pillar, A. D. (1996). *Drawing and writing as representation systems.* Porto Alegre: Medical Art.

Piller, I. (2017). *Intercultural communication: A critical introduction*. Edinburgh University Press.

Plowman, L. (2015). *Researching young children's everyday uses of technology in the family home*. Interacting with Computers, 27(1), 36-46.

Power, D., Hyde, M., & Leigh, G. (2008). Learning English from signed English: An impossible task? *American Annals of the Deaf,* 153(1), 37-47.

Quillin, K., & Thomas, S. (2015). Drawing-to-Learn: *A Framework for Using Drawings to Promote Model-Based Reasoning in Biology*. CBE life sciences education. 14. 10.1187/cbe.14-08-0128.

Ravitch, D. (2016). *The death and life of the great American school system: How testing and choice are undermining education*. Basic Books.

Rellensmann, J., Schukajlow, S., & Leopold, C. (2017). *Make a drawing. Effects of strategic knowledge, drawing accuracy, and type of drawing on students' mathematical modelling performance*. Educational Studies in Mathematics, 95(1), 53-78.

Republic of Kenya, (2007). Kenya vision 2030 Nairobi

Republic of Kenya. (2005). Sessional paper no. 1 *Policy reforms for education, training and research: Meeting the challenges of education training and research in the 21st century*. Ministry of education, Science and technology (Moest Nairobi: Moest).

Republic of Kenya (2012).Sessional paper no.14 of 2012 *Re-aligning education and training to the Constitution of kenya 2010 and vision 2030 and beyond*. Ministry of Education Science and Technology. Nairobi. Kenya

Republic of Kenya (2017) *Kenya Gazzete supplement National assembly bills* May 2017

Ring, K. (2006). Supporting young children drawing: Developing a role. *International journal of education through art*, *2*(3), 195-209.

Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *The American Economic Review,* 94(2), 247-252.

Romiszowski, A. (1974). The Selection and Use of Instructional Media Kogan Page.

Rossman and Wilson 2014) answers the question of why link qualitative and

Rossman, G.B. and Wilson, B.L. (1991), "*Numbers and words revisited: being 'shamelessly eclectic'*", *Evaluation Review*, Vol. 9 No. 5, pp. 627- 43

Sacristán, J. G. (2000). *La educación obligatoria: su sentido educativo y social* (Vol. 1). Ediciones Morata.

Sakellari, E., Lehtonen, K., Sourander, A., Kalokerinou- Anagnostopoulou, A., & Leino- Kilpi, H. (2014). Greek adolescents' views of people with mental illness through drawings: mental health education's impact. *Nursing & health sciences*, *16*(3), 358-364.

Sato, M. (2014). What is the underlying conception of teaching of the edTPA?. *Journal of Teacher Education*, *65*(5), 421-434.

Savoie, A., & St-Pierre, S. (2012). Gender-Differentiated Behaviour Traits of Elementary School Pupils in Identical Visual Arts Learning Situations. *Creative Education*, *3*(07), 1205.

Schiavio, A., & Høffding, S. (2015). Playing together without communicating? A pre-reflective and enactive account of joint musical performance. *Musicae Scientiae*, *19*(4), 366-388.

Schmidgall, S. P., Eitel, A., & Scheiter, K. (2019). Why do learners who draw perform well? Investigating the role of visualization, generation and externalization in learner-generated drawing. *Learning and Instruction*, *60*(6), 138-153.

Schneider, M. (2002). Do School Facilities Affect Academic Outcomes?.

Scrimshaw, S. C. (1990). Combining quantitative and qualitative methods in the study of intra-household resource allocation. *Rogers, BL & Schlossman NP (eds.)*.

Sedley, B. P. (2012). *His Brain Has Just Gone Haywire: The Development of Children and Young People's Concepts of Mental Illness.*

Seefeldt, C. (1995). Art--A Serious Work. *Young children*, *50*(3), 39-45.

Seligman, M., & Darling, R. B. (2017). *Ordinary families, special children: A systems approach to childhood disability*. Guilford Publications.

