

**IMPLEMENTATION OF THE KENYA PRE-PRIMARY EDUCATION POLICY
GUIDELINES AS A PREDICTOR OF ACQUISITION OF BASIC CORE
COMPETENCIES AMONG PRE-PRIMARY LEARNERS IN KISII COUNTY, KENYA**

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DECLARATION AND APPROVAL

DECLARATION

This thesis is my original work and has not been presented for an award of a degree in any other University.

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ABSTRACT

The significance of policy guidelines in informing practice of any programme cannot be overemphasized. How effectively this policy is implemented has a bearing on the quality of teaching and learning and eventual acquisition of skills. Despite the National Pre-Primary Education Policy Standard Guidelines being in place from 2018, there is still an outcry over low achievement in terms of core competencies. The purpose of this study was to assess the implementation of the Kenya pre-primary education policy guidelines as a predictor of acquisition of basic core competencies among pre-primary learners in Kisii county, Kenya. The study objectives were to; establish the relationship between pre-primary centres' implementation of the Policy Guidelines on the provision of infrastructural facilities and the acquisition of basic core competencies among pre-primary learners, establish how implementation of policy guidelines on infrastructure affect acquisition of core competencies among pre-schoolers, determine the extent the implementation Service Providers Suitability pre-primary policy guidelines predicts the acquisition of basic core competencies among pre-primary learners, examine the influence of pre-primary centres' implementation of the pre-primary Policy Guidelines on food, health and safety on the acquisition of basic core competencies among pre-primary learners and find out the relationship between pre-primary centres' implementation of the Policy Guidelines on teacher child ratio and the acquisition of basic core competencies among pre-primary learners. The study was guided by mixed research design with qualitative and quantitative methodologies and anchored on Bronfenbrenner's bio ecological systems theory (1979). The study target population consisted of 37 primary head teachers and 111 pre-primary teachers, one Quality Assurance Standard Officer of Kisii Central Sub- County. Census approach was used to include all the targeted respondents in the study. The face, construct, and content validity of the instruments was determined through the expert judgement of university supervisors. Reliability of the research instruments was determined by test-retest method and a reliability coefficient of 0.734 was reported. Questionnaires, interview schedules, and document analysis was administered to collect data. Quantitative data was analysed using descriptive statistics such as frequencies and percentages and inferential statistics such as Pearson correlation coefficient. Qualitative data was analysed using thematic analysis. The study found that most of the ECDE centers in Kisii Central Sub- County had not fully implemented the national pre-primary education policy guidelines of 2018 because majority of them still had poor ECDE infrastructural facilities, including lack of spacious and well-tendered classrooms, playground, toilets, and furniture. However, most of the service providers such as ECDE teachers, head teachers and centre managers were well trained to administratively take care of the learners. Most of the ECDE centres did not have properly structured food, health and safety systems. Lastly, most of the ECDE centres were understaffed hence the teacher-child ratio was still a big problem in most of the centres. The Ministry of Education in collaboration with the parents and other education stakeholders should ensure that ECDE infrastructural facilities, including spacious and well-tendered classrooms, playgrounds, toilets, and furniture are available in adequate amount and also in good condition. They should also ensure adequate funding to the ECDE centers to facilitate optimal implementation of the national pre-primary education policy guideline of 2018. The ministry of education in the county governments should hire more trained ECDE teachers to limit the teacher-child ratio and encourage good learning among children. This will also encourage good teacher child contact and conform with the teacher child ratio policy and guidelines in pre-primary schools.

DEDICATION

I dedicate this research to my parents John Onchiri Makori, Joyce Kwamboka Onchiri.

My husband Joel Oirere Mbata, my Children Lawreen Kwamboka and Precious Nyanchoka.

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ABBREVIATIONS AND ACRONYMS

CPE	: Certificate of Primary Education
DICECE	: Sub-county Centre for Early Childhood Education
DEO	: Sub-county Education Officer Early
ECD	: Early Childhood Development
ECDE	: Early Childhood Development and Education
GOK	: Government of Kenya
KACE	: Kenya Advanced Certificate of Education.
KCPE	: Kenya Certificate of Primary Education
KCSE	: Kenya Certificate of Secondary Education
SPSS	: Statistical Packages for Social Sciences
KICD	: Kenya Institute of Curriculum Development

CHAPTER ONE: INTRODUCTION

This chapter presents information on background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations of the study, scope of the study, assumptions of the study, theoretical framework, and operational definition of terms.

1.1 Background to the study

Globally, many countries recognize Early Childhood Development and Education as an important pillar for accelerating the attainment of Education For All (EFA) and the Sustainable Development Goals (UNESCO, 2014). To ensure quality Education and learning environment during a child's formative years, EFA's first goal stipulates that it is the responsibility of every Government to expand and enhance comprehensive Early Childhood Education. To achieve this in the 21st century, many developing and developed nations have been developing and implementing policies that are perceived to improve the state of early childhood education in various countries (Kang'ethe, Wakahiu & Michael, 2015). This has galvanized many countries, especially in sub-Saharan Africa (SSA), into confronting their historically low access to quality early childhood education which is perceived to hinder children's acquisition of basic completeness (Murunga, 2015). However, the 2014 UNESCO report indicate that the quality and management of preschool education is not satisfactory in many countries in sub-Saharan Africa counties, Kenya inclusive.

Despite the challenges facing Early Childhood Education in many parts of the world, the early years of a child's life are globally accepted as the most critical years for the lifelong development of a child (Kang'ethe, Wakahiu & Michael, 2015). In this regard, there is an evidence of a positive correlation between a child's quality of early childhood nurturing, health, environment, learning and future holistic development and academic achievement in subsequent grades in primary, secondary schools and colleges (Hungu & Ngware, 2017). This fact has been emphasized by most founders of Early Childhood Development and Education (ECDE), especially Johann Froebel, Heinrich Pestalozzi and John Dewey among others who consistently indicated that early childhood is a crucial stage of life in

terms of a child's physical, intellectual, emotional and social development which led to acquisition of core competencies (Murunga, 2015).

Core competences are abilities which empower individual learner to do class tasks efficiently, accurately as well as successfully in a specific subject area as a result of possessing of a given amount of knowledge and skills that can be evaluated (Kim, 2015). Possession of competencies helps learners to be confident, independent and self-motivated with the knowledge, skills and values which enable one to be successful in school as well as in life (Zulu, 2015). To ensure this, most countries have in place a Competency Based Curriculum (CBC) (Kim, 2015). The Competency-based curriculum's instructional implications require a move from measuring a given set of learning content to measuring each learning outcome (Rutayuga, 2014). To achieve this, learners should be offered with appropriate learning experiences in order for them to develop the required competencies as stipulated in various policies as developed in various countries (Galvao, et al., 2017).

The United States of America (USA), the United Kingdom, Australia, Germany (Mulenga & Kabombwe, 2019), Canada (Charles et al., 2016), Ukraine (Zaytseva, 2016), Finland and Scotland (Frost, Worthen, Gentz, 2015) and Netherlands (Rutayuga, 2012) adopted the competency-based curriculum. In Africa, the CBC competency-based curriculum has been adopted in Malawi, Ghana, Ethiopia (Okoye & Isaac, 2015), Rwanda, South Africa, Zambia, Tanzania and Kenya (Mulenga & Kabombwe, 2019).

In the USA, the country has had for many years a strong tradition and well-established policies in the area of ECDE development (UNESCO, 2014). Hence to ensure quality ECE programmes implement the national pre-primary policy guideline, the country has devoted substantial proportions of its resources to the expansion of pre-primary Education in recent years. However, according to a UNESCO report of 2014, the government's efforts have not been impressive given the challenges experienced in the country that include limited technical/ human resource capacity which has led to delays in meeting the core educational targets of ensuring young children acquire basic literary competencies. Further in the USA, the country lags behind other countries in access and quality of early childhood Education (Feldman, 2015). In addition, the country is among developed nations with a large preschool education quality access gap with only 69% of 4-year-old children enrolled and accessing quality early childhood education (Herman,

Sasha & Scott, 2013). Nevertheless, the United Kingdom outperformed the United States by having 97 percent of its 4-year-olds in preschool. At the same note, the United States has under invested in preschool education compared to other developed countries. Public and private spending on preschool education in the United States amounts to only 0.4 percent of our GDP, while Denmark, Spain, and Israel each spend at least 0.9 percent (Feldman, 2015).

Despite the rapid economic development in China and a well-developed pre-primary national policy over recent years, the provision of Early Childhood Education in the country remains a major challenge (Woldehanna, 2016). The gross enrolment and access to quality education for those children aged 3–6 was only 50.9% in 2010, a figure which was not only far lower than the enrolment in developed countries, but was also lower than many developing countries in Latin America and the Caribbean (Bradley, 2015). In addition, the number of public service programs aimed at early childhood education has been reduced dramatically over the past 20 years due to dramatic reforms to the economic system in the country. For example, because of the economic reform of public working units, many early childhood programs which used to be supported by public working units were either closed down, or integrated into other programs, some of which even having been changed to private service providers (Zhou, 2011)

Despite the fact that children's access to basic education is essential in reducing inequality and breaking the poverty cycle among disadvantaged families, inequality in access to quality Early Childhood Education has several faces in Morocco and reflects significant inequality gaps between the rich and disadvantaged families (World Bank, 2017). Access to pre-school education remains a luxury to many disadvantaged Moroccan children. Quality pre-schools are mainly developed in urban areas and on the initiative of the private sector. Further, according to 2017 world bank report on preschool children's access to preschool education in Morocco, in 2015-2016, only 43% of Moroccan children aged 4-5 were enrolled and accessed quality preschool education and only 27.9% in rural areas that accessed preschool Education.

In every modern society it is believed that education is the key to national development and there is a need to maintain every level of education especially the pre-primary stage, because it is the bedrock upon which all other educational levels build (Nkechi, 2015). Once a child misses that early stage it is usually difficult for the learner to get back to the

basics. Pre-primary education is a common practice in most societies; they make provision for early childhood education programs of various types for children below the official school age (usually 6 years) mainly to prepare them for the rigors of primary education and beyond (Nkechi, 2015).

In Nigeria, the implementation of the pre-primary National Policy has faced a number of challenges. One major problem is that there are many ill-equipped, substandard pre-primary schools scattered all over the country. This is as a result of lack of supervision and inspection to ensure that standard and quality are maintained. Secondly, there is no provision in teacher education programs for specialization in early childhood education (Nkechi, 2015). Hence, the implementation of early childhood education (ECE) in Nigeria has experienced severe problems whereby many children complete their early education without acquiring some core literacy competencies despite the federal government's commitment to education for all (EFA) and universal basic education (UBE) (Alase, 2017). Further in Nigeria, the policymakers in 2004 passed into law an undertaking to address the issues of the unsuccessfulness of implementation of the set agenda of the Millennium Development Goals (Opoh, Okou & Ikang, 2015). Nonetheless, these educational programs were later abandoned due to ineffectiveness in their implementation and sustainability (Oladimeji, 2021).

In Uganda there exist gaps in standardization of the ECD services. Most of the Pre-schools countrywide are neither licensed nor registered with infrequent supervision and assessment by the inspectorate. Most District Inspectors of Schools did not have mandate to oversee these institutions (EJuu, 2012). In addition the training of nursery school teachers and caregivers was not streamlined, most of the training institutions were private, with each institution offering training following its own curriculum, different entry requirements for trainees; and, certificates offered were not accredited to any recognized body (EJuu, 2012). There is an undesirable trend with regard to the content and quality of the curriculum, teaching methods, facilities, entry age to primary one and quality of teachers and their training programs (MOEST, 2008).

To address the problems inherent in preschool education in Kenya, the Constitution of Kenya (2010) establishes a system of governance where by pre-school education and

administration become a devolved functions of the county governments. However with the devolution of ECE to county governments, there are still challenges in the implementation of pre-primary national policy guidelines. Currently there are disparities in the 47 counties on their priorities related to the Implementation of Early childhood education policy guidelines whereby there are great disparities in provision of infrastructural facilities, teachers, Service Providers Suitability, food, health and safety (Odundo, 2013). This has resulted in diversity of practices by various county governments and stakeholders compromising the quality of service and education offered by ECDE centres (Wangila, 2017).

Kenya's Vision 2030 blueprint for development was formed to ensure that learners at all levels acquire competencies to meet the human resource aspirations (Republic of Kenya, 2012). This made the Basic Education Curriculum Framework (BECF) to adopt the Competency Based Curriculum (KICD, 2017; RoK, 2017a). The Framework provides opportunities for schools to empower parents to contribute to their children's learning outcomes (UNESCO, 2017). Sessional Paper No. 1 of 2019 on a Policy Framework for Reforming Education and Training for Sustainable Development in Kenya support parental engagement in the learning of their children and this parental engagement is a critical component in the implementation of the competency-based curriculum (RoK, 2019). The desired core competencies to be developed so that all Kenyans can thrive in the 21st century are oral, numeracy, reading and social skills (RoK 2017).

In Kisii County, the percentage of class three pupils who could read and do class one numeracy levels sums were 68.7% while class three pupils who could read a Kiswahili paragraph were 59.2% and 61.4% in 2011 and 2012 respectively, the class pupils who could read a paragraph were 53.5% and 51.5% in 2011 and 2012 respectively and, lastly, class three who could do subtraction were 73.1% and 54.9% in 2011 and 2012 respectively (Uwezo, 2012). Still in Kisii County, class three pupils in the rural areas who could do class two work were 27.4%, while class three pupils who could do class two work in the urban were 29.2% and it was only 64.2% of pupils aged between 6 and 16 years who were able to do every day mathematics (Uwezo, 2016). These results have remained stagnant over the years. This raises concern on the quality of pre-primary education offered in Kisii County.

In spite of the global worrying trends of preschool children's access to early childhood education, the first five years of a child play a critical role in laying a solid foundation for life, as brain development is rapid and responsive to early experiences and learning environments (Hungu and Ngware 2017). Despite the benefits associated with participation in ECDE programs, the guarantee of access to quality ECDE services for all children in Kenya is yet to be realized. Nevertheless, improving the quality and management of Early Childhood Education in Kenya (ECDE) and especially Kisii County is critical in the achievement of broader goals in education and development.

Furthermore, a recent research by Ayaga (2018) in Kisii County indicates that 70.1% of the ECDE centres did not have enough qualified teachers. In addition, despite of the fact that play is an integral part of preschool learning only 28.5% of the school had enough playground for the pupils. In addition, head teachers identified the challenge of meagre payment of preschool teachers and lack of physical facilities as impediments to child learning and development. Additionally, Omboga (2018) study at Kisii Central Sub-County found out that there was low access to quality education and children's holistic development, the physical and social and emotional skills of pre-school children were not as well developed as their academic skills. It means that the pre-schoolers in Kisii have relatively low holistic development levels. The implication is that teachers are more concerned with the development of academic competencies than with the social-emotional development and most particularly holistic development. This scenario, point out the necessity of conducting research to unearth how ECDE policy is being implemented in Kisii Central Sub-County. Figure 1 shows a worrying trend on children s achievement Kisii Central Sub-County

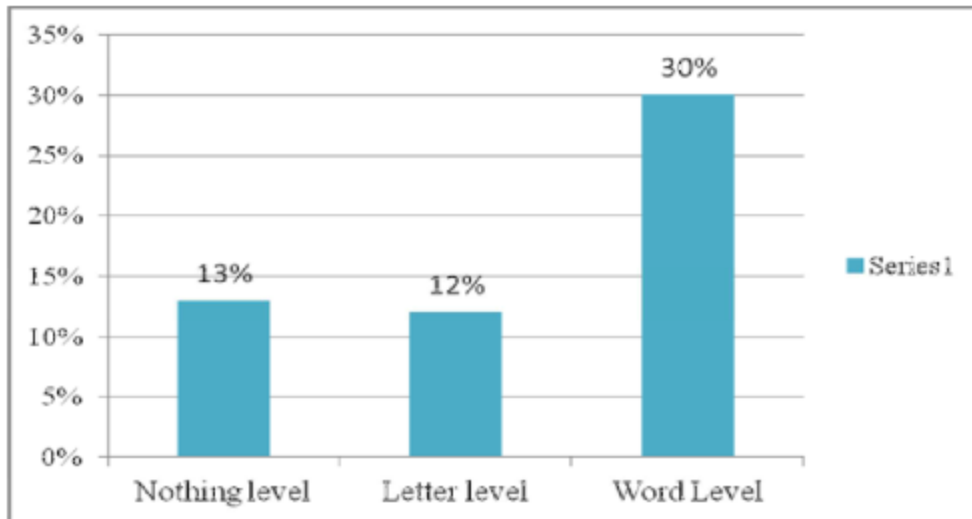


Figure 1: Reading Levels among pre-primary pupils in Kisii Central Sub-County (Source: Obunga, 2015)

. The reading achievements are too low that is 13% on nothing level, 12%, at letter level and 30% at word level. The poor academic achievement may imply very weak policy implementation in ECDE. It can be observed that about a quarter of children are at the level of not reading at all and at letter level. This necessitated the research to assess the extent the Kenyan pre-primary Education Policy Guidelines implementation predicts the acquisition of basic core competencies among pre-primary learners in Kisii Central Sub-County.

1.2 Statement of the Problem

The levels of awareness on the importance and availability of ECDE services in Kenya is commendable. The fact that the government has developed National Pre-Primary Education Policy of 2018 is a clear sign of the commitment of the government to ensure quality and relevance of the ECDE services. In fact, currently many service providers are interested in establishing ECDE centres to take care of Kenya's children hence need to assess the standards. Although the National Pre-Primary Education Policy Standard Guidelines of 2018 stipulates that all services meet quality standards, studies show that curriculum and other services are not effectively implemented in preschool hence most children join grade one before acquiring basic core competencies. It is also apparently

clear that the practice of ECDE services is almost a contradiction from the policy in relation to specific policy issues. Furthermore, the outcry over low achievement and satisfaction levels is a recent concern. In fact, children have low access to quality early childhood education and children's holistic development, the physical, social and emotional skills of pre-school children are not as well developed as their academic skills among pre-schoolers in Kisii.

With regard to Education standards of any country, the implementation on national pre-primary policy guideline and pre-primary children's acquisition of core competencies have far reaching consequences that makes it imperative to be clear about the current worrying trends of low academic achievement among pre-primary children and acquisition of basic core competencies in Kisii County. While there is a wealth of research and literature available on pre-primary children learning and factors perceived to influence learning at preprimary school, there are still areas of emphases in which we have limited knowledge. There is limited amount of research and literature situated in the Kenyan context and exploring pre-primary children acquisition of core competencies as stipulated in the Kenyan CBC curriculum design and the extent the Kenyan policy guidelines are implemented at various pre-primary centres. Hence the current study sought to assess the extent the Kenyan pre-primary Education Policy Guidelines implementation predicts the acquisition of basic core competencies among pre-primary learners in Kisii Central Sub-County.

1.3 Purpose of the Study

The study sought to assess the extent to which the Kenyan pre-primary Education Policy Guidelines implementation predicts the acquisition of basic core competencies among pre-primary learners in Kisii Central Sub-County.

1.4 Objectives of the Study

The study was guided by the following objectives:

- i. Establish the relationship between pre-primary centres' implementation of the Policy Guidelines on the provision of infrastructural facilities and the acquisition of basic core competencies among pre-primary learners.