Serafeimidis, V., & Smithson, S. (2000). Information systems evaluation in practice: a case study of organizational change. *Journal of Information Technology*, *15*(2), 93-105.

Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard educational review*, *78*(1), 40-59.

Sherin, M. G. (2002). When teaching becomes learning. *Cognition and instruction*, *20*(2), 119-150.

Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard educational review*, *57*(1), 1-23.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational researcher*, *15*(2), 4-14.

Silva, E. (2008). Measuring Skills for the 21st Century. Education Sector Reports. *Education Sector*.

Silverman, D. (Ed.). (2016). *Qualitative research*. Sage.

Singh, A. (2014). Conducive classroom environment in schools. *International Journal of Science and Research (IJSR)*, *3*(1), 387-392.

Sinofsky, E. R., & Knirck, F. G. (1981). Choose the right color for your learning style. *Instructional Innovator*, *26*(3), 17-19.

Southcott, J., & Cosaitis, W. (2015). Drawing 'Music and Me': Children's images of musical engagement. *Australian Journal of Music Education*, *23*(2).

Standa, E. M. (1980). *Educational Technology. Its relevance to Teaching Seminar Paper.*

Stark, H. L., Snow, P. C., Eadie, P. A., & Goldfeld, S. R. (2016). Language and reading instruction in early years' classrooms: The knowledge and self-rated ability of Australian teachers. *Annals of dyslexia*, *66*(1), 28-54.

Striker, S., & Kimmel, E. (2001). *The First Anti-Coloring Book: Creative Activities for Ages 6 and Up*. Macmillan.

Stronge, J. H., Tucker, P. D., & Hindman, J. L. (2004). *Handbook for qualities of effective teachers*. Ascd.

Stump, S. L. (1997). *Secondary Mathematics Teachers' Knowledge of the Concept of Slope.*

Sturgis, C. (2017). *How competency-based education differs from the traditional system of education.*

Suskie, L. (2018). *Assessing student learning: A common sense guide*. John Wiley & Sons.

Syomwene, A. (2017). *Teacher support and school environment factors influencing children's outdoor play in early childhood curriculum in pre-schools in Kenya*. Journal of Scientific Research and Reports, 1-13.

Taguma, M., Litjens, I., Makowiecki, K., & Early, Q. M. (2013). *Quality matters in early childhood education and care Sweden.*

Tanner, B. (2011). *Threshold concepts in practice education: Perceptions of practice educators.* British Journal of Occupational Therapy, 74(9), 427-434.

Taylor, L. A., & Littleton-Kearney, M. (2011). *Concept mapping: A distinctive educational approach to foster critical thinking.* Nurse Educator, *36*(2), 84-88.

Twoli, N. W., Maundu, J. N., Muindi, D. M., Kiio, M., & Kithinji, C. T. (2007). Instructional methods in education.

UNESCO (1997). *First steps: Stories on inclusion in early childhood education*, Paris France

UNESCO Institute for Statistics. (2006). *Teachers and educational quality: Monitoring global needs for 2015* (Vol. 253). UNESCO Inst for Statistics.

UNESCO. (2010). *UNESCO science report 2010: The current status of science around the world*. United Nations Educational, Scientific and Cultural Organization.

UNESCO. (2015). Topics and Learning Objectives.

UNICEF. (2003). *The millennium development goals: They are about children.* UNICEF.

UNICEF. (2016). The State of the World's Children 2016: A fair chance for every child. *New York: UNICEF*.

Uwezo. (2016). *Are our children learning (2016)?* Uwezo Kenya sixth learning assessment report, December 2016.

Valentine, C. W. (2015). *The psychology of early childhood: A study of mental development in the first years of life*. Routledge.

Veale, A. (2005). Creative methodologies in participatory research with children. In S. Greene & D. Hogan. (Eds.), *Researching Children's Experience: Methods and Approaches* (pp.253-272). Thousand Oaks, CA: Sage.

Vince, S. (Ed.). (2016). *Effective Communication: Open Learning for Sales Professionals*. Elsevier.

von Glasersfeld, E. (1995). A constructivist Approach to Teaching. *Constructivism in education*, 3-16.

von Glasersfeld, E. (2014). Ernst von Glasersfeld. *Ernst von Glasersfeld*.

Vygotsky, L., & Cole, M (1978). *Mind in the society*, 1ˢᵗ ed Cambridge: Harvard University press.

Waithaka, E. N. (2017). Choice of the Medium of Instruction in Kenyan Preschools: Averting Xenocentrism. *Journal of Education and Practice*, *8*(9), 210-216.

Walsham, G. (1995). Interpretive case studies in IS research: nature and method. *European Journal of information systems*, *4*(2), 74-81.

Walsham, G. (2006). Doing interpretive research. *European journal of information systems*, *15*(3), 320-330.

Wambua, L. M. (1988). A Survey of Resources for Training and learning Environmental Education in Primary Teachers' Colleges in Kenya (M. Ed Thesis, Kenyatta University).

Wannarka, R., & Ruhl, K. (2008). Seating arrangements that promote positive academic and behavioural outcomes: A review of empirical research. *Support for learning*, *23*(2), 89-93.

Weaver, R (2018) Re-Conceptualizing Social Value: Applying the Capability Approach in Social Enterprise Research, *Journal of Social Entrepreneurship*

Wiley, T. G., & García, O. (2016). Language policy and planning in language education: Legacies, consequences, and possibilities. *The Modern Language Journal*, *100*(S1), 48-63.

Wilkins, D. A. (1975). Learning a language is learning to communicate. *Education and Culture*.

Williamson, P. W. (2005). Learning to teach with discussion: Investigations from novice teachers' practice.

Wilson, A. H. (1982). Cross- cultural experiential learning for teachers. *Theory into Practice*, *21*(3), 184-192.

Winner, E., & Drake, J. E. (2013). The rage to master: The decisive role of talent in the visual arts. *The complexity of greatness: Beyond talent or practice*, 333-366.

The World Bank |(2005), Expanding opportunities and building experiences for young people. A new agenda for secondary education. Washington DC: World bank.|

Wong, M. (2015). *The therapeutic use of projective drawings with children who have experienced trauma* (Doctoral dissertation, Alliant International University).

Woodhead, M. (1998). 'Quality' in Early Childhood Programmes—a contextually appropriate approach. *International Journal of Early Years Education*, *6*(1), 5-17.

Woolner, P., Hall, E., Higgins, S., McCaughey, C., & Wall, K. (2007). A sound foundation? What we know about the impact of environments on learning and the implications for Building Schools for the Future. *Oxford review of education*, *33*(1), 47-70.

Wright, M. (2007). Academic entrepreneurship in Europe. *Edward Elgar Publishing.*

Wrightson, H. (2009). Children's drawing. *Collaborative relationships Using visual images Communities of learners Children and drawing*.

Yin, R. (1984). Case study research: Design and methods *(1st ed.). Beverly Hills, CA: Sage Publishing.*

Yin, R. K. (2014). Case study research: Design and methods (applied social research methods). *Thousand Oaks, CA: Sage publications.*

## APPENDICES

### Appendix I: Questionnaire for EYE Teachers

I am a student from **MOI UNIVERSITY** currently undertaking a study entitled *"Drawing as a pedagogical tool in the acquisition of communication skills in Early Years Education in Kenya"* The respondents are Teachers of Nandi County. Kindly, fill this questionnaire with utmost sincerity. Information given was treated with utmost confidentiality.

### Instructions

1. Please respond to all items in this questionnaire
2. Put a (√) alongside the option that is most applicable to you or fill in the spaces provided
3. You do not need to write your name in this questionnaire

### Section A: Background Information

1. What is your gender?
(i) Male ☐          (ii) Female ☐

2. What is your age group?
(i) Below 25 years ☐          (ii) 26 – 30 years ☐

(iii) 31 – 35 years ☐          (iv) 36 – 40 years ☐

(v) 41 – 45 years ☐          (vi) 46 – 50 years ☐

(vii) Over 51 years ☐

3. What is your highest level of education (Professional course)?
i) KCSE ☐  ii). Proficiency in ECDE ☐

iii) Certificate in ECDE ☐          iv) Diploma in ECDE ☐

v) P1 ☐          vi) Bachelor's Degree in ECDE ☐

vi) Masters in ECDE ☐

Any other (specify) …………………..