- ii. Establish how implementation of policy guidelines on infrastructure affect acquisition of core competencies among pre-schoolers?
- iii. Determine the extent the implementation Service Providers Suitability pre-primary policy guidelines predicts the acquisition of basic core competencies among pre-primary learners.
- iv. Examine the influence of pre-primary centres' implementation of the pre-primary Policy Guidelines on food, health and safety on the acquisition of basic core competencies among pre-primary learners.
- v. Find out the relationship between pre-primary centres' implementation of the Policy Guidelines on teacher child ratio and the acquisition of basic core competencies among pre-primary learners.

1.5 Research Questions

The following specific questions formed as a guide to the study:

- i. What is the relationship between pre-primary centres' implementation of the Policy Guidelines on the provision of infrastructural facilities and the acquisition of basic core competencies among pre-primary learners?
- ii. To what extent does the implementation Service Providers Suitability at pre-primary schools predicts the acquisition of basic core competencies among pre-primary learners?
- iii. How does pre-primary centres' implementation of the Policy Guidelines on food, health and safety influence the acquisition of basic core competencies among pre-primary learners?
- iv. What is the relationship between pre-primary centres' implementation of the Policy Guidelines on teacher child ratio and the acquisition of basic core competencies among pre-primary learners?

1.6 Significance of the Study

Teachers may gain understanding of implementation of ECDE policy as it inform policy implementation in preschools. Teachers play an important role in education system, more often than not, they are a salient voice to parents and communities hence may identify and mobilize suitable human and material resources for construction and furnishing as well as development of play and learning materials. The ECDE children stand to benefit since the policies and practice are in tandem to set guidelines. The transformation of

society would not be sufficiently realised if the ECDE sector appears to be forgotten; hence national development such as the vision 2030 remains a dream

The findings of study may also be significant as to curriculum policy developers such as KICD, through providing them with the insights on how to review ECD policy so as to address issues in ECD standards among the 47 counties in terms of the quality of teachers, curricular, and instructional materials and methods of delivery.

The study findings may also benefit future scholars, through offering literature materials to future researcher who would want to fill the gaps left in the present study.

1.7 Limitations of the Study

Study was limited by unwillingness of some respondents to give full information due to suspicion of some nature or fear of victimization. The researcher assured the respondents that the study was purely academic and they were guaranteed confidentiality in handling of their information. In addition, the study was also limited by poor roads. The researcher used motor bikes and reschedules the date when the schools are not accessible due to bad weather. The study is also limited to only one region in Kenya. Hence its findings cannot be generalised for other areas in Kenya. However, the researcher recommends the study to be replicated in other areas before the generalization and deduction is made.

1.8 Scope of the Study

The study was carried out to evaluate the implementation of National Pre-Primary Education Policy of 2018 with a focus on infrastructure; personnel suitability; food, health and safety; and teacher-child ratio and their effects on pre-primary children's acquisition of core competencies. The study was carried out in selected public pre-schools in Kisii Central Sub-County. The study involved the use of questionnaires, Interview schedules and Document analysis. The study was a mixed methods research with a focus on embedded research design. The target population of the study was 37 primary head teachers, 111 preschool teachers teaching in public preschool, 1 County Director of Early Childhood and 2 Quality Assurance Officers in Kisii Central sub-county.

1.9 Assumptions of the Study

The study had the following assumptions;

- Pre-primary teachers implement similar practices, which are coherent and aligned to the set policy framework. This facilitates provision of quality ECD services

- Study assumes that lack of policy to guide critical issues relevant to child development may be hampered.
- All respondents gave honest and accurate responses.
- That all contacted potential participants agreed to be included in the study.

1.10 Theoretical Framework

This study was guided by Bronfenbrenner's bioecological systems theory (1979)

1.10.1 Bronfenbrenner's bioecological systems theory

Early years of learning and engagement is best investigated and understood through the lens of Bronfenbrenner's bioecological human development theory, which describes human development process in terms of complex systematic interactions between humans and their environment (Bronfenbrenner & Morris, 2006). According to this model, human development is highly complex, and it is the product of numerous interactions among people, Process, Context, and Time (Bronfenbrenner, 1994).

Bronfenbrenner proposed that a developing child is surrounded by layers of relationships, like a set of nested Russian dolls (Rosa & Tudge, 2013; McInerney, 2014). In Bronfenbrenner's ecological system theory, the ecological environment is portrayed as a nested arrangement of structures, each contained within the next. Bronfenbrenner emphasised the aspects of context, which included the individual in the centre, and four popular concepts called microsystem, mesosystem, exosystem, and macrosystem. In this model, each system operates at a greater spatial distance, with different forces of magnitude of influence on the developing individual (Bronfenbrenner, 1994; McInerney, 2014).

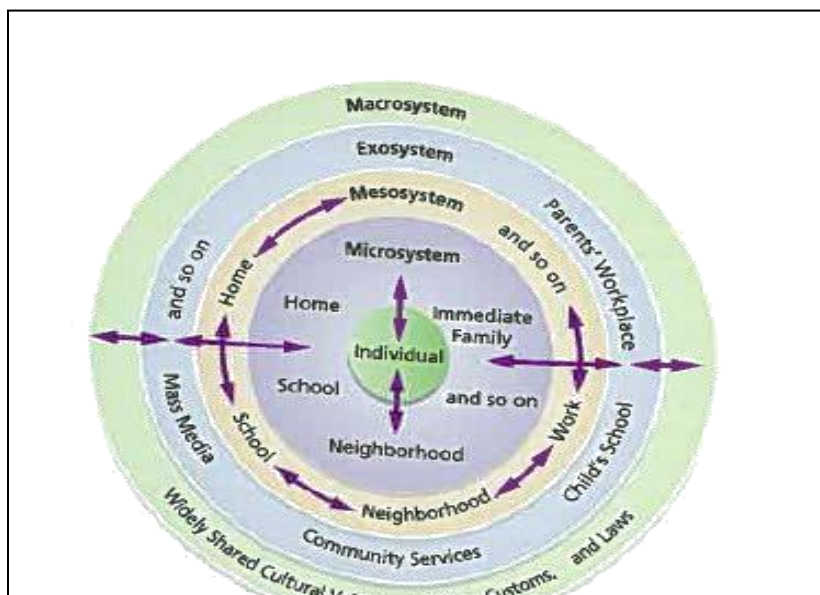


Figure 2. The five systems in human development

(Source: Adapted from McInerney (2014)).

An individual interacts directly with the microsystems, which consist of daily activities, social roles, and interpersonal relations in children's lives, such as interactions with parents, friends, and teachers. Relationships in a microsystem are bi-directional and mutualistic, and the person's reaction is influenced by how they are treated by others, and vice versa. The microsystem is the most interactive and influential level of the ecological systems theory (Bronfenbrenner, 1994).

In the ecosystem, the interactions and associations of the child take place between two or more settings, such as the family and the school, or the family and the peer group. There are cross-relationships and lateral connections between these small settings. An ecosystem is a web of microsystems where the interactions may conflict with or alternatively encourage various developments. For example, a child may be experiencing difficulties interacting with family members at home and may have a negatively interacting microsystem. This is balanced by positive peer group interaction at school. Thus, development results from the interactions between complex sets of microsystems. These interactions have both positive and negative impacts on the individual (Bronfenbrenner, 1994; Leonard, 2011).

The exosystem is the next level, the exosystem consists of the linkages and processes that take place between two or more settings, such as the parents' workplace, the child's school, and community services. These settings are external to the individual but influence, delimit or determine development. These structures are the major institutions of society that are deliberately structured, that evolve at the local level and influence the developing person. Bronfenbrenner suggests that three exosystems are likely to affect the development of children and youth indirectly. These are the school and the peer group, the parents' workplace, family social networks and neighbourhood-community contexts (Bronfenbrenner, 1994).

The fourth level is the macrosystem, the macrosystem is the wider sociocultural environment that includes the micro, meso, and exosystems. The macrosystem includes the economy; cultural values and beliefs; lifestyles; material resources; political systems and laws with which the child interacts indirectly, and the macrosystem can have a significant impact on development as the child gets older (Bronfenbrenner, 1994, Leonard, 2011; McInerney, 2014).

The final stage of Bronfenbrenner's ecological systems theory is the chronosystem. The chronosystem is composed of the temporal (time) and spatial (space) dimensions in which Bronfenbrenner's other four (micro, meso, exo and macro) levels of the bioecological systems theory operate. Time determines development, and many dimensions and characteristics of time in space can have a deep effect on development. For example, as children develop today, changing technology and communication through technological devices and social networks, shape the nature, interactions, and impacts of the ecological systems on their development (Leonard, 2011; McInerney, 2014).

The development of human behaviour and acquisition of knowledge and skill depends on reciprocal interactions between people and symbols in the immediate environment that are known as 'proximal process' (Bronfenbrenner, 1994). Cognitive and other aspects of development occur due to the effects of 'mechanisms of organism-environment interaction', the 'proximal processes' (Bronfenbrenner & Ceci, 1994). The effective proximal processes underpin the bioecological theory and explain outcomes such as the realisation and development of individual potentials for different perceptions and responses, and acquiring knowledge and skills. The model proposes that 'when proximal processes are weak, genetically based potentials for effective psychological functioning remain relatively unrealised but they become actualised to a progressively greater extent as proximal processes increase in magnitude' (Bronfenbrenner & Ceci, 1994). Examples of proximal process are the active interactions between parents and children, children and teachers at school, and peer interactions. The form, content and direction of the proximal processes that affect development of the individual vary, according to the characteristics of the developing person, the environment, and the nature of the developmental outcomes (Bronfenbrenner & Evans, 2000). According to the bio ecological systems theory, individuals are 'developing within a complex system of relationships affected by

multiple levels of the surrounding environment' (Berk, 2006). In the present research the researcher will utilise Bronfenbrenner's approach of the proximal processes that look at process-person-context development. The Researcher based children's development on early childhood policy and children relationship to their environment by adopting Bronfenbrenner's theory.

1.11 Conceptual Framework

Conceptual framework is schematic illustration which demonstrates the variables included in the research. The arrows and lines in a conceptual framework are placed and connected between boxes to demonstrate the association between the independent and dependent variables (Oso & Onen 2009).

Implementation of Pre-Primary Policy

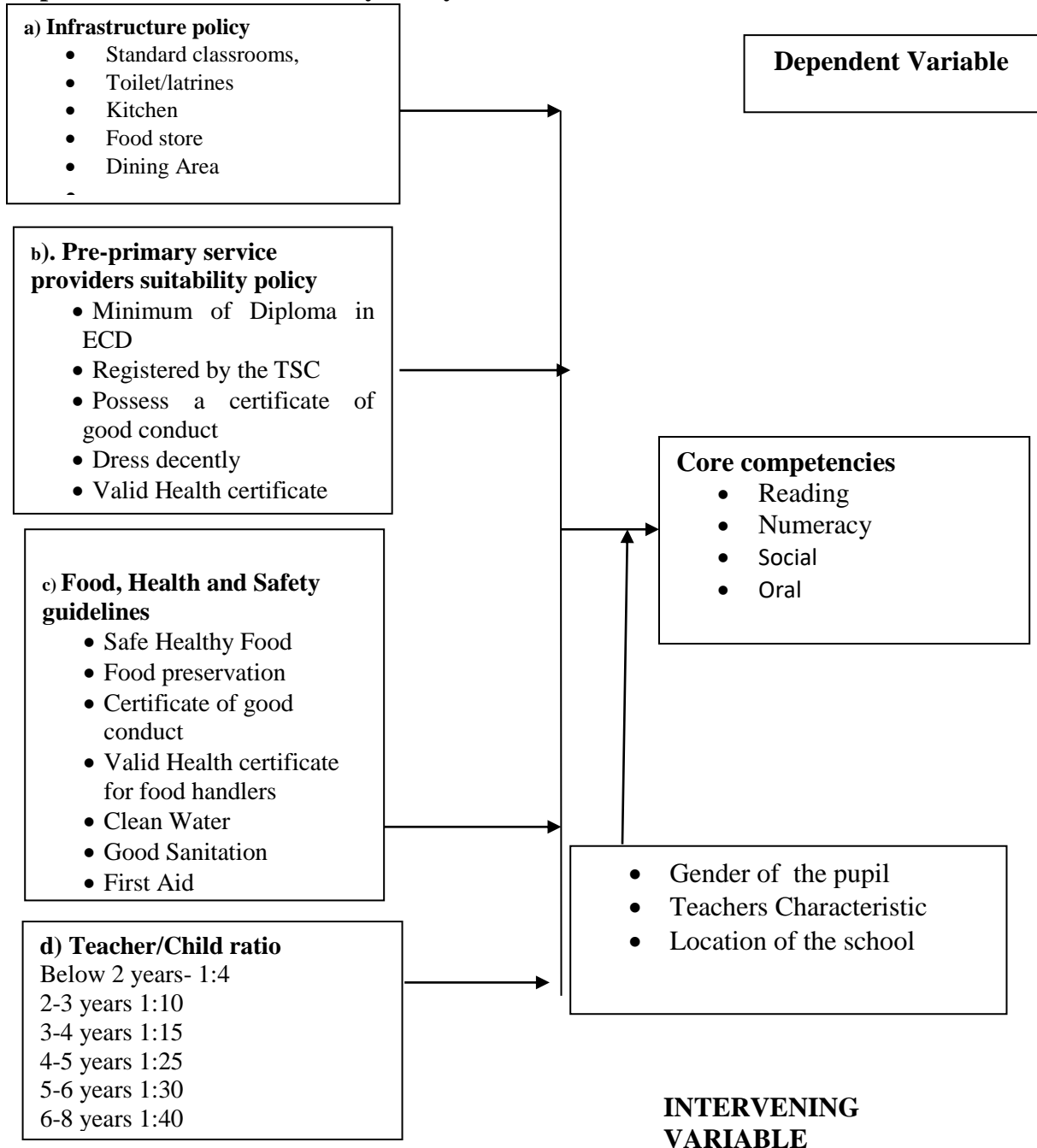


Figure 3: *Conceptual Framework Showing Components of the National pre-primary policy.*

Source: The Researcher (2023)

The dependent and independent variables are clearly explained and discussed in the conceptual framework below so as to represent the variables that shape the children's ability to acquire competency based curriculum while in school. Better development of children at an early age means provision of quality education. This is possible if services are standardized in both Private and Public ECD Institutions as per the current ECD policy framework. Development of children acts as dependent variable which depends on the quality services provided in the school. These services are determined by physical facilities, human resource, teaching and learning resources within the institution. They have to be of good quality and in good state to enhance development. As a result they act as independent variables. Ultimately teachers' characteristics impact instruction and learning goal setting that influence the holistic development of children. Interceding variables which may affect how implementation of the 2018 National pre-primary policy on effective learning include gender of the pupils, Teachers Characteristic and Location of the school. For instance gender characteristics influence perceptions, learning and play hence impacting on holistic development.

1.12 Operational Definition of Terms

The following terms have been defined as used in the study:

Administrator:-The person responsible for the day-to-day management of the centre.

Caregiver:-One of the persons responsible for the supervision and charged with the duty of facilitating the children's holistic development.

Day Care Centres- These are centres providing for infants and toddlers from birth to and Nurseries three (3).

Developmentally Appropriate Practice -That which is suitable and fitting to the development of children including individual differences.

Early Childhood Assistant Teacher- means a staff member who performs direct child care functions and related duties, works under the supervision of an early childhood teacher and assists in the implementation of curriculum.

Early Childhood Development Centre: - An Educational setting in which a programme is offered for children ages 3-5.

Pre-primary Teacher- means a staff member who performs direct child care functions and related duties. The early childhood teacher implements the curriculum and daily activities for a group of children.

ECDE Policy- structured plan intended to regulate and guide decisions, actions, and other matters in the early childhood sub sector

Infrastructural Facilities Policy: indicates basic facilities and installations that help children in developing and learning in the way possible they include school building, phones, playground etc.

Infrastructural Facilities: Age and developmentally appropriate facilities (child size, brightly coloured), adequate and safe facilities.

Personnel Suitability Policy- This policy details processes that provide a high-quality and consistent approach of recruiting and managing suitable personnel in our preschools

Personnel Suitability: - refers to a person's identifiable character traits and conduct sufficient to promote the efficiency of the service. It includes ECDE teacher's qualification and adherence to set guidelines

Learning: - process of acquiring new all modifying existing knowledge, behaviors, skills and values.

Effective- capable of producing an intended result

Implementation – process of moving an idea from concept to reality

Core competencies: This include reading, oral, social and numelacy competencies pre-primary leaners are expected to acquire at pre-primary school

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter explores various related literatures on the teacher related factors in effective implementation of Early Childhood Development and Education (ECDE) curriculum in Preschools. The literature review covers global, regional and local contexts under the following sub-headings; Implementation of preschool infrastructural facility policy, personal suitability of employees in ECDE Centres, stakeholders engagement in the provision of Early Childhood Education in the ECDE centres and implementation health and safety guidelines in the ECDE centres, finally, a summary of major literature review is discussed. The research gaps from the reviewed studies are finally highlighted.

2.1 Infrastructural Facilities and Acquisition of Basic Core Competencies

Children need a physical setting both indoors and outdoors where they can play, explore, and learn safely. The learning environment needs to include developmentally appropriate materials and arranged to promote exploration based on children's different stages of development (Workman and Ullrich, 2017). A high-functioning operating environment is an essential element of a quality early childhood programme.

Cate, Diefendorf, McCullough, Peters, & Whaley (2010) did a project of a compilation of selected resources in 2009 in North Carolina. The project found that there are several areas of focus and many elements that contribute to program quality, including the organization of physical space, appropriate and adequate supply of materials, teacher qualifications, programming variables, instructional strategies, collaboration among team members and families, as well as individualization and adaptations within daily routines. Unlike Cate et al (2010) project was based on document analysis the present study collected data from a sample questionnaires, teacher interview schedules, document analyses.

Yacan, (2014) study in Turkey focused of the element of daylight in preschools and its social and cognitive effects on pre-schoolers. Participants were 69 children (30 boys and 39 girls), aged from four to five, who enrolled in two different early childhood facilities in Van in Turkey. Results revealed that there was a crucial correlation between preschool

students' social behaviour and cognitive skills and daylight in preschool classrooms. Furthermore, students' cognitive skills were also crucially correlated with classrooms' daylight conditions in preschools. The study differs with the current one because it collected data on elements of daylight only while the current study was based on implementation of infrastructure facilities policy

Akaki Kality (2014) carried out a study in Addis Ababa Sub City to advance knowledge on the sector and convey this understanding to practitioners and policy makers in order to take timely corrective measures. The study was guided by interpretivist paradigm employing qualitative research approach. Study included preschool teachers, principals, experts, and parents who were interviewed. The schools settings were observed and relevant documents analysed. The study found that Classrooms were furnished with child sized chairs and tables. The walls and ceilings of the rooms were decorated with letters, words, and numbers but the rooms were not standard sized for classroom purposes as they were built for other purposes. The study differs with the current one because it was guided by interpretive paradigm employing qualitative research approach hence it lacked quantitative findings which this study brought on board.

The Rwanda Education Quality Standards of 2008 issued by Ministry of Education (MINEDUC) sets out the quality standards in promoting improvements to education. It highlights issues of organization, teaching and learning, schools infrastructure, school equipment, curriculum, evaluation, school governance, certification and values. This document is entitled the child friendly schools infrastructure standards and guidelines. The standards adopted four clauses relevant to infrastructure and equipment from the (Rwanda Education Quality Standards 2008). The document offers clarification and guidelines on how to achieve the standards. The four standards include Standard on appropriate, sufficient and secure buildings"; Standard on healthy, clean, secure and learner protecting environment."; Standard on child-friendly, barrier free environment which promotes inclusive access and equal rights of every child" and Standard on adequate and appropriate equipment that support the level of education.

In Monduli district in Arusha region Tanzania Enos & Francis (2016) did a study focused on exploring issues in the provision of pre-primary education. The study used both qualitative and quantitative approaches in data collection and analysis. Data were

collected from the participants through interviews, questionnaire and documentary review. The findings from the study showed that Head Teachers faced multiple challenges in managing pre-primary education, including shortage of classrooms, shortage of qualified teachers and lack of teaching and learning materials. The study concluded that only few schools in Monduli district provided pre-primary education due to some challenges including inadequate classrooms, inadequate teaching and learning materials, absence of qualified teachers, long distance from schools to home and readiness of parents to enrol students. Although the reviewed study was conducted amongst pre-primary schools it differs with the current study in that it was more focused on challenges provision of pre-primary education.

Study conducted in public ECDE centres in West Pokot North rift region of Kenya by Chepkonga (2017) aimed at investigating the influence of learning facilities on provision of quality education. The study used mixed method research methodology. The respondents consisted of ECDE officers, head teachers and teachers. The data was collected using questionnaire, checklists and interview guide. Data was analysed using descriptive and inferential statistics. The research found out that there was significant relationship between learning facilities and provision of quality ECDE in West Pokot County. Majority of public ECDE centres were found not to have enough classes, desks, water, kitchen stores among other facilities. The lack of adequate learning facilities influenced negatively provision of quality education. Although, Chepkonga's study was a mixed design the study differs with the current one because it was investigating the influence of learning facilities while the current study is evaluating the implementation of ECDE policy.

Shinali, Githui, and Thinguri, (2014) study looked at the assessment of the Early Childhood Development capitation grant on ECDE centres in Narok south Sub County. Descriptive survey design was used. Qualitative and quantitative techniques were used. The instruments used were questionnaires, observation checklist and structured interview. Purposive sampling was used in the selection of the population where 50 respondents from 20 ECDE centres were selected for the study. The researcher established that the ECD capitation grant has led to an increase in the enrolment of learners in ECDE centres, there was adequacy of the teaching and learning materials and this in turn has enhanced

learning. The study differs with the current one because it was descriptive survey design while the current study is mixed method design.

Kweyu (2008) established that there is an increasing requirement for outdoor recreational activities, particularly in urban centres where life has happened to be increasingly sedentary, therefore necessitating the need for outdoor activities to enhance pupils' physical activity performance levels. Ngecha, (2011) argues that despite an increase in the number of pre-school centres in Kenya, little has been done to initiate a rich outdoor environment in many centres. In addition, majority of pre-school teachers rarely participated in children's play, let alone guiding play activities. This scenario calls for a study to be carried in Kisii Central Sub-County to assess the ECDE Policy implementation.

Wanjau, (2013) study in Mirangine District, Nyandarua County study was to investigate influence of immediate environment on implementation of the curriculum in public preschools. Further the research investigated the role of infrastructure in the curriculum implementation. The study methodology was survey design with a sample of twenty parents and twenty teachers' respondents through cluster and simple random sampling technique. The study instruments were written questionnaires for teacher respondents, interview schedule for parent respondents and observational schedule. It was also established that number of toilets in preschools were inadequate and need to be increased wanjau study differs with current study because it was based on survey design hence the current study was based on embedded research design.

Mahindu (2011) found out that public pre-schools have many children learning indoors without playful experiences outdoors because some of the pre-schools are located in residential plots and rooms turned into classrooms hence children stay indoors most hours of school day. Mahindu also found that many pre-schools do not have play items for their pupils. In addition, in case pupils are playing or learning outside, they are left to play and learn on their own without teachers' supervision and guidance. Due to this circumstance, we need to be concerned about the provision of quality environment to pre-school children in Kisii Central Sub-County as per policy provisions.

Monda (2012) who did a study in Borabu Sub-county among pre-school pupils sought to find the provision of teaching and learning resources. The study was based on general

provision of resources in ECDE centres indoors but the current study was concerned with the outdoor environment and its implication on pupils' physical activity level and learning. In addition, Borabu Sub-County Education School Assessment Report (2013) found that 31 public schools perform poorly in classroom interactions with teachers. In essence the study was based on provision of teaching and learning resources while the current study is on evaluating the pre-primary policy on infrastructure.

Ayaga's (2016) study examined the implication of outdoor environment on children's physical activity performance levels and learning in public pre-schools in Borabu Sub-County. The target population was 50 public pre-schools, 50 primary school head teachers, 50 pre-school lead teachers, and 1603 final pre-school class pupils in Borabu Sub-county. The study employed cluster, purposive, and simple random sampling designs. The study comprised of 44 pre-schools, 44 primary school head teachers, 44 pre-school lead teachers, and 309 final pre-school class pupils. Data collection instruments used was questionnaires, an interview schedule, document analyses and observation. The study found that; the general state of outdoor environment component was unsatisfactory; there was a relatively weak relationship between availability, adequacy, effectiveness, and location of various components of outdoor environment in ECDE centres, and the ability of pre-school children's ability to performing various loco-motor activities and rhythmic movement activities. Ayaga's study was only based on implication of the outdoor environment. The current study was based on the implementation of the ECDE policy.

2.2 Pre-Primary Service Providers Suitability and Acquisition of Basic Core Competencies

As pointed out by the OECD education systems need to invest in intensive personnel training in order to deliver high-quality outcomes (OECD, 2006). Specific knowledge, skills and competencies are expected of ECDE practitioners. There is a general consensus, supported by research, that well-educated, well-trained professionals are the key factor in providing high-quality ECDE services. Research shows that the behaviour of those who work in ECDE matters and that this is related to their education and training. The qualifications, education and training of ECDE staff are, therefore, an important policy issue (OECD, 2006). In spite of the consensus on the importance of

well-trained staff, governments often fear the funding consequences of raising staff qualifications. This might seriously affect ECD quality, and with this, child development outcomes, since staff are not being optimally trained or educated to stimulate early learning and development.

The No Child Left behind Act (NCLB) describes teacher-quality variables as: the highest academic degree, type of teaching certificate, major/minor in teaching discipline, and number of years a teacher teaches (NCLB, 2002). Chikutuma, (2013) study from Harare low and high density suburbs sought to establish the quality of Early Childhood Development (ECD) programmes. The qualitative design methodology was used in this study. Self-constructed observation checklists and in-depth interview guides were used. The participants in the study were 10 school heads, 10 ECD teachers and 10 ECD parents, one from each of the ten schools under study from Harare low and high density suburbs. The findings of the study revealed that school heads incompetently managed the ECD curriculum. The study showed that ECD personnel qualifications were varied. The study also revealed that teaching methods in ECD were all child-centred though some ECD parents and school heads criticised the play-way and child-centred method of teaching. Findings of the study also revealed that the components of a quality ECD programme which included; nutrition, health and safety, parental involvement, stakeholder involvement were compromised. The study differs with the current study in that it was qualitative design methodology used conducted through self-constructed observation checklists and in-depth interview guides were used hence it lacked quantitative findings. However, current study was a mixed method research design.

Paul-Wiseman, (2013) did an investigation into the Early Childhood Care and Education Centre Based -Active Learning curriculum approach at four government ECCE Centres in the St. George East Educational District in Trinidad and Tobago. A qualitative case study was employed to gain insights into the concerns of four early childhood teachers. The theoretical framework was based on Concerns Based Adoption Model (CBAM). The findings revealed that teachers had intense concerns related to informational, personal, management and collaboration stages, but minimal concerns were reported at the awareness, consequence and refocusing stages. Emerging concerns were related to ineffective training and understanding, time demands, availability of resources, inadequate staff, and lack of support from the cluster administrator. Although, Paul-

Wiseman, (2013) study was conducted amongst pre-primary school pupils it was carried out in in Trinidad and Tobago and was a qualitative study hence it lacked quantitative findings. The current study adopted a mixed methods approach.

Clark, D., Baxter, J., Danelsko, E., Piovos, H., Sevcik, M., Vaenti, M., & Van Wyk, N. (2008) in calary Canada, examined physical activity levels of preschool-aged children in child care settings. The research project consisted of three different phases. A survey was developed to help answer the research questions. Many of the caregivers (92%) felt that their educational training in the Early Learning and Child Care Diploma should have more focus on concepts and supports to promote physical in preschool-aged children (Clark et al., 2008). Clark et al. (2008) identified five basic themes that limited physical activity in child care settings: A lack of space and equipment; A lack of suitable ideas for structured physical activities; A high emphasis on free play with little to no adult involvement and; Caregivers rarely getting involved in play scenarios, often not taking the opportunity to facilitate activities or encourage or extend children's play (Clark et al., 2008). While Clark, et al (2008) study was conducted in Calary Canada to examine physical activity levels of preschool-aged children in child care settings. On the contrary, the current study was conducted in in Kenya and assessed the ECDE policy implementation.

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2010) did a longitudinal study in Britain to investigate the influence of pre-school on children's academic and social-behavioural outcomes. The study sample included 2,800 children from 6 English Local Authorities who attended 141 pre-school settings. Children were assessed on their cognitive and social-behavioural development at entry to the study and their parents interviewed to obtain social demographic and background information. This was a longitudinal study in which researchers conduct several observations of the same subjects over a period of time. The study was also based on children's academic and social behaviour. The reviewed study was longitunal in nature and prone to dropout of participants hence the current study adopted mixed method design particularly embedded research design.

Nadine (2012) study explored the effect of a physical activity curriculum resource. A total of five preschools from the NW quadrant of Calgary, Alberta were included in this study. The 48 participants involved in the study were all 4 years old. The preschools were divided into three groups: Control Group (no intervention), Intervention Group (school received the resource), and Intervention and Teacher Training Group (schools received the resource and teacher training). The researcher placed pedometers on all participants and observed selected participants using the System of Observing Fitness Instruction Time (SOFIT). The results of this study did not confirm that teacher training impacted physical activity levels. The effects of the resource on the Intervention and Intervention and Teacher Training groups were similar as derived from pedometer and direct observation. Alternative forms of teacher intervention may further increase physical activity. Unlike this study which was experimental in nature based on quantitative methods it lacked qualitative finding which could have provided participants feelings and responses and the current study was a mixed method design.

Jano (2013) study examined the trends and current status of the demand for and supply of primary school teachers in Benishangul Gumuz Region in Ethiopia with a focus on teacher quantity and quality. Descriptive analysis of data on student enrolment and standard teacher–section ratio was used to analyse teacher demand. The supply side of the analysis mainly focused on the examination of the status of current teaching force in terms of number and quality in the region, the prevailing status of prospective graduates of Gilgel Beles College of Teacher Education, and the potential intake capacity of the college. Primary data on the opinion of informed officers and officials were gathered using Questionnaires and Focus Group Discussions. Tremendous increase in the number of students and teachers was recorded for the last five years. The study showed that only 34 percent of the teachers were qualified. While Jano (2013) study examined the trends and current status of the demand for and supply of primary school teachers in Ethiopia the current study was conducted in pre-primary schools in Kenya to assess the implementation of ECDE policy on effective learning.

In Uganda EJuu, (2012) did a study on Effective implementation comprehensive ECD policy after five years since the ECD policy was launched. This study was qualitative in nature employing a cross sectional survey design. Random and purposive sampling techniques were used to sample key policy implementers at national and district level.

Open ended questionnaires and interview guides were used to collect data from a total of 53 participants from central, western, northern, eastern and Far East regions of Uganda. A three phase system, beginning with secondary data review, primary data collection, and finally data analysis was employed. Policy gaps exist as a disabling factor towards implementing the ECD Policy including lack of competent personnel in ECD both at national and local to manage different ECD programmes. Tutors with ECD related training who can competently mentor caregivers in the colleges are few, highly trained caregivers who can manage centres efficiently are few and ECD trained district inspectors of schools are almost not available to supervise ECD activities. This means that there are a few people at the district that have adequate qualification in it. The study differs with the current study because it was qualitative in nature employing a cross sectional survey design hence it lacked quantitative data. The current study will be a mixed method design.

Tarmo and Tilya (2014) reviewed research on the implementation of competence-based curriculum reforms in Tanzania. The study established that classroom teaching, learning and assessment in most secondary schools has remained traditional contrary to the competence-based curriculum demands. Lack of comprehensive orientation to the reformed curriculum for the teachers and poorly resourced learning environment are among many drawbacks to the implementation of the reformed curriculum. Secondary school teachers put forward various reasons for not using the advocated learner-centred pedagogy in their day to day classroom practices. These include lack of adequate knowledge and skills on how to use the advocated pedagogy, large class size, shortage of relevant textbooks, and lack of cooperation from students (Tilya, 2014); This study was a review of research on the implementation of competence-based curriculum reforms in Tanzania while the current study assessed the pre-primary service providers in their role in the implementation of the pre-primary policy in Kisii Central Sub-county of Kenya.

Murugi (2016) study in Likoni Sub-County was carried out to investigate the teacher related factors influencing pupils' mathematics performance at Kenya certificate of Primary Education in public schools. Descriptive survey design was used and data collected using questionnaires, interview guide and observation guide. The targeted population comprised of 24 head teachers, 380 mathematics teachers, and 5700 pupils.

Stratified random sampling was used to select the required number of pupils. Purposive sampling was used to select mathematics teachers. A sample of 20 head teachers, 20 mathematics teachers and 300 pupils was obtained for the study. The study findings established that teacher preparation was lacking in the delivery of mathematics content. In-service training was inadequate while there was very little motivation to both teachers and learners. While Murugi (2016) study was confined to the factors that influence mathematics performance at Kenya Certificate of Primary Education the current study evaluated the implementation of the pre-primary policy on effective learning.

Omariba (2012) study was concerned with the challenges facing secondary schools“ teachers and students in the use of instructional technologies. This was a descriptive survey design. The study was conducted in ten (10) provincial public secondary schools in Kisii County. Data was collected using questionnaires, interview schedules and observation schedules. The obtained data were analysed systematically using descriptive statistics and presented with the help of frequency tables, graphs and percentages. The study findings revealed that most of the instructional technologies were available but inadequate in terms of quantity. Not all the instructional technologies were easily accessible for both teachers and students for teaching and learning processes. Finally, teachers and students faced several challenges such as teachers having limited skill on use of some instructional technologies, inadequate instructional technologies, inadequate funds and lack of support from the school’s administration whereas students revealed among others lack of accessibility and overcrowded classrooms which need resolutions. The Ministry of Education together with all other education stakeholders need to come-up with strategies to curb this menace. This differs with the current study in that it was a conducted among secondary schools but current study was carried out among ECDE learners.

2.3 Food, Health and Safety Guidelines and Acquisition of Basic Core Competencies.

The implementation of the School Health and safety Programme is core to the realization of the goal of any Educational level. Safety and health management in schools is a growing concern in Kenya. Media reports on dilapidated infrastructure, unhealthy

conditions and other cases of insecurity in schools have been a concern. According to United Nations Children's Fund (UNICEF, 2009) academic attainment is regarded as a decisive factor that determines educational quality. Therefore, in pursuing such academic attainment, children have the right to learn in a safe and healthy environment.

Timmons (2010) study examined the types of training that school principals currently have and perceive they need in order to effectively address school safety and respond to crisis events. Elementary, middle, and high school principal across the Commonwealth of Virginia were surveyed utilizing an adjusted version of the School Safety Needs Training Survey constructed by the Virginia Department of Criminal Justice Services Virginia Centre for School Safety. 1,791 surveys were sent out. Analyses of Variances and descriptive statistics were run. Findings indicated that principals had the most training on the school safety topics of medical emergencies, managing bomb threats, and responding to crisis incidents. Principals at the elementary, middle, and high school levels all reported that they needed more training in the area of dealing with disruptive and assaultive students and intervening with angry and abusive parents and family members. Significant differences were found between elementary and middle school principals and elementary and high school principals. This reviewed study was quantitative and involved principals at the elementary, middle, and high school levels. The current study was based on mixed method approach involving only pre-primary teachers and head teachers.

Jisook, Youngmee and Yu-jin (2009) study compared student's satisfaction with school food service environment to improve the quality of middle school meal service. A survey was conducted consisting of 246 boys and 433 girls from 6 middle schools providing school meals. The questionnaires were directly distributed to the subjects. As for the quantity of food, classroom group expressed significantly higher satisfaction than cafeteria group but as for the satisfaction on hygiene, classroom group showed significantly lower satisfaction than cafeteria group. About the satisfaction of school meal environment, classroom group showed more satisfaction on distribution time, eating place, eating atmosphere. The classroom group showed higher satisfaction than cafeteria group in cases of quantity, diversity of types of soup, dessert, and the cost of school meal. To improve eating place and hygiene of school meal, sufficient cafeteria space and pleasant environment is needed to be established. While Jisook Youngmee and Yu-jin

(2009) was a survey study, the current study is on the other hand was on mixed method design conducted among pre-school subjects.

Lau (2014) study explored students' perceptions of school safety, bullying behaviour, and school programming in a high needs school. Student responses on the Safe Schools Survey were analysed and the effect of poverty on students' perceptions of school safety and bullying behaviour were tested. The school's bullying initiatives were assessed with the Safe Schools Checklist to determine the degree to which provincial- and board-level, as well as evidence based recommendations for safe schools were met. Three themes emerged from interviews with school personnel one was the school's knowledge on the impact of the community on student needs and their behaviour in school; two was school's role in meeting student needs; and lastly barriers to creating a safe school for students. Based on the study's findings, implications for schools safety practice were discussed. The study was bases on bullying of children as a safety issue unlike this study that is evaluating implementation of food, health and safety guidelines in pre-primary.

Lleras (2008) conducted an investigation with over 10 000 Grade 10 students of various ethnic backgrounds in 659 American schools to examine whether students in particular school contexts or groups are more likely to experience hostility. Student reports of classroom disorder, perceptions of school safety, verbal harassment, and school-level variables such as economically disadvantaged students, school size, and the percentages of pupils from ethnic minority were examined. Results indicated that students were more likely to experience disruptive classrooms in large and high-poverty public high schools. It is important to note that the survey, which was used in the study, was administered eight years prior to the study's publication. Hence, some information from the surveys may not be applicable due to changes in school legislation and efforts to improve school climate in recent years. Additionally, this study finds the effect of student characteristics on the likelihood of experiencing verbal bullying in school varies by school characteristics. The results suggest that high-achieving African American and Hispanic students are more at risk of verbal harassment within predominantly minority schools. While Lleras (2008) study conducted in USA the current study was carried out in Kenya.