4. Please indicate your length of teaching experience in service
i) Below 5 years ☐          (ii) 6 – 10 years ☐
(iii) 11 – 15 years ☐          (iv) 16 – 20 years ☐
(v) Over 21 years ☐
5. Any other in-service training you have done (specify)……………………………

## SECTION B: TEACHERS' PEDAGOGICAL CONTENT KNOWLEDGE ON DRAWING

Kindly read the statement and indicate the most appropriate response in your view by ticking (√) one alternative provided in the corresponding box.

**SA-Strongly Agree, A- Agree, UN- Undecided, D-Disagree, SD- Strongly Disagree**

| Teacher's pedagogical Content Knowledge on drawing | SD | D | UN | A | SA | Mean | Sd |
|---|---|---|---|---|---|---|---|
| Drawing content knowledge was part of my training in ECDE | | | | | | | |
| | | | | | | | |
| My classroom drawing decision is determined to a large extent by the depth of my pedagogical content knowledge on drawing, | | | | | | | |
| I do not prefer using drawing in my classroom activities because I am not sure if I am doing it correctly | | | | | | | |
| There is sufficient content in Creative art activity area to help learners acquire communication skills | | | | | | | |
| I interpret and give meaning to the learners drawings | | | | | | | |
| | | | | | | | |
| I prefer to use drawing to support classroom learning activities because learners enjoy drawing effortlessly | | | | | | | |
| I use the EYE curriculum design to develop the schemes of work and plan lesson drawing activities always | | | | | | | |
| Learners cannot acquire Communication skill any better with the use of drawing activities | | | | | | | |
| **Valid N** | | | | | | | |

9. a. Was your training included drawing activities and how to use the skill acquired in EYE?

b. Does your training and experience influence the decisions you make in class to draw or not to draw? Explain.

10. Is there any possibilities in using drawing in the acquisition of effective communication skills in EYE?

**SECTION C: NATURE OF THE CLASSROOM ENVIRONMENT**

Make **comment(s)** basing on your observation and the number of learners in your class the following statements concerning organization of the classroom for use of drawing activities for learner's acquisition of communication skills?

|  | Statements | Sufficient | Not sufficient | I don't know |
|---|---|---|---|---|
|  | **NATURE OF THE CLASSROOM ENVIRONMENT** |  |  |  |
| 1 | Natural Lighting |  |  |  |
| 2 | Ventilation(Quality of air) |  |  |  |
| 3 | Size of the classroom |  |  |  |
| 4 | Cleanliness |  |  |  |
| 5 | Accessibility of drawing resources |  |  |  |
| 6 | Learning Corners |  |  |  |
| 7 | Sitting arrangements |  |  |  |
| 8 | Organization of the classroom |  |  |  |
| 9 | Space within the classroom |  |  |  |
| 10 | Chalk board Position and Visibility |  |  |  |

11. Explain, how the following influence the use of drawing in the acquisition of effective communication in EYE?

  i. Classroom environment
 ii. Organization of drawing resources and
iii. Use of drawing activities in EYE

**SECTION D: USE OF DRAWING RESOURCES**

To what extent do you agree with the following statements concerning availability and use of drawing resources for acquisition of communication skills at EYE center?

**1**- Available used     **2**-Available not used, 3-Not available, 4 -I don't know

| | Statements | Used | Not used |
|---|---|---|---|
| | | **2** | **1** |
| **USE OF DRAWING RESOURCES** | | | |
| 1 | EYE Curriculum | | |
| 2 | Schemes of work | | |
| 4 | Lesson plans | | |
| 6 | Pencils/ Pens /Markers/ Crayons | | |
| 8 | Erasers | | |
| 10 | Drawing books/ papers | | |
| 11 | Charcoal | | |
| 12 | Sticks | | |

8. Mention any other not mentioned above, drawing resource that you use for drawing activities in your class for drawing activities?