Mubita Phiri, Monde, and Simooya, (2016) did an exploration study on safety and health issues in selected schools of Chibombo District in Central province of Zambia. Using

purposive and simple random sampling, a sample of fifty stakeholders in randomly selected schools of Chibombo district was selected. This sample comprised teachers, pupils and auxiliary staff in the selected schools. Data was collected using unstructured interviews and focus group discussion. Data collected was analysed using descriptive statistics and thematic analysis. This paper established that the selected schools faced many safety and health challenges. This study established that as much as the selected schools in Chibombo district had put in place safety and health measures, there were still outstanding safety and health concerns. It is therefore recommended that the government should provide safe and health school environments through appropriate frameworks, guidance and legislation. While Mubita Phiri, et al (2016) study based on safety and health issues in selected schools of Chibombo District in Zambia. Data was collected using unstructured interviews and focus group discussion and it lacked quantitative data. The current study was based on both qualitative and quantitative methods.

Nur Afni Idayu Aziz, (2011) did a study on occupational safety and health is a vital issue in the workplace as it is strongly related to human behaviour and belief towards safety. A qualitative research using one-to-one interviews for data collection was conducted with 29 respondents. Findings reveal that the majority of respondents feel safe when working in the hotels. Study shows that most of the hotels' staff in 3 to 5-star hotels are aware of the significance of workplace safety and health and emphasise was giving on safety practices. Findings also showed many challenges such as staff behaviour towards safety, the absence of qualified staff in the safety field, lack of safety communication, and expensive cost of safety training, all of which have inclined the improvement of safety perceptions and practices. This study had been limited by the hotels' policy based on occupational health and safety at the work place while the current study was carried in pre-primary schools in Kisii central Sub-county of Kenya.

In Oyo State, South-West Nigeria study was carried out by Adebayo and Owoaje in 2016 to evaluate the quality of implementation of the school health program in public primary schools in rural and urban. The study utilized a comparative cross-sectional design. A two-stage sampling technique was used to select 49 public primary schools; 26 rural and 23 urban, from two selected Local Government Areas. Findings show neither the rural nor the urban public primary schools had trained first aiders, school health assistants or school health nurses. Most of the schools had first aid boxes and only 8.7% of the urban

schools had a sick bay. Majority had sources of water supply. Overall, the study revealed poor quality of implementation of the school health program in the selected rural and urban public primary schools in Oyo State as various essential equipment for effective school service delivery were either inadequate. Adebayo et al (2016) study differs with the current study because it only evaluated the quality of implementation of the school health programme in public primary while the current study evaluated food, health and safety guidelines in pre-primary.

Mwaisaka (2013) did an assessment of Workers' Health and Safety at Workplaces in Mtwara Municipality, Tanzania. The study involved 60 respondents from two companies namely OLAM and Wentworth Resources in Mtwara Municipality. Both qualitative and quantitative methods were employed in data collection, analysis and presentation. The study found out that the workers at the study organization have a high level of understanding of the safety measures. Despite that, the study revealed that workers have experienced diseases such as sore throat, cough, shortness of breath, accidents, backache, muscle tear (soft tissue trauma), and twisted ankle. Moreover, the study noticed that a high percentage of the respondents displayed a high capacity for vigilance of securing their safety and health at workplaces. Employer should adopt teaching programs among all levels of management to raise awareness about health and safety. While Mwaisaka (2013) did an assessment of Workers' Health and Safety at Workplaces in Mtwara Municipality, Tanzania the current study was conducted amongst pre-primary learners.

Chikwanu (2014) did an evaluation of the implementation of the school wash programme in Choma District of Zambia. A stratified random sample of 65 schools which comprised Secondary, Basic (Primary) and Community schools was used for data collection. The study employed questionnaire, interviews and observations schedule. Purposive selection of key informants as respondents for the interviews was also used. Data was also obtained by group discussion with pupils, female and male teachers. Results obtained indicated that despite being fully known at the district level, the programme was not yet introduced in most schools and the government ran a parallel programme the School Health and Nutrition (SHN), which did not fully integrate WASH activities. SHN policy was poorly implemented in schools in regard to the set objectives. Chikwanu (2014) study was conducted amongst primary and secondary school pupils. On the contrary, the current study was conducted in pre-primary learners on the implementation of the pre-

primary policy related infrastructure, qualification on service providers, safety guidelines and teacher child ratio and not just health and nutrition.

Sibanda, (2012) assessed how the implementation of the school supplementary feeding programme is helping to ease the malnutrition in school learners. The study applied a combination of qualitative and quantitative design with descriptive and comparative approaches. Individual interviews were conducted with 102 learners using a structured questionnaire. A focus group discussion was also held with the parents or guardians with regards to their perception of the school supplementary feeding programme. The study was conducted at Havana Primary School in the Katutura area of Windhoek. The study found majority of the learners in the school supplementary feeding programme were thin. The findings highlighted that the current school feeding supplementary programme implementation was not sufficient. The study suggested that the primary school education curriculum could also be improved to provide more nutrition education to the learners. While Sibanda, (2012) was carried out in Namibia the current study was carried out in Kenya.

Otiato, Omondi, and Abongo (2015) study explored the extent of implementation of gender perspectives in school health policy for primary schools in Usigu division. The study was conducted in rural primary schools along the beaches in Usigu Division using cross-sectional analytical design. A sample of 338 girls selected through stratified random sampling, from STD 4-8 was used. Data was collected using structured questionnaires, analysis done using descriptive and inferential statistics mainly hierarchical regression. The study found that Implementation threshold of gender policy as perceived by the STD 4-8 respondents (girls) was 20.79% of total variance explained by the three different gender factor loadings based on principal factor axis factoring. The findings revealed that level of implementation of the gender component of the current policy is still weak based on 50% factor loading out of 10 elements drawn from the policy. The study however, recommends that more evaluations focusing on the broader themes of the policy should be conducted in the wider contexts and further explorations be done to explain non extraction of other factors. While Otiato, et al (2015) assessed extent of implementation of gender perspectives in school health policy the current study will evaluate the implementation of food, health and safety guidelines among pre-primary learners.

2.4 Teacher Child Ratio and Acquisition of Basic Core Competencies

Policy declarations on maximum class size have been very common around the globe. In fact the issue of quality education has been of great concern as the number of pupils has doubled or tripled in some cases, thus affecting the pupil to teacher ratios are the world. Both class size and adult-child ratios are correlated with greater program effects (Rich, 2013). In America public schools employ 250,000 fewer people than before the recession of 2008–09, while enrolment has increased by 800,000, and class sizes in many schools are at record highs (Rich, 2013). Low adult-child ratios are associated with more extensive teacher-child interaction, more individualization, and less restrictive and controlling teacher behaviour (Barbara, Donovan, and Burns, 2000). Smaller group size has been associated with more child initiations, and more opportunities for teachers to work on extending language, mediating children's social interactions, and encouraging and supporting exploration and problem solving.

Brabo (2014) study examined the effects of class size on differentiating instruction and reaching all students in high school physical education. Brabo reveals that although small class size is recommended, it is not a reality in physical education. The study was qualitative in design involving a purposive sample of physical education teachers employed in a local suburban high school in Northern California's San Francisco Bay Area. Their teaching experience spanned from two to over twenty years. Findings showed common themes of challenges physical education teachers face impacting the quality of instruction, preventing differentiated opportunities for diverse student population. Common themes include issues around teacher ability to deliver quality instruction, student engagement, providing timely, positive feedback to students, large class behaviour management, assessment, and providing a variety of teaching styles. Brabo (2014) study differs with the current study because it was qualitative in design while the current on the other hand was both qualitative and quantitative in nature.

Chingos (2011) report on the false promise of class-size reduction notes that class-size reduction, or CSR, is enormously popular with parents, teachers, and the public in general. The latest poll results indicate that 77 percent of Americans think that additional educational dollars should be spent on smaller classes rather than higher teacher salaries. Many parents believe that their children will benefit from more individualized attention

in a smaller class and many teachers find smaller classes easier to manage. The pupil-teacher ratio is an easy statistic for the public to monitor as a measure of educational quality, especially before test-score data became widely available in the last decade. Policymakers across the nation, including those in at least 24 states, have taken these ideas to heart and enacted CSR initiatives at costs upward of billions of dollars. California allocated \$1.5 billion per year in the late 1990s to reduce class size in the early grades. Florida has spent about \$20 billion since 2002 reducing class size in every grade from kindergarten through high school. This trend partly reflects an increase in educational services to students with disabilities, as required by federal law beginning in 1975. But falling pupil-teacher ratios affected all students, as evidenced by the even steeper drop at private schools (which serve fewer disabled students). The trend at private schools also likely reflects the strong preference of parents for small classes and the greater incentive for private schools to respond to those preferences. Parents, teachers, and policymakers have all embraced CSR as a strategy to improve the quality of public education. Effects in the research literature, such as the STAR results that indicate that a 32 percent reduction in class size increased achievement by about 15 percent of a year of learning after one year.

Renatus,(2013) in Tanzania was concerned with the influence of class size and pupils-teacher ratio on pupils' achievement outcomes in primary schools in Bukombe district. The theory was grounded on conflict theory by Karl Marx 1864-1920. The study was quantitative in approach. Data were collected through pupil's achievement outcomes analysis sheet and classroom Observation form. The study finding revealed community participation in classroom teachers' recruitment, enrolling the number of students in relation to the classroom available construction, increasing, paying high salary to the teaching profession to attract people to join the teaching profession, as the strategies for solving the issue of class size, pupils teacher ratio and pupils academic performance in public primary school. Furthermore the study indicates no relationship between pupils' teacher ratio and pupils' academic performance but that there was relationship between class size and pupils academic performance. The findings indicate also that, there is relationship between class size and pupils' academic performance. From the above findings the study recommends that, to reduce the intensity of pupils' teacher ratio and class size there is a need for constructing more and enough classes as well as recruiting many teachers so as to reduce pupils' congestion in the classrooms and to balance the

ratio as recommended. Renatus (2013) study differs with the current study in that it was grounded on conflict theory by Karl Marx 1864-1920 while the current study is grounded on Bronfenbrenners bioecological system theory (1979).

A study in Machakos County, Kenya by Kaloki, Kasau, Kitoo, Mutinda, and Kalai in 2015 assessed the impact of Pupil-Teacher Ratio (PTR) on academic performance. The study targeted 78 public primary schools in which a total of 24 schools were sampled for the study. Descriptive survey design was used as the research design for the study. Questionnaires were used in collecting data for the study. The analysis involved use of simple regression to determine whether PTR predicts performance in national examinations. A coefficient of determination R^2 of 0.104 was obtained. This revealed that 10.4% of the performance is due to PTR while the remaining 89.6 % is due to other intervening factors. Anova regression model applied was significantly good enough in predicting the outcome variable. The findings of the study revealed that PTR significantly influences performance of pupils in national examinations. The study recommended to all Education sector stakeholders to pay adequate attention to PTR since it affects performance of pupils in Primary Schools. It recommended to the government to employ more teachers to lower PTR and ease teacher workload. It also recommended to the government and the MOE to review the Education Act to enable schools admit pupils on basis of PTR to avoid over enrolment and congestion in classrooms. Kaloki, et al (2015) study differs with the current study because it assessed the impact of Pupil-Teacher Ratio (PTR) on academic performance amongst public primary schools based on descriptive survey on contrary the current study was carried among pre-primary learners and will be based on mixed method approach.

Kenya, (2008) did case studies from Migwani location in Keya aimed at exploring the effectiveness of Free Primary Education. The respondents included head teachers, teachers, pupils, parents, community leaders and government officials in the location. Qualitative and quantitative data collected through interviews and observation. The study found that Migwani Location saw an increase in enrolment to public schools at the beginning of 2003. There is an unbalanced pupil to teacher ratios in most classes. The quality of education has deteriorated in most schools in the region. The results clearly shows that abolishing fees gives more access to there was need to address class size to enhance quality. While Keya (2008) study was based on the implementation of Free

Primary Education in Keya it collected data through interviews and observation. The current study was based on the implementation of the pre-primary policy and data was collected using questionnaires, teacher interview schedules, document analyses.

Chacha, and Zani, (2015) assessment of how the introduction of Free Primary Education program affected pupils' enrolment in public primary schools in Kuria East Constituency and how the resulting pupil - teacher ratio affected teacher effectiveness. The study was anchored on social systems theory. Simple random sampling technique was used to identify 100 teacher respondents and 25 head teachers from 25 schools that were identified through stratified sampling of a total 68 schools in the area. The study established that enrolment in schools increased by more than 30% in 2003 and the pupil-teacher ratio increased from 42:1 in 1998 to 53:1 in 2003 and rose again to 60:1 in 2006 and remained the same until 2008. The study recommended that the government should set a minimum threshold of the pupil-teacher ratio by recruiting more teachers to meet the shortfall. Chacha, and Zani, (2015) study was based on the implementation of Free Primary Education in Kenya. The current study was based on the implementation of the pre-primary policy in pre-schools Kisii county.

2.5 Summary of Major Literature Reviewed and Research Gaps

Implementation of infrastructural facilities in pre-primary schools is very important. Children need a physical setting both indoors and outdoors where they can play, explore, and learn safely. Enos & Francis (2016) findings from the study showed that Head Teachers faced multiple challenges in managing pre-primary education, including shortage of classrooms, shortage of qualified teachers and lack of teaching and learning materials. The study concluded that only few schools in Monduli district provided pre-primary education due to some challenges including inadequate classrooms, inadequate teaching and learning materials, absence of qualified teachers, long distance from schools to home and readiness of parents to enrol students. In addition, Chepkonga (2017) study aimed at investigating the influence of learning facilities on provision of quality education using mixed method research methodology found out that there was significant relationship between learning facilities and provision of quality ECDE in West Pokot County. Majority of public ECDE centres were found not to have enough classes, desks, water, kitchen stores among other facilities. The lack of adequate learning facilities

influenced negatively provision of quality education. Majority of this studies did not look at the provisions of policy verses practice. This gap was filled by the current study. Not only that infrastructure matters but also service Providers Suitability in pre-primary schools. It is noted by OECD that education systems need to invest in intensive personnel training in order to deliver high-quality outcomes (OECD, 2006). Specific knowledge, skills and competencies are expected of ECDE practitioners. Clark, et al (2008) in calary Canada, examined physical activity levels of preschool-aged children in child care settings. The research project consisted of three different phases. A survey was developed to help answer the research questions. Many of the caregivers (92%) felt that their educational training in the Early Learning and Child Care Diploma should have more focus on concepts and supports to promote physical in preschool-aged children (Clark et al., 2008). Jano (2013) study examined the trends and current status of the demand for and supply of primary school teachers in Benishangul Gumuz Region in Ethiopia with a focus on teacher quantity and quality. Descriptive analysis of data on student enrolment and standard teacher–section ratio was used to analyse teacher demand. While many of the studies were done amongst secondary and primary pupils the current study was conducted amongst pre - primary pupils in Kisii County.

The study also reviewed literature on food, Health and Safety Guidelines in pre-primary schools. Mubita Phiri, Monde, and Simooya, (2016) did an exploration study on safety and health issues in selected schools of Chibombo District in Central province of Zambia. The study comprised teachers, pupils and auxiliary staff in the selected schools. Data was collected using unstructured interviews and focus group discussion. It was established that the selected schools faced many safety and health challenges. In Oyo State, South-West Nigeria study was carried out by Adebayo and Owoaje in 2016 to evaluate the quality of implementation of the school health program in public primary schools in rural and urban. The study utilized a comparative cross-sectional design. Findings show neither the rural nor the urban public primary schools had trained first aiders, school health assistants or school health nurses. Most of the schools had first aid boxes and only 8.7% of the urban schools had a sick bay. Chikwanu (2014) study found that despite being fully known at the district level, the WASH programme was not yet introduced in most schools and the government ran a parallel programme the School Health and Nutrition (SHN), which did not fully integrate WASH activities. SHN policy was poorly implemented in schools in regard to the set objectives. Although most of the studies

touched on the health and safety issues they were conducted amongst primary and secondary school pupils. On the contrary, the current study was conducted in pre-primary learners.

Lastly, Teacher child ratio in pre-primary schools has been an issue over the years. Brabo (2014) study examined the effects of class size on differentiating instruction and reaching all students in high school physical education. Brabo reveals that although small class size is recommended, it is not a reality in physical education. The study was qualitative in design involving a purposive sample of physical education teachers employed in a local suburban high school in Northern California's San Francisco Bay Area. Chingos (2011) report on the false promise of class-size reduction notes that class-size reduction, or CSR, is enormously popular with parents, teachers, and the public in general. The latest poll results indicate that 77 percent of Americans think that additional educational dollars should be spent on smaller classes rather than higher teacher salaries. Many parents believe that their children will benefit from more individualized attention in a smaller class and many teachers find smaller classes easier to manage. A 2013 study by Renatus in Tanzania was concerned with the influence of class size and pupils-teacher ratio on pupils' achievement outcomes in primary schools in Bukombe district. The study finding revealed community participation in classroom teachers' recruitment, enrolling the number of students in relation to the classroom available construction, increasing, paying high salary to the teaching profession to attract people to join the teaching profession, as the strategies for solving the issue of class size, pupils teacher ratio and pupils academic performance in public primary school. Unlike the current study many of studies reviewed were carried in USA, Finland and other European countries and conducted amongst Primary and secondary School students on the contrary the current study will be conducted in ECDE centres and was based on implementation of the ECDE policy.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design, the location of the study, the target population, sampling procedures, sample size, research instruments, data collection procedures, data analysis procedures and ethical considerations when carrying out the study.

3.2 Research Design

A research design is a master plan specifying the methods and procedures for collecting and analysing the needed information (Remler & Gregg, 2012). It is a frame work that plans the action for the research project. In other words, it is a systematic plan to study a scientific problem. A research design is a plan specifying how data relating to the research was collected and analysed. The study was based on embedded research design. In embedded research design, a small amount of either qualitative data or quantitative data are included within a larger qualitative or quantitative study. The current research included open-ended questions in an interview to collect qualitative data while a larger quantitative data was collected using questionnaires.

According to Creswell and Plano (2007) there are three ways in which mixing can happen. Data can be merged or converged, two data sets can be connected or two data sets can be embedded into each other. In embedded research design one data set has supportive role to another and it is considered that the single data set itself is not adequate (Creswell and Plano Clark 2007). In this study qualitative data was embedded in quantitative data which play more important role. This is shown in figure 3.1 below

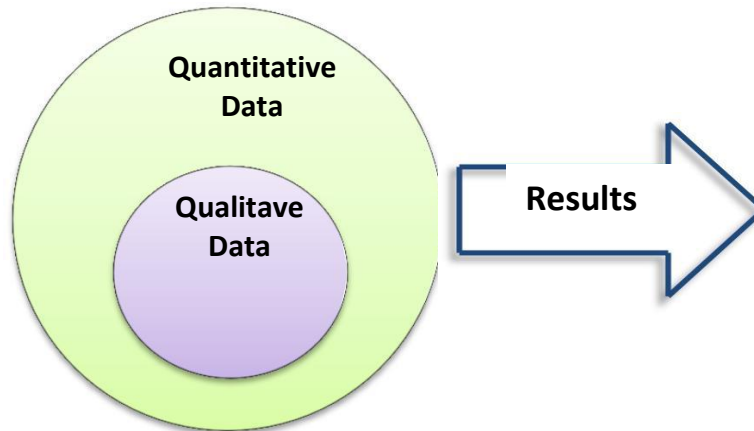


Figure 3.2: Embedding qualitative data into quantitative data

(Adapted from Creswell & Plano Clark 2007)

Mixed method research approach tries to broaden and deepen the corroboration and understanding by combining components from both quantitative and qualitative approaches (Johnson et al. 2007). Metsämuuronen (2005) confirms the idea that it is beneficial to combine these two approaches and that the approaches are not exclusive. Although he points out that often it is reasonable to choose one of the approaches to be a main approach. Results are more reliable when more than one research methods are used. (Metsämuuronen, 2005)

3.3 Area of the Study

The study was conducted in Kisii County, Kisii Central Sub-County. Other sub-counties in Kisii County include Marani, Kisii South, Masaba South, Nyamache, Sameta, Gucha, Kenya and Gucha South. Kisii Central Sub-County is one of the nine Sub-counties in Kisii County. The Population Density of Kisii Central Sub-County is 875 people per square kilometre. Kisii Central County is characterized by a mountainous topography with a number of ridges and valleys. Kisii Central Sub-County was purposefully sampled because studies by Uwezo (2011) on Annual Learning Assessment report shows that many pupils in pre-primary and lower primary school are poor readers and cannot do simple arithmetic below and at their level. There has also been dissatisfaction on the quality of the ECDE services amongst the stakeholders in the ECDE Sub-Sector. Find the Map of Kisii Central Sub-County (Appendix X)

3.4 Target Population

The population of the study was 37 pre-school head teachers and 111 preschool teachers and According to the records from the Sub-county Education Office, Kisii Central, there are 16 public schools in Getembe West and 21 public schools in Getembe East making a total of 37 preschools attached to pre-primary schools, and 2 Quality Assurance and Standards Officers. The study also used 1 Sub-County Director ECDE. The table 3.1 below shows the distribution of the target population according to type of school and geographical divisions.

Table 3.1: Target Population

Division	No of Pre-primary schools	No of Pre-primary school teachers	Head teachers	Sub-County Director ECDE	Quality Assurances officers
Getembe West	16	48	16		1
Getembe East	21	63	21	1	1
Sub-total	37	111	37	1	2

3.5 Sampling Technique and Sample Size

The current study employed census technique and purposively included all the 37 public pre-school head teachers since they were the only ones in charge of the administration of the ECDE Programmes in the two divisions for interview schedule of Kisii Central Sub-County. The study involved 2 Quality Assurance and standards Officers and 1 Sub-County Director of ECDE. Mason (2010) recommends that for interviews you may sample 10 to 50 respondents. According to Mason (2010), it is more likely PhD students using qualitative interviews stopped sampling when the number of samples is a multiple of ten rather than when saturation has occurred with 25-30 being a typical recommendation (Dworkin, 2012). In saturated sampling is a non-sampling technique in which all (100%) members of the target population are selected because they are too few to make a sample out of them (Borg & Gall, 2007). The study also employed saturation technique to select the whole of 111 preschool teachers representing 100% of the study population. The study sample size is shown in Table 3.2

Table 3.2 Sampling Frame

Category of Respondents	Population	Sample	Percentage
Primary Head Teachers	37	37	100%
Pre-primary Teachers	111	111	100%
Sub-County Director ECDE	1	1	100%
Quality Assurance Standards Officer	2	2	100%

3.6 Research Instruments

The research instruments consisted of questionnaires, interview schedules. The teacher's questionnaire; the Head teachers, Sub-County Director of ECDE, Quality Assurance and Standards Officer interview schedules, and observation checklist was used to collect data from the primary head teachers, preschool teachers to collect relevant information about the evaluation of quality and relevance of ECDE Policy in pre-primary schools.

3.6.1 Questionnaire

Orodho (2005) describes a questionnaire as a tool that comprises of a set of written questions to be personally completed by the respondents. Mugenda and Mugenda (2005) argue that questionnaires give a detailed answer to complex problems. Additionally, questionnaires are popular in data collection because of the relative ease and cost-effectiveness with which they are constructed and administered.

3.6.1.2 Questionnaire for Pre-primary Teachers

The questionnaires were constructed based on the study objectives and the research questions. The questionnaire consisted of a background and four parts. The background information included ECD Centre Number, Type of pre-School, Year of Establishment, Registration Status, Enrolment and number of teachers. Part A consists collection of data on Learning Structure (Building, Toilets, Furniture, Physical/Psychomotor Materials/Equipment, and Playground). Part B included information on Suitability of Registered Providers, Pre-primary teachers and Other Staff Members; Part C was about Health and Nutrition, Centre Feeding Program and Safety Guidelines. Part D covered information on Teacher Child Ratio. This included a likert scale where 1= (Strongly

Disagree) 2 = (Disagree) 3= (Undecided) 4 = (Agree) and 5 = (Strongly Agree) Teachers Questionnaires is attached as Appendix IV.

3.6.2 Interview Schedule

Kothari, (2014) asserts that an interview is a two-person dialogue initiated by the interviewer for the specific purposes for obtaining relevant information and focused on content specified by research objectives. In this an in depth interview was conducted to solicit the required information from the sampled Head teachers. It is usually acknowledged that small samples are characteristic of qualitative research, Qualitative researchers collect much detailed information from a relatively small number of individuals. The richness of the information gathered is most important, rather than an emphasis upon large sample sizes as would be used in quantitative research. For many research projects, eight respondents was sufficient.

The data gathered from interview schedule helped to verify information obtained through questionnaires (Mugenda & Mugenda, 2005). This study preferred to use interview schedule because an interview schedule provides a free environment for the respondents to express themselves and even give rise to additional information, which could not be catered for in the questionnaires (Ader, Van, Deltaan, & Beekman, 2008).

3.6.2.1 Interview Schedule for Primary School Head Teachers, QASO and Sub-County Director

A Few guiding questions were prepared focusing on collecting data related to implementation of the ECDE policy; Interviews sought the information on the centre infrastructure and facilities; personal suitability of registered providers, pre-primary teachers and other staff members in ECDE Centres; food, health and safety guidelines and teacher child ratio in the ECDE centres All interviews were recorded and transcribed for analysis purposes, with the consent of the respondents. The interview Schedule is attached as Appendix VI.

3.6.2 Document analysis

Onen & Oso (2009) describe document analysis as a critical examination of public or private recorded information related to information under investigation. According to Punch (2009) documents both historical and existing are rich sources of data for

education and social research. Documents may include letters, plans, operational schedules, personal diaries, and photographs of activities, daily reports and models (Punch, 2009). Document analysis was used to determine how the ECDE policy is being implemented. The documents to be reviewed included progress record, first aid kit, health record, and photos of Centre facilities. Document analysis is attached as Appendix V.

3.6.3 Pilot Testing of the Instrument

Pilot research was done among the respondents in ECDE public schools neighbouring Kisii Central Sub County. The respondents chosen for pilot testing were not engaged in the main study. Piloting permits revisions to minimize ambiguity from study items so that they may be reiterated and simplified with a clear meaning (Creswell, 2012). The study randomly picked 4 pre-school head teachers and 11 pre-school teachers for pilot study. After split-half test methods is administered to the respondents in pilot testing exercise, the questionnaires were coded, entered and analyzed through SPSS to determine the coefficient of reliability. The Cronbach Alpha (α) was used to measure internal consistency and to establish every research objective in order to help evaluate the possibility for the objectives under review; the same output was yielded if the research is conducted later on. The questions were reviewed to ensure that all respondents interpreted them in the same manner. In addition, the average time required to complete the questionnaire was recorded, and the overall pilot test results were assessed and adjustments was made prior to the creation of the final instruments based on the findings of the instruments review and pilot test.

3.7 Validity and Reliability of Research Instruments

3.7.1 Validity of the Questionnaires

Oswald & Price (2006) defines face validity as the degree to which an instrument appears to measure what it claims. Also, validity is the degree to which the instrument measures what it is designed to measure (Mugenda & Mugenda, 2005) The instruments, immediately after the design, was presented to respondents to determine whether the questions are clear, comprehensible, and in sound order (face validity). The face validity was achieved by asking respondents to rate the tools as they appear to them. The responses enabled the researcher to authenticate whether the tools were adequately

constructed to collect the required data. Expert judgment by lecturers was also used to ensure validity.

3.7.2 Reliability of Questionnaire

Reliability is the extent to which results are consistent over time and an accurate representation of the total population and if the results of a study can be reproduced under a similar methodology (Joppe, 2000). Before the actual study, a pilot study was conducted in two pre-primary schools this included six preschool teachers. The questionnaire was piloted so as to check and ensure that the wording of questions was clear; to identify and remove unnecessary questions or information; and lastly to identify topics and questions that had been omitted, but were necessary to yield usable data. These schools were not included in the actual study. The research instruments, the questionnaire and interview schedule were pilot-tested. Through piloting, item deficiency and ambiguity was uncovered (Faranenkel & Wallen 2009).

The study used the test-retest method to determine the reliability of the Questionnaire. The research instruments was administered to the same group of respondents twice during pilot study. A two week lapse between the first and second test was allowed. The scores from the tests was correlated using Pearson's product moment correlation coefficient formulae as follows:

$$r = \frac{N\sum xy - \sum x \sum y}{\sqrt{[N\sum x^2 - (\sum x)^2][N\sum y^2 - (\sum y)^2]}}$$

Where

r	=	the correlation coefficient
N	=	the number of respondents completing the questionnaire
x	=	the scores of the first of the test
y	=	the scores of second of the test

A correlation coefficient greater or equal to 0.6 was considered appropriate (George & Maller, 2003). Using SPSS v. 22 to compute the reliability of the questionnaires, the study recorded a reliability coefficient of 0.734.

3.7.3 Trustworthiness of Qualitative Instruments

A good qualitative researcher should assure fellow researchers and respondents that the findings are credible and trustworthy. Le Compe & Goetz (1982) argues that research should be concerned with the accuracy and truthfulness of the findings. The current research study adapted triangulation as a method of ensuring validity and reliability of interviews schedules. Triangulation refers to the use of two or more data sources, methods, theoretical perspectives, investigators, and approaches to analysis in the study of a single phenomenon and then validating the congruence among them. The major goal of triangulation is to circumvent/avoid the personal biases and overcome the deficiencies (Denzin & Lincoln (2008)). In addition, according to Brewer & Hunter (1989) the use of different methods compensates for their individual limitations and exploits their respective benefits. The interview was also administered to primary head teachers, QASO and the Sub County Director of ECD.

3.8 Data Collection Procedures

Before the collection of any data from the sample, an authorization letter was sought from the University Ethical Review Committee. The letter enabled the researcher to acquire a research permit from the National Commission for Science, Technology and Innovation. This permit enabled the researcher to get permission from the County Commissioner and the Director of Education Kisii County and Kisii Central Sub-County Education Officer to carry out the study in the in the pre-schools. Respondents were informed on the importance of the study and was assured verbally of confidential treatment of information provided. Letters notifying various institutions and persons whom the intended study target was dispatched two weeks before the researcher visited the respondents. Where possible appointments were booked in person so as to give the respondents a hint on what the study expected of them. Respondents was given enough time to prepare fully before being involved in the study.

To increase response return rate of the head teachers' questionnaires, personal visit was made, by giving them relevant instructions on how to fill in the questionnaires. The questionnaire were then collected on the very day it is administered this ensured that they are not lost. During the period of administration of questionnaires to the head teachers the very particular day would be used for interviewing ECDE teachers. The answers to the questions asked was recorded in a field note book and kept for analysis.

After the administration of Teachers questionnaires and preschool teacher's interviews then researcher sought for appointment to administer the observation checklist to collect the required data from the field.

3.9 Data Analysis Procedure

Both quantitative and qualitative data were analysed.

3.9.1 Quantitative Data Analysis.

Data from questionnaires was analysed using descriptive and inferential statistics by the help of SPSS version 22. Wolveto (2009) describes descriptive statistics as one that involves the process of computing a mass of raw data into tables, charts, with frequency distribution, and percentages. On the other hand, inferential statistics consists of procedures used to make inferences about the population characteristics from information contained in the sample. This is presented in Table 3.3.

Table 3.3 Quantitative Data Analysis Matrix

Objectives	Data collection instruments /Items	IV	DV	Method of Analysis
Establish the relationship between pre-primary centres' implementation of the Policy Guidelines on the provision of infrastructural facilities and the acquisition of basic competencies among pre-primary learners	Teacher's Questionnaire Part A	Infrastructure facilities policy	Core competencies	Descriptive statistics: frequency counts and percentages Pearson correlation coefficient
Determine the extent the implementation Service Providers Suitability pre-primary policy guidelines predicts the acquisition of basic core competencies among pre-primary learners	Teacher's Questionnaire Part B	Personnel suitability	Core competencies	Descriptive statistics: frequency counts and percentages Pearson correlation coefficient
Examine the influence of pre-primary centres' implementation of the pre-primary Policy Guidelines on food, health and safety on the acquisition of basic competencies among pre-primary learners	Teachers' Questionnaire Part C	Health and safety guidelines	Core competencies	Descriptive statistics: frequency counts and percentages Pearson correlation coefficient
Find out the relationship between pre-primary centres' implementation of the Policy Guidelines on	Teachers' Questionnaire Part E	Teacher child Ratio	Core competencies	Descriptive statistics: frequency counts and

teacher child ratio and the acquisition of basic core competencies among pre-primary learners	percentages Pearson correlation coefficient
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3.9.2 Qualitative Data Analysis

The study followed the principles of thematic analysis as proposed by Braun and Clarke, (2006). According to Braun and Clarke (2006) thematic analysis is a method for identifying and analysing patterns (themes) contained by data. It simply organizes and describes data set in details. Furthermore, thematic analysis interprets various aspects of research. Thematic analysis was appropriate for this study because it is not grounded in any particular theoretical framework and can hence be applied across a broad range of qualitative approaches, making it flexible. The study adapted all the phases of thematic analysis. The six phases of thematic analysis are as indicated in table 3.4:

Table 3.4 Phases of thematic Analysis

Phase	Description of the phase processes		
	Phase		
Phase 1	Becoming Familiar with the Data		Reading & rereading the data in order to become familiar with what the data entails.
Phase 2	Generating codes	initial	The researcher generates initial codes by noting where and how patterns occur. This occurs through data reduction by collapsing data into labels in order to create categories for efficient analysis.
Phase 3	Searching themes	for	Codes are assembled into overarching themes that accurately depict the data. At this point the researcher describes exactly what the themes mean.
Phase 4	Reviewing themes	the	The researcher looks at how the themes support the data and the overarching theoretical perspective. If it seems incomplete, the researcher may find what is missing.

Phase 5 Defining and naming the themes and The researcher defines what each theme is, which aspects of data are being captured, and what is interesting about the themes.

Phase 6 Producing the report The researcher writes the report by deciding which themes make significant contributions to understanding what is going on within the data.

Extracted from Braun & Clarke (2006)

3.10 Ethical Considerations

No study should be undertaken without ethical considerations (Govil, 2013). The participants were given introductory letters on appendix (I) which provided them the information on the purpose of the study and its aims. They were also given consent forms (appendix, II) from which informed consent was obtained before they take part in the study. In addition the researcher ensured anonymity and confidentiality of the participants were maintained. Confidentiality was assured by putting statements on confidentiality on the questionnaires and verbally be communicating during the administration instruments. Primary school head teachers Questionnaire is appendix iii and preschool teacher's Questionnaire is appendix IV. To ensure this, no personal details were known by anyone other than the researcher, the participants were allocated pseudonyms to conceal their identity. The researcher ensured that the participants are treated with dignity and respect throughout the duration of the study. The information gathered were analysed by the researcher only and handed over to the supervisor as a research report.

CHAPTER FOUR

FINDINGS, INTERPRETATIONS AND DISCUSSIONS

4.0 Introduction

This chapter presents the findings, interpretations and the discussions? of the study and has been sub-divided into sections and sub-sections. The background information of the school of study participants such as ECD Centre sponsorship and registration status have been presented first. The research findings on the basis of the study objectives and hypotheses were also presented. The quantitative data was analysed using both descriptive and inferential statistics. The descriptive statistics were used to describe and summarize the data in form of tables, charts, frequencies and percentages. As such, all information have been cross-discussed to capture views from the questionnaires, interviews, focus group discussions, document reviews and the observations made. The inferential statistics were used to help make inferences and draw conclusions. Pearson Product-Moment Correlation, independent t-test, analysis of variance and multiple regression analyses were used to investigate the relationship between the variables. All tests of significance were computed at $\alpha = 0.05$. The Statistical Package for Social Sciences (SPSS) version 26.0 was used to analyze the quantitative data. This chapter also presents qualitative results and discussions of the data collected from in-depth interviews. For the qualitative data, a thematic analysis approach was used.

4.1 Purpose of the Study

The study sought to assess the extent to which the Kenyan pre-primary education policy guidelines implementation predicts the acquisition of core basic competencies among pre-primary school learners in Kisii Central Sub-County.

4.1.1 Objectives of the Study

The study was guided by the following objectives:

- i. Establish the relationship between provision of infrastructural facilities and the acquisition of basic competencies among pre-primary learners.
- ii. To investigate the extent to which service providers suitability predicts the acquisition of basic core competencies among pre-primary learners.

- iii. To examine the influence of implementation of guidelines on food, health and safety on the acquisition of basic competencies among pre-primary learners.
- iv. To find the relationship between teacher-child ratio and the acquisition of basic core competencies among pre-primary learners.

4.1.2 Hypothesis of the Study

The study was guided by the following objectives:

- i. Provision of infrastructural facilities has no influence on acquisition of basic competencies among learners in ECD centres.
- ii. Service provider’s suitability does not predict acquisition of basic competencies among learners in ECD centres.
- iii. Implementation of guidelines on food, health and safety have no influence on acquisition of basic competencies among learners in ECD centres.
- iv. Teacher-child ratio has no influence on the acquisition of basic core competencies among learners in ECD centres.

4.2 Response Return Rate

Table 4.1, which shows the summary of return rate of selected study participants, reveals that the return rate of the respondents were acceptable for the study.

Table 4.1: Response Return Rate

Category of Respondents	Population	Sample	Returned	Rate
Pre-primary Teachers	111	111	93	83.8%
Primary Head Teachers	37	37	28	75.7%
Sub-County Director ECDE	1	1	1	100.0%
Quality Assurance Standards Officer	2	2	2	100.0%
Total	151	151	124	82.1%

All 111 preschool teachers in the ECD centres within Kisii Central Sub-County who were targeted for the study were included in the study and were given questionnaires. Out of this number, 93 (83.7%), of the questionnaires were returned for analysis. However, some 18 (16.3%) questionnaires were either inappropriately filled, returned after the

deadline or were not received at all. With regard to the other tools of data collection, 28 (75.7%) of the head-teachers, the Sub-County Director of ECDE and the Quality Assurance and Standards Officers (QASO) were accessed and interviewed. Thus, the research established an overall return rate of 82.1%, suggesting that the return rate was adequate for analysis. Creswell (2014) and Oso & Onen (2009) recommends that a response rate of above 60% is suitable, above 70% is very good and above 80% is excellent for analysis and reporting on a survey study. Based on this assertion, the current study's response rate is therefore excellent. The recorded high response rate was attributed to the fact that the questionnaire and other tools of data collection in this study were personally administered by the researcher to the identified study participants, who were pre-notified of the intention of the study. In addition, the questionnaire items were developed in such a way that they were easy to comprehend and respond to, besides the questionnaire was not too long to make a respondent lose interest. Lastly, extra efforts were made by the researcher to clarify queries as well as prompt the respondents to fill the questionnaires.