.......................................................................................................................................

**SECTION E: USE OF LEARNERS DRAWINGS IN EYE.**

Kindly read the statement and indicate the most appropriate response in your view by ticking (√) one alternative from the provided **(Strongly Agreed - SA, Agree - A, Undecided- U, Disagree - D, Strongly Disagreed -SD)** in the corresponding box.

| Sn. | Statement | SA | A | U | D | SD |
|-----|-----------|----|---|---|---|----|
| 1. | Learners communicate what they know through drawing | | | | | |
| 2. | Learners enjoy drawing objects that they love within their environment and so show originality | | | | | |
| 3. | Learners' drawings does not represent things or objects in their environment | | | | | |
| 4. | Learners' drawing shows creativity in their representation | | | | | |
| 5. | Learners' understand better when using drawing | | | | | |
| 6. | Learners show originality and creativity in their drawing | | | | | |
| 7. | There is no evidence of communication skills acquisition on learners' engaged in drawing | | | | | |
| 8. | Drawing makes learners' more imaginative and expressive | | | | | |

**PART E: LEARNERS' ACQUISITION OF EFFECTIVE COMMUNICATION**
10. To what extent do you agree with the following statement concerning children's communication skills?

**SA**- Strongly Agree  **A**-Agree   **U**-Undecided  **D**-Disagree   **SD-**Strongly Disagree)

| | Statements | SA | A | U | D | SD |
|---|---|---|---|---|---|---|
| | | **5** | **4** | **3** | **2** | **1** |
| **CHILDREN'S EFFECTIVE COMMUNICATION SKILLS** | | | | | | |
| 1 | Drawing activities creates a conducive environment for learners' Oral skills development | | | | | |
| 2 | Drawing helps learners develop better listening skills | | | | | |
| 3 | Drawing activities gives learner's room to express their ideas creatively hence gaining confidence in gestural expression | | | | | |
| 4 | Drawing activities inspires learners to enjoy witting | | | | | |

10. What other effective communication skills can children acquire from drawing activities?

**Appendix II: Direct Observation**

**a. Direct Observation checklist on learners' drawings**

   i. What is the content of learners' drawings?
  ii. Does their drawing demonstrate any creativity, originality and imaginations?
 iii. What do learners use for drawing in their drawing activities?
 iv. Does learners' drawing reflect what they know and have any meaning?
  v. Are learners able to describe their drawings?

**b. Classroom Organization Observation**
Tick **(√)** against the indicated words as appropriate (1) for adequate, (2) Not adequate, (3) for I don't know. Use the remarks column for information that cannot be communicated by the symbols.

| ITEM | Observation | Adequate | Not Adequate | I don't Know |
|---|---|---|---|---|
| Classroom environment | Natural Lighting | | | |
| | Space | | | |
| | Size | | | |
| | Cleanliness | | | |
| | Accessibility | | | |
| | Learning Corners | | | |
| | Sitting arrangement | | | |
| | Ventilation | | | |
| Writing boards | Position, Visibility | | | |
| Furniture | Learner Tables | | | |
| | Learner Chairs | | | |
| | Teacher Tables | | | |
| | Teacher Chairs | | | |
| Learning activities | Teacher-Learner Interaction | | | |
| | Learner-Learner Interaction | | | |
| Learning resources | Syllabus Schemes of work Lesson plan | | | |
| | Learners' drawing Workbooks | | | |

**Appendix III: Interview Schedule for ECDE Sub County Program Officers**

**INTERVIEW ITEMS**

1. Are all EYE teachers in your Sub County ECDE trained and with experience? Yes/No. Explain

2. Have you organized any in-service training in readiness for teaching creative art-drawing activities?

3. How do teachers in your sub county, obtain teaching/learning resources for drawing?

4. How often do you monitor and supervise EYE activities in schools within your sub-county

**Appendix IV: Interview Schedule for EYE Teachers**

1. What does drawing mean?

2. Is there sufficient content in drawing activities that can help learners acquire communication skills?

3. What challenges do you face in attempting to enhance communication skill acquisition EYE?

4. Which communication skill areas would you suggest that drawing may enhance? Arrange them from most influenced to the least.