4.3 Background Information

Background information was captured to understand the nature and profile of the ECD centers included in the study. The information included classification, sponsorship and registration status of the centers. The results were analysed and summarized into frequency and percentages as shown in Table 4.2.

Table 4.2: Background Information of ECDE Centres

Characteristic	Response	Frequency	Percent (%)
Centre Sponsor	County Government	26	70.3
	Private	6	16.2
	Faith Based	5	13.5
	Total	37	100.0
Registration Status	Registered	33	89.2
	Not Registered	4	10.8
	Total	37	100.0

From the results in Table 4.2, majority (70.3%) of the ECD centres were sponsored by county governments of Kisii while only 16.2% were under private sponsorship as the

other 13.5% were sponsored by faith based organizations. In terms of registration status, the results of the survey established that 89.2% of the ECD centres were duly registered with valid Centre registration numbers. However, about a tenth (10.8%) were operating without registration thus implying that they had not been inspected for compliance to various registration guidelines. This could suggest that some ECD centres in Kisii Central Sub-County do not comply with basic statutory requirements for operation. This therefore may subject them to face legal challenges if they fail to comply with established guidelines, particularly if non-compliance leads to harm. This can result in costly litigation and compensation claims. Similarly, Sitati, et al., (2016) also found that other than being at constant conflict with the regulatory bodies, without adherence to curriculum guidelines and educational standards, children may not receive the appropriate cognitive stimulation and learning experiences necessary for their development. This can hinder their academic progress and readiness for primary school.

4.4: Validity and Reliability of the Pre-primary Teachers' Data

4.4.1: Internal Validity

The study sought to explore the degree of confidence that the causal relationship being tested was not influenced by other factors or variables, except the variables included in the study. This was done through establishing internal validity of the scales used in the study. Pearson Product Moment Correlations analysis by the aid of SPSS version 26.0 was conducted to investigate internal validity. In this regard, the test was done by correlating scores of each item in the sub-scale with the respective total score. Items of the sub-scale that significantly correlated with total score of the sub-scale indicated that the items were valid. Sullivan (2001) affirms that an item has good validity index provided it significantly correlates with its sub-scale total. Equally, Creswell (2014) asserts that the higher the validity coefficient, the more accurate the item measures the constructs of the sub-scale. Table 4.3 gives the summary of Pearson Product Moment Correlation Coefficients for each of the sub-scales, as test of validity of the pre-primary teacher questionnaire.

Table 4.3: Pearson Product Moment Correlation for Test Validity of Questionnaire

Scale/Item	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11
Learning Structure/building	.298 **	.395 **	.284 **	.370 **	.564 **	.490 **	.572 **	.343 **	.536 **	.561 **	.411 **
	Item 12	Item 13	Item 14	Item 15							
	.217 **	.108 *	.155 *	.501 **							
Status of Toilets	.229 *	.304 **	.339 **								
Status of Furniture	.444 **	.673 **	.541 **	.431 **						-	-
Psycho-motor equipment	.523 **	.435 **	.411 **	.673 **	.101 *	.561 **	.444 **				
Status of playground	.322 **	.330 **	.430 **	.673 **							
Health Facilities	.223 **	.331 **	.345 **	.377 **	.099 *	.444 **	.515 **	.344 **	.223 **	.345 **	
Feeding program	.234 **	.439 **	.514 **	.456 **	.100 *	.411 **	.455 **	.399 **	.710 **	.549 **	.333 **
	Item 12	Item 13	Item 14	Item 15							
	.311 **	.400 **	.241 **	.509 **							
Safety & protection	.441 **	.611 **	.234 **	.423 **	.608 **	.661 **	.339 **	.404 **	.123 **	.429 **	.432 **
	Item 12	Item 13	Item 13	Item 14	Item 15	Item 16	Item 17	Item 18	Item 19	Item 20	
	.322 **	.428 **	.331 **	.067 *	.126 **	.455 **	.338 **	.501 **	.123 **	.560 **	
Basic core competencies	.327 **	.394 *	.503 **	.018	.429 **	.17* *	.605 **	.538 **	.205 **	.261 **	.478 **
	Item 12	Item 13	Item 14	Item 15							
	.607 **	.401 **	.351 **	.301 **							

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

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

From Table 4.3, it is evident that most of the items in each sub-scale significantly correlated with their sub-scale totals, except for a few. For example, all the items in the

sub-scales of learning structure/building, status of toilets, status of furniture, psychomotor equipment, status of playground, health facilities and feeding program were significantly correlated with their sub-scale totals. It is only in the sub-scales of basic core competencies that one item did not significantly correlate with its sub-scales totals. Specifically, item 4 did not meet adequate validity given that it failed to significantly correlate with the subscale total. This item was excluded from the final analysis of the data given that it had failed the validity test. However, the data from the variables under service providers; teachers/caregivers, head teachers, Centre managers and health services providers were not included in this test because they were measured in binary form. Nonetheless, given that all other items in each of the other sub-scales reached significant levels, it was concluded that the questionnaire items were of adequate validity.

In addition, a Measure of Sampling Adequacy was investigated by subjecting the pre-primary school teachers' survey data to suitability tests using the Kaiser-Meyer-Olkin (KMO Index) and the Bartlett's Test of Sphericity. This was considered necessary because Gravetter & Wallnau (2000) affirm that Bartlett's Test for Sphericity relates to the significance of the study and shows the validity of responses obtained in relation to the problem that the study seeks to address. In this regard, the suitability tests of the teachers' questionnaire data set for analysis was assessed for each sub-scale and the results was summarized as in Table 4.4.

Table 4.4: KMO and Bartlett's Test

Sub-scale	Kaiser-Meyer-Olkin (KMO)	Bartlett's Test for Sphericity		
		Approx. Chi-	Df	Sig.
Learning Structure/building	.370	362.92	105	.000
Status of Toilets	.474	9.02	3	.029
Status of Furniture	.386	9.68	6	.039
Psychomotor equipment	.437	81.44	21	.000
Status of playground	.451	24.49	6	.000
Health Facilities	.473	96.97	45	.000
Feeding program	.324	479.452	91	.000
Safety & protection	.212	869.94	190	.000
Basic core competencies	.294	895.23	.190	.000

Source: Survey Data (2023), SPSS Analysis

Table 4.4 shows the results of the Kaiser-Meyer-Oklin measure of sampling adequacy (KMO Index) and the Bartlett's Test for Sphericity for each subscale of the preschool teachers' questionnaire. It reveals that the questionnaire had sufficient sampling adequacy. This is in line with the recommendation by Kaiser (1974) who holds that the Kaiser-Meyer-Oklin measure of sampling adequacy index > 0.5 is of acceptable internal validity. In addition, Tabachnick & Fidell (2001) asserts that Bartlett's Sphericity test statistic should be less than 0.05 for an adequate internal validity. From the table, Bartlett's test for Sphericity are all significant ($p = .05$,) and Kaiser-Meyer-Olkin indexes are all > 0.5 for all the sub-scales of the questionnaire. Hence, based on the results, it was concluded that each variable was predicted without error by the other variables. This further suggests that the data were of adequate internal validity therefore it was suitable for inferential analysis.

4.4.2: Reliability of the Instruments

Cronbach's alpha coefficient analysis was used to investigate the measure of internal consistency of the questionnaire data. Internal consistency is the degree of interrelationship or homogeneity among the items on sub-scale, such that they are consistent with one another and measuring the same thing, that is, it measures how closely related a set of items are as a group. In this study, the reliability for multi-item opinion items were computed separately for all the sub-scales in the teachers'

questionnaires and the coefficient alpha values of the variables were reported in Table 4.5.

Table 4.5: Internal Consistency: Cronbach’s Alpha Results for the Questionnaire

Scale	No. Items	Cronbach’s alpha	Conclusion (Reliable/Unreliable)
Learning Structure/building	15	.710	Reliable
Status of Toilets	3	.711	Reliable
Status of Furniture	4	.721	Reliable
Psycho-motor equipment	7	.697	Reliable
Status of playground	4	.719	Reliable
Health Facilities	10	.776	Reliable
Feeding program	15	.801	Reliable
Safety & protection	20	.800	Reliable
Basic core competencies	15	.788	Reliable

Source: Author (2023), SPSS Analysis.

Table 4.5 indicate that all the sub-scales met the required level of internal consistency of reliability. It suggests that all the items in each sub-scale hanged up well with the other items and therefore there was no item deleted from any sub-scale in the questionnaire. The Cronbach’s alpha values ranged from a low of 0.697 (Psycho-motor equipment sub-scale) to a high of 0.810 (feeding program sub-scale). The Cronbach’s alpha values for all the sub-scales suggest that the instruments had acceptable reliability for the study, as recommended by Oso and Onen (2013) that a coefficient of at least 0.60 is of acceptable reliability. This implies that the instrument had acceptable inter-item consistency reliability standard, indicating that the questionnaire was suitable for data collection because it sufficiently measured the constructs for which it was intended to measure.

4.4.3 Common Method Bias

In the study both independent and dependent variables data were obtained from the same respondents at one point in time in the same measurement context with the same item context and similar item characteristics. This means that there was a possibility that the study could suffer from Common Method Bias (CMB). Common method bias describes the measurement error that is compounded by the sociability of respondents who want to provide positive answers (Podsakoff, MacKenzie & Podsakoff, 2003). In this regard, the

study investigated presence of CMB by use of Harman single-factor test where all the measures in the study were loaded into an exploratory factor analysis, with the assumption that the presence of CMB would have been indicated by the emergence of either a single factor or a general factor accounting for the majority of covariance among the measures. Use of dimension reduction in factor analysis with Herman single factor test, as a test of common method bias, revealed that a single factor only accounted for 24.3% which was far too less than 50% of variance, signifying that there was no significant threat of common method bias in the study.

4.5 Diagnostic Test

Given that the study used statistical tests that includes, Pearson's product moment correlation coefficient, Analysis of Variance (ANOVA), simple and multiple regression analysis, which rely upon certain assumptions about the variables used in the analysis, diagnostic test was necessary. The following diagnostic tests were done to ascertain the suitability of the collected data for multiple regression analysis: normality; absence of perfect multi-collinearity; homoscedasticity and heteroscedasticity and independence of errors.

4.5.1: Normality Test Results

In order to make valid inferences from a regression, the residuals of the regression should follow a normal distribution. Non-normally distributed variables distorts relationships and significance of tests. There are two main methods of assessing normality; graphical and statistical tests. Whereas, graphical interpretation has the advantage of allowing good judgment to assess normality in situations when numerical tests might be over or under sensitive, it may lead to false conclusion of normality status. Equally, while statistical tests have the advantage of making an objective judgment of normality they have the disadvantage of sometimes not being sensitive enough at low sample sizes or overly sensitive to large sample sizes. The two well-known statistical tests of normality are Kolmogorov–Smirnov test and the Shapiro–Wilk test. The Shapiro–Wilk test is appropriate method for small sample sizes (<50 samples) while Kolmogorov–Smirnov test is used for $n \geq 50$. Given our data sample ($n=93$), Kolmogorov–Smirnov test was used to examine the normality of the variables, in line with the recommendation of Gravetter & Wallnau (2000). The null hypothesis states that data are taken from normal distributed

population. Thus, when $P > 0.05$, null hypothesis accepted and data are assumed to be normally distributed. The test is based on the correlation between the data and the corresponding normal scores, with $K-S = 1$ when their correlation is perfectly normal. This means that a significantly ($p < .05$) smaller $K-S$ than 1 implies that normality is not met. Hence, the data is normal when Kolmogorov–Smirnov test value ($K-S$) is $\geq .05$, as asserted by Tabachnick and Fidell (2001). Table 4.6 is the SPSS output showing Kolmogorov–Smirnov tests results.

Table 4.6: Test of Normality of the Data Set

	Kolmogorov–Smirnov		
	Statistic	df	Sig.
Learning Structure/building	.101	93	.066
Status of Toilets	.182	93	.000
Status of Furniture	.095	93	.069
Psychomotor equipment	.095	93	.080
Status of playground	.101	93	.067
Health Facilities	.243	93	.000
Feeding program	.100	93	.059
Safety & protection	.099	93	.098
Basic core competencies	.097	93	.101

a. Lilliefors Significance Correction
Source: Survey Data (2023).

Evident in Table 4.6, there was a violation of normality by two variables, status of toilets and health facilities, given that its p value was less than 05. As a result, they had to be transformed first to remove skewness that was observed in the original data before being used in inferential statistics, as explained by Thode (2002). Since both the variable exhibited negative skewness, they were transformed through the use of arcsine of the square root of the variable ($\arcsin X_i^{1/2}$). However, the rest of the variables exhibited normal distribution given that there were no statistically significant differences ($\text{sig.} < .05$) noted in any of other variables with their corresponding normal scores. All significant values being greater than the prior set value of .05.

4.5.2: Assumptions of Multi-Collinearity

Multi-collinearity means that two or more items measure the same entity and are identical. In other words, it refers to a situation in which a predictor variable in a multiple regression model could be linearly predicted from the other variables with a considerable

degree of accuracy (Tabachnick & Fidell, 2001). This indicates that perfect multi-collinearity creates redundancy given that what a regressor explains about the response is overlapped by what another regressor or a set of other regressors explain. Although, correlation matrix can be used to investigate the pattern of inter-correlation among the variables, its use is inadequate, hence, in this study interpretation of Tolerance and Variance Inflationary Factor (VIF) values was used to investigate the assumption of multi-collinearity. The variable's tolerance is $1-R^2$, while VIF is its reciprocal. The proportion of variance in the predictor that is not accounted for by the other predictors defines tolerance. Tolerance below 0.10 or a VIF greater than 10 would be symptomatic of multi-collinearity problems, as observed by O'Brien (2007). Table 4.7 shows the SPSS output indicating Tolerance and Variance Inflation Factors values.

Table 4.7: Tolerance and Variance Inflation Factor (VIF) Statistics

Model	Collinearity Statistics	
	Tolerance	VIF
1 Learning Structure/building	0.55	1.83
Status of Toilets	0.60	1.67
Status of Furniture	0.66	1.53
Psycho-motor equipment	0.55	1.81
Status of playground	0.90	1.11
Health Facilities	0.39	2.55
Feeding program	0.41	2.43
Safety & protection	0.31	3.23

Dependent Variable: Strategic Plan Implementation

Source: Survey Data (2023).

As a rule of thumb, tolerance value smaller than 0.10 and VIF greater than 10 indicates that the variable under consideration is almost a perfect linear combination of other independent variables already in the equation thus it should not be added to the regression equation because it is insignificant. Table 4.7 indicates that multi-collinearity conditions were met, given that each of the variables had adequate tolerance (tolerance value > 0.10) and Variance Inflation Factor (VIF < 10). This finding confirms that there was no violation of multi-collinearity assumptions which is a requirement for multiple regression analysis.

4.5.3: Homoscedasticity and Heteroscedasticity

The study also investigated the assumption of homoscedasticity, which means that the variance of errors is the same across all levels of the independent variable. When the variance of errors differs at different values of the independent variable then heteroscedasticity is indicated. In line with the recommendation of Osborne and Waters (2019,) the assumption of homoscedasticity was checked by visual examination of a plot of the standardized residuals by the regression standardized predicted value. According to Gravetter and Wallnau (2000), if a model is well-fitted, then there should be no pattern to the residuals plotted against the fitted values. Non-constant variance of the residuals would, therefore, imply heteroscedasticity. This was demonstrated graphically by fitting residuals versus fitted (predicted) values, as in Figure 4.1 that follows.

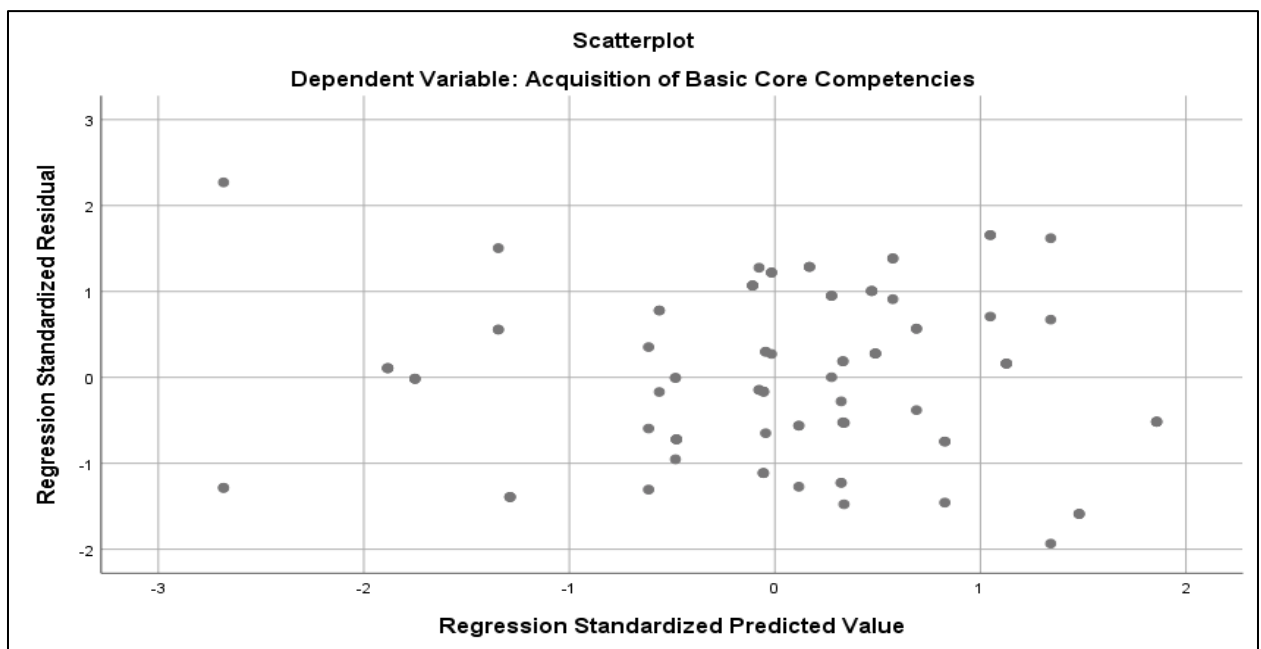


Figure 4.1: Scatter Plot of Standardized Residuals against Standardized Predicted Values Source: Survey Data (2023).

Figure 4.1 shows that the data points nearly formed a patternless cloud of dots characterizing heteroscedasticity or absence of Homoscedasticity. Heteroscedasticity is implied when the scatter is not even and have no definite patterns (Gravetter and Wallnau, 2000). Consequently, the assumption of Homoscedasticity, which refers to equal variance of errors across all levels of the independent variables, was not significantly violated. Therefore, the assumption that errors were spread out consistently between the variables, indicating that the variance around the regression line was the

same for all values of the predictor variables, was upheld. As a result, regression and correlation analyses were deemed fit.

4.5.4 Test for Independence of Errors

Generally, errors are assumed to be independent and violating this assumption leads to biased estimates of standard errors, though the estimates of the regression coefficients remain unbiased, yet inefficient. In this regard, the assumption holds that the observations in the sample are independent from each other, meaning that the measurements for each sample subject are not influenced by or related to the measurements of other subjects. In accordance with the recommendations of Kothari and Garg (2014), Durbin Watson test was used to examine independence of errors. Table 4.8 provides the test results.

Table 4.8: Test of Independence: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.696 ^a	.485	.436	.28135	2.004

a. Predictors: (Constant), Safety and Protection, Learning Structures/building, Playground, Furniture, Toilets, Psychomotor equipment, Feeding program, Health Facilities

b. Dependent Variable: Acquisition of Basic Core Competencies

Source: Survey Data (2023).

It is evident in Table 4.8 that the data was not auto-correlated; therefore, the assumption of independence was not violated as revealed by the Durbin-Watson statistic of 2.004 which is between 1.5 and 2.5, as recommended by Tabachnick and Fidell (2001).

4.6 Level of Basic Core Competencies among Pre-Primary Learners in Kisii Central Sub-County

The study sought to investigate the level of basic core competencies among pre-primary learners in Kisii Central Sub-County. It was the dependent variable of the study, hence it was necessary to create insight on it. The study operationalized basic core competencies among pre-primary learners as ability of the learners to exhibit reading, social, oral and numeracy skill. In this regard, a fourteen-itemed- questionnaire interrogated the level of

basic core competencies among the pre-primary learners. The surveyed pre-primary teachers rated the indicators of basic core competencies in their learners in the scale of 1 to 5, where 1-Strongly Disagree; 2-Disagree; 3-Undecided; 4-Agree; and 5-Strongly Agree. Their views of the respondents on indicators of basic core competencies among the pre-primary learners were summarized in percentage frequencies and means with their standard deviations, as shown in Table 4.9.

Table 4.9: Survey on Core Basic Competencies among the Pre-primary Learners (n=93)

Item	1	2	3	4	5	Mean	SD
The learners include others in their activities, even if they are not friends.	20 (21.5%)	28 (30.1%)	12 (12.9%)	21 (22.6%)	12 (12.9%)	2.75	0.82
They try to always be respectful of others.	23 (24.7%)	32 (34.4%)	25 (26.9%)	10 (10.8%)	3 (3.2%)	2.33	0.63
They can explain their interests and ideas clearly to other children/teachers.	32 (34.4%)	20 (21.5%)	18 (19.4%)	17 (18.3%)	6 (6.5%)	2.41	0.75
They recognize numbers and count things appropriate to their	25 (26.9%)	28 (30.1%)	9 (9.7%)	18 (19.4%)	13 (14.0%)	2.63	0.86
They ask questions when they don't understand something	22 (23.7%)	39 (41.9%)	15 (16.1%)	10 (10.8%)	7 (7.5%)	2.37	0.82
They sit still and pay attention to	18	27	6 (6.5%)	25	17	2.96	1.1
They can find information they need to finish a task or solve a problem.	32 (34.4%)	23 (24.7%)	16 (17.2%)	10 (10.8%)	12 (12.9%)	2.43	0.96
They are supportive to their friends	23 (24.7%)	38 (40.9%)	6 (6.5%)	16 (17.2%)	10 (10.8%)	2.48	0.85
They can make age appropriate choices that benefit their well-being and keep them safe	45 (48.4%)	21 (22.6%)	12 (12.9%)	9 (9.7%)	6 (6.5%)	2.03	0.74
They listen when others have problems and can help solve conflicts.	12 (12.9%)	18 (19.4%)	36 (38.7%)	21 (22.6%)	6 (6.5%)	2.90	0.98
They engage with ideas or information that is challenging for them.	29 (31.2%)	38 (40.9%)	16 (17.2%)	9 (9.7%)	1 (1.1%)	2.09	0.65
They take instructions and follow it	38 (40.9%)	13 (14.0%)	18 (19.4%)	8 (8.6%)	16 (17.2%)	2.47	0.72
They speak up for themselves when they need help or support.	24 (25.8%)	27 (29.0%)	21 (22.6%)	15 (16.1%)	6 (6.5%)	2.48	0.90
They can come up with new, creative ideas during play activity	9 (9.7%)	9 (9.7%)	24 (25.8%)	30 (32.3%)	21 (22.6%)	3.48	1.2
Composite mean of acquisition of core basic competencies in ECDE centres						2.56	0.74

Key: 1-Strongly Disagree; 2-Disagree; 3-Undecided; 4-Agree; and 5-Strongly Agree.
Source: Survey Data (2023)

The findings of the study established that the level of acquisition of core basic competencies among the learners in ECD centres in Kisii Central Sub-County are generally not meeting expectations but only approaching expectation. This was interpreted from a composite mean rating of 2.56 in the acquisition of core basic competencies scale of 1 to 5, with a standard deviation of 0.74. This suggests that in majority of the ECD centres within Kisii Central Sub-County many learners have low ability to communicate and collaborate with each other. For example, it emerged that collaboration among the ECD learners was only rated at 2.75 (SD=0.82), as only 22.6% and another 12.9% of the respondents agreed that their learners exceeded and highly exceeded expectation, respectively, on how they include others in their activities even if they are not friends. On the flip flop, more than a half (51.6%) of the ECD teachers agreed that their learners were below expectation or just merely approaching expectation on how they involve others in their activities.

By the same token, the results of the survey established that many of the ECD learners have low competencies in communication skills. This was reflected by a mean rating of 2.41 (SD=0.75) in the scale of 1 to 5 on how the learners were able to explain their interests and ideas clearly to other children/teachers. While just 24.8% of the respondents either agreed or strongly agreed that their learners were able to explain their interests and ideas clearly to other children/teachers, majority (55.9%) of them confirmed that their learners were not able to effectively explain their interests and ideas to other children/teachers.

Likewise, while only 18.3% of the surveyed ECD teachers either agreed or strongly agreed that their learners do ask questions when they don't understand something, a significant majority (65.5%) of them refuted the claim that their learners always ask questions. They rated their learners ability to ask questions when they don't understand something as either only approaching or simply below expectation (mean=2.37; SD=0.82). This suggests that, on average, many of the ECD learners in Kisii Central sub-county have low communication and self-efficacy skills which are core competencies required among the learners at this level. Similarly, their ability to speak up for

themselves when they need help or support was rated at 2.48 (SD=0.90) in the scale of 1 to 5, suggesting that majority of the learners have low self-efficacy.

Equally, the results of the survey established that respect among some of the learners was wanting. This was shown by a low response rating of 2.33 (SD=0.63) on the item which sought to establish whether the learners try to always be respectful of others. Whereas, only 14.0% of the respondents accepted that their learners try to always be respectful of others, close to three one out of every five (59.1%) of the surveyed ECD teachers generally refuted the claim that their learners always try to be respectful of others. This indicates that many of the ECD learners in the surveyed centres lack this virtue of respect to one another.

However, with regard to recognition of numbers, it occurred that the learners, on average, were rated at 2.63 (SD=0.86) in this competency. This means that the learners generally met expectations on recognition of numbers and counting of things appropriate to their age. In fact, more than a third (33.4%) of the surveyed ECD teachers agreed that their learners exceeded expectations in their ability to recognize numbers and count things appropriate to their age.

On their ability to concentrate, the results of the survey established that they are generally above average in concentration. For instance, 45.2% of the surveyed ECD teachers generally agreed that their learners always sit still and pay attention to them, translating to a mean rating of 2.96 (SD=1.1). However, some 19.4% of them and 29.0% others disagreed and strongly disagreed, respectively, learners always sit still and pay attention to them. This finding suggests that a sizeable proportion of the ECD teachers who took part in the survey were satisfied with how their learners concentrate and pay attention to them. On the flip flop, the study established that the learners are poor in taking instruction. This was indicated by a mean response rating of 2.47 (SD=0.72) on the item which sought to find out whether the learners take instructions and follow it. Only 25.8% of the surveyed ECD teachers agreed that their learners always take instructions and follow them.

On the other hand, it emerged that the learners were low in critical thinking and problem solving. This was interpreted from a low mean rating of 2.43 (SD=0.96), with close to three out of five (59.1%) of the teachers accepting that their learners are not able to find

information they need to finish a task or solve a problem. Equally, majority (71.0%) of the surveyed teachers observed that their learners cannot effectively ($Mean=2.03$; $SD=0.74$) make age appropriate choices that benefit their well-being and keep them safe. In addition, the results of the survey established that most of the learners in ECD Centres in Kisii Central Sub-County have difficulties in handling challenging tasks. This was shown by a mean rating of 2.09 ($SD=0.65$), with 72.1% of the ECD teachers who took part in the confirming that their learners are not able to effectively engage with ideas or information that is challenging for them. This finding suggests that there is generally low acquisition of competencies that relate to oral and social skills among the learners in ECD centres in Kisii Central Sub-County.

However, the results of the survey revealed that the ECD learners in Kisii Central Sub-County are generally very active and creative when it comes to play activities. This was shown by a mean rating of 3.48 with a standard deviation of 1.2 on whether the learners are able to come up with new, creative ideas during play activity. A significant majority (54.9%) of the sampled ECD teachers were in agreement that their learners always come up with new, creative ideas during play activity, suggesting that the learners have acquired high competencies in creativity and imagination.

4.7 Provision of Infrastructural Facilities and Acquisition of Basic Competencies among Pre-Primary Learners

The first research objective was to establish the relationship between provision of infrastructural facilities and the acquisition of basic competencies among pre-primary learners. The study operationalized infrastructural facilities as basic facilities and installations that help children to develop and learn in the best way possible. To achieve this objective, infrastructural facilities were assessed through four main dimensions, namely: Learning structures/buildings, Toilets, Furniture, Psychomotor equipment and Playground. These measures being the main facilities that characterize infrastructure in pre-school were deemed important and, therefore, used as its proxies in this study. On the other hand, basic core competencies were operationalized as the ability for the pre-schoolers to be responsible in decision making, be socially aware and have relationship skills. First, the objective was addressed by use of descriptive statistics to explore the views of the respondents on the variables under infrastructural facilities and acquisition of basic competencies among pre-school learners. Secondly, regression analysis was used

to establish the level of influence of infrastructural facilities on acquisition of basic competencies.

4.7.1 Descriptive Analysis of Infrastructural Facilities

The study sought to explore the views of the respondents on each of the five aspects of infrastructural facilities in their ECD centres. The respondents' views on each aspect of infrastructural facility were captured using a 5-point Likert scale of; 1= Strongly Disagree (SD), 2 = Disagree (D), 3= Undecided (U), 4 = Agree (A) and 5 = Strongly Agree (SA).

4.7.1.1 Status of Learning Structures/Buildings

This section sought to investigate status of structures/building in the surveyed pre-school centres. The status of structures/building was measured using 17 items, where the scales were rated on a 5-point Likert scale of; 1= Strongly Disagree (SD), 2 = Disagree (D), 3= Undecided (U), 4 = Agree (A) and 5 = Strongly Agree (SA). The results were analyzed to show frequencies, percentages, mean and standard deviation for each item. Similarly, the combined mean and standard deviation was also computed as presented in Table 4.10.

Table 4.10: Status of Learning Structures/Buildings (n=93)

Learning Structures	SD	D	U	A	SA	Mean	ST D
1.Has Permanent buildings	18 (19.4%)	36 (38.7%)	12 (12.9%)	21 (22.6%)	6 (6.5%)	2.6	1.1
2.Buildings in good condition	42 (45.2%)	21 (22.6%)	9 (9.7%)	12 (12.9%)	9 (9.7%)	2.2	1.2
3.Adequate ventilation	27 (29.0%)	30 (32.3%)	18 (19.4%)	12 (12.9%)	6 (6.5%)	2.4	1.1
4.Class rooms of standard size (8m x 6m)	30 (32.3%)	33 (35.5%)	9 (9.7%)	15 (16.1%)	6 (6.5%)	2.3	1.1
5.Has Classrooms with lockable doors	24 (25.8%)	36 (38.7%)	6 (6.5%)	15 (16.1%)	12 (12.9%)	2.5	1.2
6.Classrooms have lockable windows	21 (22.6%)	30 (32.3%)	24 (25.8%)	12 (12.9%)	6 (6.5%)	2.5	1.0
7.Indoor space adequate	18 (19.4%)	27 (29.0%)	9 (9.7%)	24 (25.8%)	15 (16.1%)	2.9	1.2
8.Has Cemented floor	24 (25.8%)	42 (45.2%)	15 (16.1%)	9 (9.7%)	3 (3.2%)	2.2	0.9
9.Has earthen floor in good condition	24 (25.8%)	27 (45.2%)	18 (16.1%)	15 (9.7%)	9 (3.2%)	2.5	1.1
10.There is a fire extinguisher	30 (32.3%)	39 (41.9%)	15 (16.1%)	9 (9.7%)	0 (0.0%)	2.0	0.9
11.There is a fire assembly point in case of a fire outbreak	33 (35.5%)	39 (41.9%)	12 (12.9%)	3 (3.2%)	6 (6.5%)	2.0	0.7
12There is an emergency exit in every classroom	42 (45.2%)	45 (48.4%)	6 (6.5%)	0 (0.0%)	0 (0.0%)	1.6	0.6
13.The Centre has computers for children	39 (41.9%)	48 (51.6)	0 (0.0%)	6 (6.5%)	0 (0.0%)	1.7	0.8
14.The centre floors are safe for children	15 (16.1%)	33 (35.5%)	9 (9.7%)	24 (25.8%)	12 (12.9%)	2.8	1.1
15.The pavements are safe for children	24 (25.8%)	30 (32.3%)	18 (19.4%)	12 (12.9%)	9 (9.7%)	2.5	1.1
16.The Centre has ramps to cater for children with physical challenges	39 (41.9%)	51 (54.8%)	0 (0.0%)	3 (3.2%)	0 (0.0%)	1.6	0.7
17.There is a resting place for the children	21 (22.6%)	36 (38.7%)	12 (12.9%)	15 (16.1%)	9 (9.7%)	2.5	1.1
Composite mean on status of learning structures						2.3	1.0

Source: Survey Data (2023)

The findings of the survey established that pre-school centres in Kisii Central Sub-County have below average ratings with regard to status of learning structures. This was reflected by a composite mean of 2.3 with a standard deviation of 1.0, suggesting that most pre-school centres in the sub-county do not have appropriate physical settings. For instance, the results show that majority of the centres do not have permanent buildings. This emerged from the item mean of 2.6 ($SD=1.1$), showing that the participants generally disagreed with the statement that “their centre has permanent buildings”. The mean shows that participants ranged mainly from the level of strongly disagreeing to being undecided on the statement. Specifically, 38.7% of the participants disagreed with the statement while a further 19.4% strongly disagreed, implying that majority (58.1%) of the pre-primary school teachers cumulatively disagreed that the centres have permanent buildings. On the other hand, only 22.6% agreed and 6.5% strongly agreed that the centres had stand-alone facilities. This shows that structures dedicated as ECD centres in most of the facilities were temporary in structure, against the ministry’s policy that school buildings must be permanent and secure enough.

Further, the results also show that the buildings used as ECD learning institution are not in good condition, as the participants generally disagreed (Mean = 2.2; $SD=1.2$) with the assertion that the buildings are in good condition. This view was held by majority (67.8%) of the pre-primary school teachers who either disagreed or strongly disagreed that buildings were in good condition. Only 22.6% of the teachers agreed that the buildings were generally in good condition but 9.7% others were undecided on the statement. This shows that most of the buildings do not meet basic physical requirements. The government policy on physical structures envisage that all learning institutions should have classrooms, offices, kitchens, toilets and other physical structures that are in good condition, clean, well maintained and safe and properly utilized.

On whether, there was adequate ventilation in the buildings, participants generally disagreed ($M=2.4$; $SD =1.1$). This implies that majority of pre-primary school teachers considered their buildings to be poorly ventilated, as reflected by 61.3% of the respondents. Only 19.4% of the participants were of the considered opinion that their buildings were of adequate ventilation. Similarly, many of the classrooms were found not to be of the required standard size (8m x 6m), as indicated by a mean of 2.3 with standard deviation of 1.1. In fact, 35.5% and 32.3% of surveyed teachers disagreed and strongly

disagreed, respectively, that their class rooms were of standard size (8m x 6m). Only 22.6% generally agreed that their classrooms were of the standard size. This shows that most classrooms used for ECD learning were not of the standard size (8m x 6m), as prescribed in the education policy on classroom construction.

It also emerged that the classroom doors in most of the ECDE centres are not lockable, as was reflected by a mean rating of 2.5 with standard deviation of 1.2. Nearly two out of every three (64.5%) of the surveyed ECDE teachers confirmed that their classrooms had no lockable doors. Only 29.0% of the teachers alluded that their classrooms had lockable doors. Thus, it's evident that majority of ECDE centres have classrooms that have no lockable doors. Similarly, the classroom windows were found not to be lockable, as indicated by a mean response rating of 2.5 (SD=1.0). Specifically, 32.3% of pre-primary school teachers who participated in the study disagreed and another 22.6% strongly disagreed that their classrooms had lockable windows. Only 12.9% agreed and 6.5% other strongly agreed that their classrooms had lockable windows. Cumulatively, a significant majority (55.9%) of the participants confirmed that their classroom windows were not lockable with only 19.4% others insisting that their classroom windows were lockable. This shows that the learners' security and safety were compromised.

Likewise, the indoor spaces were found to be only moderately adequate (Mean = 2.9). However, a standard deviation of 1.2 suggests that views were fairly widely divergent across the participants. For example, while 29.0% of the participants disagreed that the indoor space was adequate, a near similar proportion of 25.8% agreed that they were indeed adequate. Similarly, while 19.4% strongly disagreed with the view, 16.1% strongly agreed that indoor space were adequate and some 9.7% of the participants remained undecided. However, it is clear that the indoor space is not adequate in almost half of the ECD centers which is contrary to the infrastructural policy on safe learning spaces for ECD learners. In adequate indoor space hampers physical development and growth of the children.

With a resting place being necessary in ECD centres for the toddlers, the participants; were asked to indicate the availability or lack of this infrastructure. The results showed that the centres generally lacked this feature. Results showed a mean of 2.5 (SD = 1.1) regarding the statement that there is a resting place for the children in full day ECD centres. Majority (61.3%) of the participants confirmed that there were resting places for

the children in their centres. Only 25.8% of the respondents alluded that there were resting places for children in their centres. From this finding, it is evident that lack of resting places for children is prevalent in most ECD centres in the sub-county. In the same vein, during the interview with the head teachers, one of them confirmed that the indoor space is too little such that children cannot find a good place to sleep during their resting time. He had this to say;

In our ECD centre, although we have a sleeping area for little children, the area is not furnished with comfortable sleeping materials like mats and mattresses. Moreover, the area is small and thus can only accommodate a small number of children at a time. [Interview: Head-Teacher 2, 24th May, 2021.