5. What does classroom environment mean?

6. Does classroom environment play a role in Communication skill acquisition?

7. What challenges do you face within the classroom environment on communication skill acquisition?

8. What suggestion would you give to overcome communication skill challenges in a classroom environment?

9. Do you prepare the schemes of work and lesson plans for drawing activities and do you use them in teaching? Explain.

10. What do 4-year-old learners choose to communicate?

11. Do learners have the pleasure in engaging in drawing activities? And do their activities show any Creativity and Imaginations? Explain

**12.** What challenges do 4 year old learners often face in communication?

**13.** What suggestion would you give to overcome communication challenges among 4 year old learner?

**Appendix V: Formula and Sample Size Table**

   **a. Yamane formula**

$$\left(n = \frac{N}{1 + Ne^2}\right).$$

                        Where;
                              n= the sample size
                              N = the size of population
                              e= the error of 5 percent

   **b. Yamane Size of Population and Sample Size Table**

| Size of Population | Sample Size (n) for Precision (e) of: | | | |
|---|---|---|---|---|
| | ±3% | ±5% | ±7% | ±10% |
| 500 | a | 222 | 145 | 83 |
| 600 | a | 240 | 152 | 86 |
| 700 | a | 255 | 158 | 88 |
| 800 | a | 267 | 163 | 89 |
| 900 | a | 277 | 166 | 90 |
| 1,000 | a | 286 | 169 | 91 |
| 2,000 | 714 | 333 | 185 | 95 |
| 3,000 | 811 | 353 | 191 | 97 |
| 4,000 | 870 | 364 | 194 | 98 |
| 5,000 | 909 | 370 | 196 | 98 |
| 6,000 | 938 | 375 | 197 | 98 |
| 7,000 | 959 | 378 | 198 | 99 |
| 8,000 | 976 | 381 | 199 | 99 |
| 9,000 | 989 | 383 | 200 | 99 |
| 10,000 | 1,000 | 385 | 200 | 99 |
| 15,000 | 1,034 | 390 | 201 | 99 |
| 20,000 | 1,053 | 392 | 204 | 100 |
| 25,000 | 1,064 | 394 | 204 | 100 |
| 50,000 | 1,087 | 397 | 204 | 100 |
| 100,000 | 1,099 | 398 | 204 | 100 |
| >100,000 | 1,111 | 400 | 204 | 100 |
| a = Assumption of normal population is poor (Yamane, 1967). The entire population should be sampled. | | | | |

**Appendix VI: Picture plate Sampled school infrastructure**



**Picture plate 10: School infrastructure: Outside environment**
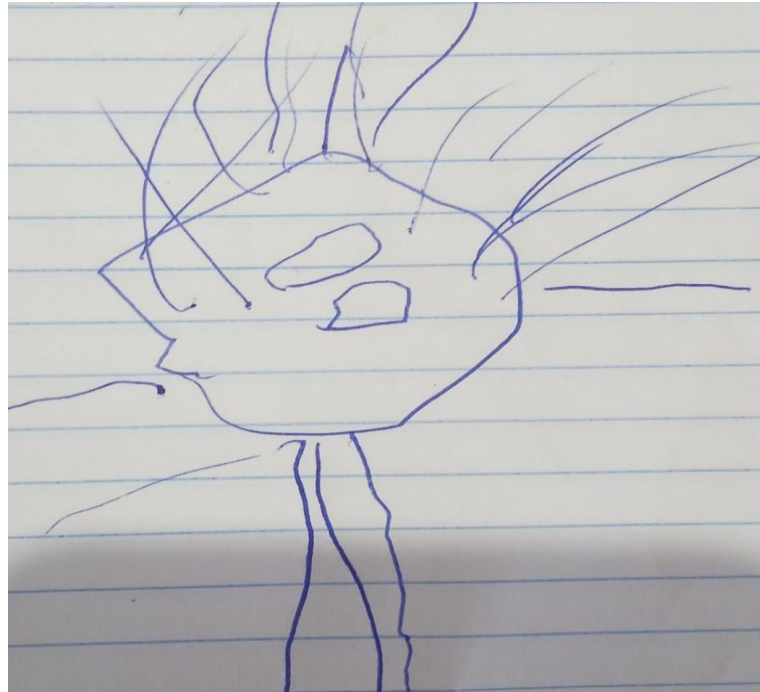


**Picture plate 11. School infrastructure: Inside environment**

**Picture plate 12. School infrastructure:: Modern structure Outside environment**



**Picture plate 13. School infrastructure: Modern structure inside environment**

**Appendix VII: Picture plate on learners drawing content**



**Picture plate 14: A picture of a girl Chebet with long braided hair. Drawn by a 4 year old Boy Neo**



**Picture plate 15: Picture of a boy, sheep, hut and house drawn by a 5 1/2 years old girl- Christine**

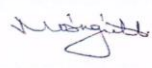**Picture plate 16: Picture depicts a cow, father, boy and an insect. 4 1/2 year old Jonathan.**

**Appendix VIII: Map of Nandi County**
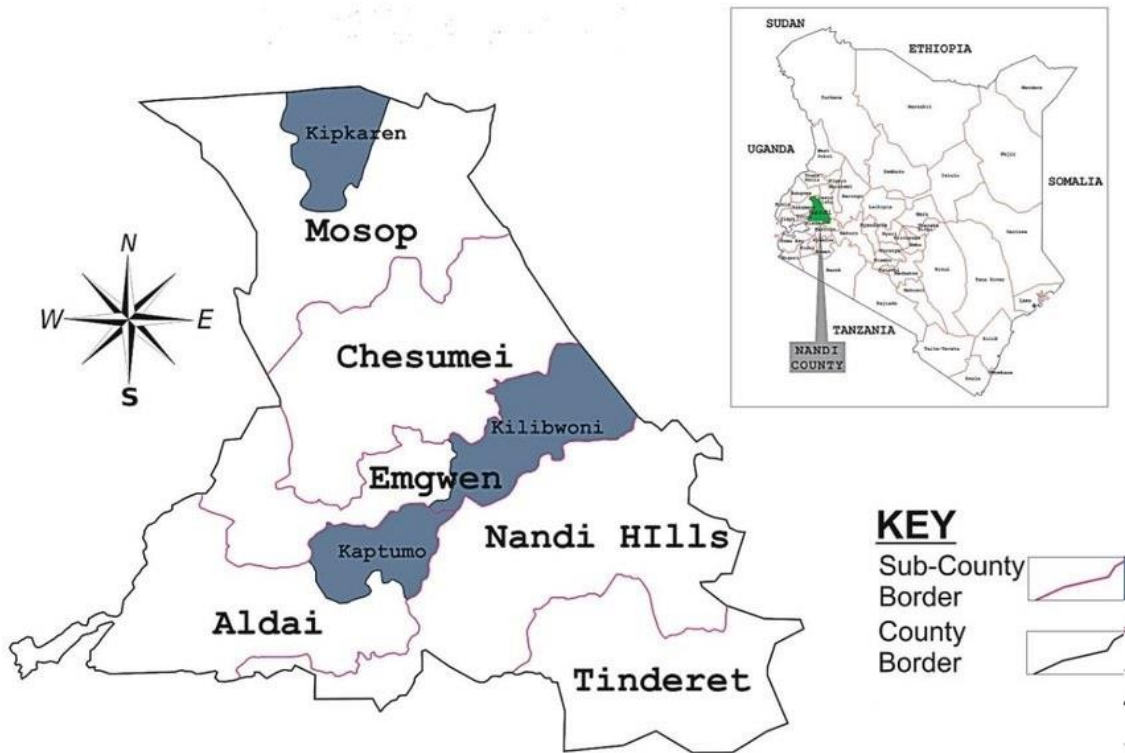
## Appendix IX: Map of Kenya
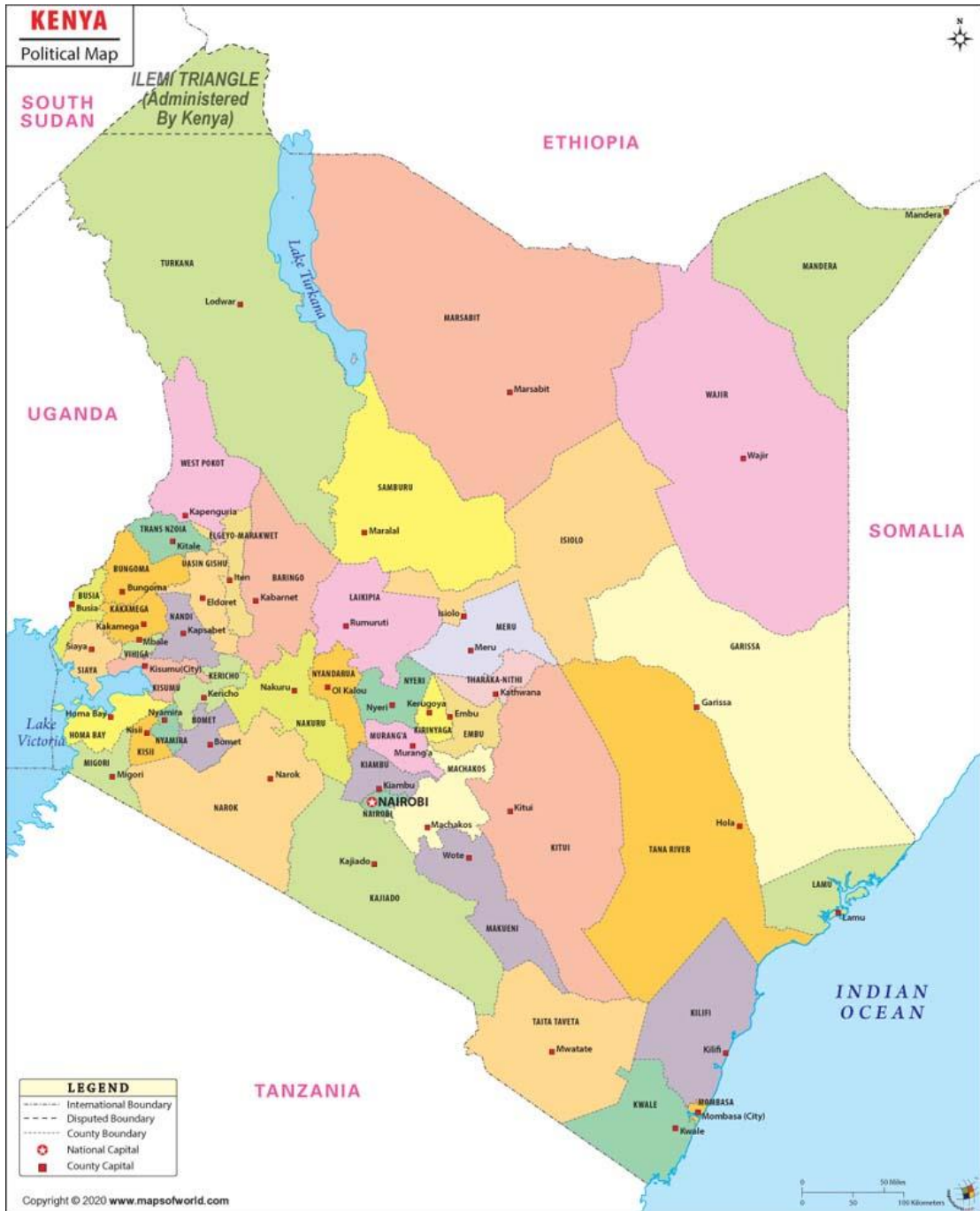
**Appendix X: Research License**



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