In terms of floor quality, it emerged that good number of the ECD classrooms in Kisii Central Sub-County did not have cemented classrooms (mean = 2.2; standard deviation = 0.9). This view was convergent as shown by the standard deviation and supported by majority (71.0%) of the participants who either disagreed or strongly disagreed that they have cemented floors. Only 12.9% of participants alluded that their classrooms had cemented floors. This shows that a significant majority of the participants reported having a floor which was not cemented. The result depicts a picture of unhealthy status of the floors of the ECD classrooms in majority of the ECD centres. Further, the results also reveal that for those classrooms with earthen floors, the floors were not in good condition. This emerged as the response mean rating for the item “has earthen floor in good condition” was 2.5 with a standard deviation of 1.1. In this case, majority (54.8%) of the participants held the view that their classrooms had earthen floors in bad condition. On the contrary, 19.4% of the participants were undecided on this matters but some 25.8% others were of the opinion that their earthen floors were just in good condition. Equally, the ECD classrooms’ floors were also found not to be safe for children (*Mean* = 2.8; *SD*= 1.1). This emerged as a majority (51.6%) of participants disagreed with the assertion that floors are safe for the children. However, while 9.7% of them were undecided, 38.7% of the participants held the view that the classroom floors were safe for children.

Likewise, with regard to safety of pavements, the results showed that they were generally not very safe. This was interpreted from a mean rating of 2.5 (*SD*=1.1), with about three out of five (58.1%) of the respondents confirming that pavements in their ECD centres

were not safe for children. Only 22.6% of the sampled teachers held the belief that their pavements were safe enough for children, but some 19.4% of them were undecided. This shows that the pavements in many of the ECDE centres were generally not safe for children.

Similarly, the results also showed that most of the ECD centres had no ramps to cater for children with physical challenges. This emerged from the mean rating of 1.6 (SD=0.7) on whether or not the centres had ramps to cater for children with physical challenges. In fact, nearly all (96.7%) the surveyed teachers denied their centres had ramps to cater for children with physical challenges. The fact that an overwhelming majority of the respondents reported that there were no ramps to cater for children with physical challenges at their centres suggest that many of the ECD centres in this sub-county generally lack this infrastructure. Similarly, during the interview session with the head teachers, it was found that most of the ECDE centres in the study area largely lack specialized equipment and learning materials tailored to children with disabilities. Here is what he had to say;

Many ECDE centres are not physically accessible to children with disabilities. This includes the absence of ramps, elevators, and accessible restrooms, which are crucial for children with mobility impairments. The design and layout of classrooms and playgrounds often do not consider the needs of these children, hindering their participation in various activities [Interview: Head teacher, 22nd May, 2021]

The absence of facilities for learners with disabilities perpetuates inequality and discrimination. It sends a message that the needs of these children are less important or not worth addressing. This can reinforce negative societal attitudes towards individuals with disabilities and contribute to a culture of exclusion. These findings also corroborates with that of Okongo, et al., (2015) who also established that in an inclusive society, all children should have equal opportunities to learn and grow, regardless of their abilities. Failing to provide adequate facilities in ECDE centers undermines efforts to achieve educational equity and inclusivity.

In the same vein, there was a notable absence of fire extinguishers in many of the centres. This was reflected by a mean response rating of 2.0 with a fairly small standard deviation of 0.9 indicating that the participants had a convergent level of disagreement that there

were fire extinguishers in the centres. Close to three out of every four (74.2%) of the surveyed ECD teachers indicated that their centres had no fire extinguishers. Only 9.7% of participants agreed with the statement but some 16.1% of them were undecided. Cumulatively, a significant majority of the participants disagreed that there was fire extinguisher in their classrooms suggesting that most ECD centres lacked fire extinguishers making it dangerous in cases of fire emergencies. In addition, the results of the survey show that many of the centres had no fire assembly points in case of a fire outbreak. This was revealed by a mean response rating of 2.0 with a standard deviation of 0.9, as majority (77.4%) of respondents indicated that there are no fire assembly points in their institution, such that in case of fire outbreak, the learners would be exposed to great danger. This shows lack of preparation to handle fire emergency in the ECD centres. Also, during the interview with the QASO, it was found that many ECDE centres in Kenya operate in environments that are ill-equipped to handle fire emergencies. Here is what he had to say;

Many ECDE centres in Kenya operate in environments that are ill-equipped to handle fire emergencies. The buildings often lack basic fire safety measures such as fire extinguishers, smoke detectors, and well-marked emergency exits. Moreover, staff members are frequently untrained in fire emergency protocols, leaving them unprepared to act effectively in the event of a fire. This lack of preparedness can be attributed to several factors, including limited financial resources, inadequate training programs, and a general lack of awareness about fire safety. [Interview: QASO, 20th May, 2021]

The lack of preparedness to handle fire emergencies in Kenyan ECDE centres is a critical issue that demands immediate attention. Gathanwa, (2021) posit that addressing the contributing factors and implementing effective strategies, it is possible to enhance the safety of these centres and protect the lives of young children. Ensuring fire safety in ECDE centres is not just a regulatory requirement but a moral obligation to safeguard the well-being of the youngest members of society.

Similarly, the results also showed that there was no emergency exit in every classroom as indicated by the item mean response rating of 1.6 with a standard deviation of 0.6. This rating indicate that almost all of the participants disagreed with the statement that “there

is an emergency exit in every classroom”. Specifically, 48.4% of the participants disagreed and 45.2% others strongly disagreed that there is an emergency exit in every classroom. This shows that there is absolutely no fire exit in the ECD centres in Kisii Sub County.

With regards to technology within the classrooms, the results of study show that the centres do not have computers (M = 1.7; SD= 0.8). Specifically, 51.6% of participants disagreed with the statement and a further 41.9% strongly disagreed with the statement that the centres do have computers. This suggests that in 93.5% of the ECD centres, there were no computers for children.

4.7.1.2 Status of Toilets in ECD Centres

The status of toilets in ECD centres was measured using 3 items whose constructs gauged whether the toilets were suitable, clean, adequate, safe and age appropriate for all the children. The results were analyzed to show frequencies, percentages, mean and standard deviation for; each item. Similarly, the combined mean and standard deviation was also computed as presented in Table 4.11.

Table 4.11: Status of Toilets in ECD Centres (n=93)

Toilets	SD	D	U	A	SA	Mean	STD
Children Toilets	15	24	18	21	15	3.0	1.1
Suitable and Clean	(16.1%)	(25.8%)	(19.4%)	(22.6%)	(16.1%)		
Has enough toilet for boys and girls (1:25)	15	27	21	18	12	2.8	1.1
	(16.1%)	(29.0%)	(22.6%)	(19.4%)	(12.9%)		
The toilets are safe and age appropriate for ALL the children	24	33	18	12	6	2.4	1.0
	(25.8%)	(35.5%)	(19.4%)	(12.9%)	(6.5%)		
Composite mean of status of toilets						2.7	1.1

Source: Survey Data (2023)

The results of the study revealed that the status of toilets in ECD centres in Kisii Central Sub-County are generally average, as reflected by a composite mean rating of 2.7 (SD=1.1) in the scale of 1 to 5. This suggests that children toilets in ECD centres within Kisii Central Sub-County are not very suitable for use by the learners. With regard to numbers, the toilets in some centres are hardly enough for both gender in the required

ratio, and are not age appropriate for all the children. Similarly, during the interview with the QASO officer, it was established that most of the ECDE centres in Kisii County are not well equipped with infrastructure including the essential ones such as toilets hence subjecting the learners to health risks. Here is what he had to say;

Most of our ECDE centres are not adequately equipped due to limited resources. Essential facilities such as latrines are not sufficient in hence posing our learners to health risk, given that inadequate toilets can lead to poor sanitation and hygiene, increasing the risk of infections like diarrhea, dysentery, and other gastrointestinal diseases. [Interview: QASO, 20nd May, 2021]

This implies that most of the ECDE centres in Kisii Central Sub County are not properly equipped with sanitation facilitation facilities hence making the learners to be susceptible to health risks. This observation also concurs with that of Chepkonga, (2017) who also found that poor sanitation can also contribute to the spread of parasitic infections such as worms, which can adversely affect children's health and development. Moreover, children who do not have access to proper toilet facilities may develop poor hygiene practices that can persist into adulthood, affecting their long-term health and well-being.

For instance, the findings of the study show that the children toilets were only above average in terms of cleanliness ratings ($Mean = 3.0$; $SD = 1.1$). Specifically, although 38.7% of the surveyed teachers were satisfied that their toilets were clean enough, 41.9% of respondents refuted the claim that the toilets were clean for the pre-school learners. However, 19.4% of them were undecided. This suggests that many ECD centres do not have clean and appropriate children's toilets, which puts the health of the learners in danger. Similarly, in terms of whether the toilets were adequate in number, the results showed that this was not true. The participants generally disagreed with the statement that the ECD centres had enough toilets for boys and girls in the appropriate ratio of 1:25 for boys and 1:30 for girls. The learners' toilet adequacy rating in the ECD centres was 2.8 ($SD = 1.1$) in the scale 1 to 5, with a significant proportion (45.1%) of the participants indicating that their centres do not have enough toilets for the learners and another 22.6% remaining noncommittal on this matter. However, some 32.3% of the participants confirmed that their centres had enough toilets for boys and girls in the appropriate ratios. This shows that a sizeable proportion of the ECD centres in Kisii Central Sub-County do

not have adequate toilets for boys and girls that meets the policy of toilet-pupil ratio of 1:25 for girls and 1:30 for boys.

In addition, the available toilets were found not to be age appropriate in many of the centres. This was reflected by a mean rating of 2.4 (SD=1.1) on the age appropriate scale of 1 to 5, with only 19.4% of participants generally agreeing that toilets in their centres are safe and age appropriate for all the children (including CSN). However, a significant majority (61.3%) of the participants generally disagreed that the toilets are safe and age appropriate for all the children (including CSN). This shows that a bigger proportion of the participants were of the opinion that the toilets in their centres are not safe and age appropriate for their pre-school learners.

4.7.2.3 Status of the Furniture in ECD Centres

Status of furniture in the ECD centres was measured using 4 items. The results were analyzed to show frequencies, percentages, mean and standard deviation for each item. Similarly, the combined mean and standard deviation was also computed as presented in Table 4.12 below.

Table 4.12: Status of the Furniture in ECD Centres

Furniture	SD	D	U	A	SA	Mean	STD
Available and Adequate	15 (16.1%)	30 (32.3%)	12 (12.9%)	21 (22.6%)	15 (16.1%)	2.9	1.1
Children's suitable size tables	18 (19.4%)	33 (35.5%)	3 (3.2%)	27 (29.0%)	12 (12.9%)	2.8	1.2
Children's suitable size chairs	12 (12.9%)	21 (22.6%)	6 (6.5%)	33 (35.5%)	24 (25.8%)	3.4	1.2
Furniture in good condition	24 (25.8%)	27 (29.0%)	9 (9.7%)	18 (19.4%)	15 (16.1%)	2.7	1.2
Composite mean of status of furniture in ECDE Centres						2.9	1.2

Source: Survey Data (2023)

Using the scale of 1 to 5, the finding of the study established the status of furniture in ECDE Centres in Kisii Central Sub-County to be at 2.9 (SD=1.2), suggesting that the furniture in the centres are generally not very good. For example, the result shows that the availability of furniture in the ECD centres were, on average, rated at 2.9 (SD=1.1). However, it emerged that the participants had divergent views ranging from strongly disagreeing through to strongly agreeing indicating that the situation varied greatly across the centres. Specifically, about a third (32.3%) of the participants disagreed and a further 16.1% of them strongly disagreeing that the furniture in their centres were adequate. On the other hand, 22.6% agreed while 16.1% strongly agreed that the furniture in their centres were adequate. This shows that whereas 48.4% of participants cumulatively disagreed, 38.7% cumulatively agreed that furniture was available and adequate. The result is an indication that in nearly half of the ECD centres the furniture is inadequate. This finding was also supported by one of the head teachers during the interview session when he said;

The furniture in our ECD centre is not adequate especially since there are always breakages. Some of the furniture has been used for a very long time hence being dilapidated and dirty. Moreover, some of the chairs and tables

are made of heavy wood material and are bigger for some children in ECD making them inappropriate. [Interview: Head-Teacher 1, 22nd May, 2021]

Similarly, the results of the study show that the tables in some of the ECD centres are not suitable in size to the children. This was shown by a mean response rating of 2.8 (SD=1.2) on the item that sought to investigate whether children tables were of suitable size. However, the participants' views were significantly spread across the scale with 35.5% of them disagreeing, 19.4% strongly disagreeing, 29.0% agreeing and 12.9% strongly agreeing that the tables were of suitable size. On the other hand, 3.2% of the participants were undecided on whether or not the tables were of suitable size for the pre-school learners. Cumulatively, majority (54.9%) of participants disagreed while 41.9% agreed. This shows that while most of the ECD centers had their tables suitable, significant number were not of suitable for providing comfort for learning to take place among the pre-school learners.

Equally, the study sought to find out whether the chairs were of suitable sizes to the learners. The results showed that in more than a half of the centres, the chairs were of suitable sizes to the learners. This was reflected by a mean response rating of 3.4 (SD=1.2) with majority of the participants accepting (35.5% agree; 25.8% strongly agree) that the chairs in their ECD centres were of suitable sizes to the children. Only 22.6% of participants disagreed and a further 12.9% strongly disagreeing that their ECD centres chairs were of suitable sizes to the children. This shows that majority (61.3%) of the ECD centres had children suitable chairs while a few (35.5%) did not have such chairs. Similarly, in one of the interview with the head teachers, one of them had this to say;

Most of our learners fin difficulty in learning due to inadequate suitable and comfortable chairs or furniture. So most of the children share their chairs which is against the recommendations of the national policy guidelines for preschools. We therefore encourage the education stakeholders to assist us with finance for us to fill this gap [Interview: Head-Teacher 4, 22nd May, 2021]

In the same vein, the general condition of the furniture were found not to be good. On average, the participants disagreed with the statement that furniture was in good condition (Mean = 2.7; SD = 1.2). This emerged as majority of the participants rejected (29.0% disagreed; 25.8% strongly disagreed) the statement that furniture in their centres were in good condition. On the other hand, 19.4% of the participants agreed as a further

16.1% strongly agreed. This shows that 54.8% of participants disagreed while only 35.5% agreed that furniture was in good condition, indicating that furniture in majority of the ECD centres were in poor condition.

4.7.2.4 Status of the Physical/Psychomotor Materials/Equipment in ECD Centres

The status of physical/psychomotor materials were measured using seven itemed Likert scaled questionnaire. The results were analyzed to show frequencies, percentages, mean and standard deviation for each item. Combined mean and standard deviation was also computed and the results are presented in Table 4.13.

Table 4.13: Status of the Physical/Psycho-motor Materials/Equipment in ECD Centres

Statement	SD	D	U	A	SA	Mean	STD
Has adequate fixed equipment for the number of children at the centre	18 19.4%	30 32.3%	15 16.1%	21 22.6%	9 9.7%	2.7	1.1
Has adequate Play materials	27 29.0%	39 41.9%	9 9.7%	12 12.9%	6 6.5%	2.3	1.0
Fixed play equipment in good condition	21 22.6%	42 45.2%	15 16.1%	12 12.9%	3 3.2%	2.3	0.9
Has Soft landing for slides	27 29.0%	33 35.5%	12 12.9%	15 16.1%	6 6.5%	2.4	1.1
Equipment is appropriate in sizes for ECD children	15 16.1%	24 25.8%	9 9.7%	27 29.0%	18 19.4%	3.1	1.2
Equipment are regularly serviced and maintained	21 22.6%	36 38.7%	12 12.9%	15 16.1%	9 9.7%	2.5	1.1
Swings at low level for ECD children	15 16.1%	45 48.4%	6 6.5%	18 19.4%	9 9.7%	2.6	1.0
Composite mean of status of psycho-motor equipment in ECD Centres						2.5	1.1

Source: Survey Data (2023)

The findings of the survey established that status of psycho-motor equipment in ECD Centres in Kisii Central Sub-County was generally moderate. This was interpreted from a

composite mean rating of 2.5 (SD=1.1) in the scale 1 to 5 on status of psycho-motor equipment in ECD Centres, indicating that most of the centres were not having adequate and appropriate psycho-motor equipment. For example, on fixed equipment, the results show that the centres do not have adequate fixed equipment commensurate to the number of children at the centres (Mean = 2.7; SD = 1.1). The item shows that the participants generally disagreed with the statement to the effect that ECD centres have adequate fixed equipment for the children at the Centre. Specifically, 32.3% of the participants disagreed and 19.4% strongly disagreed that their centres had adequate fixed equipment. This shows that more than half of the ECD centres do not have adequate fixed equipment for the children.

Similarly, the findings of the study show that the centres do not have adequate (Mean = 2.3; SD = 1.1) playing materials. This view was presented by majority (70.9%) of the participants who generally disagreed that their centres had adequate play materials. Only 19.4% of the participants held the belief that their centres had adequate play materials. This suggests that many of the ECD only have inadequate or totally do not have play materials in their centres. Further, the results also found that the few fixed play equipment, which were available, in the centres were not in good condition (Mean = 2.3; SD = 0.9). This was confirmed by majority of the participants (67.8%) who disagreed with the assertion that fixed play equipment in their Centre were in good condition, compared to a minority (16.1%) who alluded that the fixed play equipment in their Centres were in good condition. This shows that majority of ECD centres maintenance of fixed play equipment to the required levels was generally poor and failed to meet expectation. Similarly, during the interview session with the head teachers, it was found that most of the ECDE centres were not adequately equipped with playing facilities. For instance, one of the respondents had this to say;

Many ECDE centres operate with minimal financial resources. Government funding is often insufficient, and reliance on community contributions and donor aid does not always meet the needs of these centres. This financial constraint limits the ability of schools to purchase and maintain adequate play equipment. [Interview: Head-Teacher 4, 22nd May, 2021]

Adequate play equipment is essential for the holistic development of children in ECDE centres. The absence of such equipment can hinder physical, cognitive, social, and

emotional growth, ultimately affecting children's overall well-being and future potential. Sitati, et al., (2016) also emphasised that it is imperative for stakeholders, including governments, communities, and private entities, to recognize the importance of play in early childhood and work collaboratively to ensure that all children have access to enriching and stimulating play environments

On servicing of the equipment, it emerged that the available equipment were not regularly serviced. This was shown by a mean response rate of 2.5 (SD. = 1.1), with majority of the participants (61.3%) cumulatively disagreeing while 25.8% cumulatively agreeing that the equipment were regularly serviced. This shows that more than three out of every five of the cases of play equipment were not regularly serviced causing them to fail from time to time thus affecting children activities.

On equipment appropriateness, the equipment were found to be of above when the respondents were probed on whether the equipment were appropriate in sizes for ECD children (Mean 3.1; SD = 1.2) with 48.4% of participants cumulatively agreeing and only 41.9% cumulatively disagreeing that equipment were appropriate in sizes for ECD children. However, the swings were found not be at the appropriate low level for ECD children (Mean = 2.6; SD= 1.1) in some of the centres. This was shown by the fact that many (64.5%) of the participants generally disagreed with the statement that swings are at appropriately low level for ECD children, only a few (29.1%) of them believed that the swings were at appropriate heights. This shows that in many of the ECD centres in Kisii Central Sub-County the swings were not conveniently accessible to ECD children, as their heights could be higher to some children.

Further, there were also no soft landing for slides as indicated by majority of the participants who disagreed by the statement (Mean = 2.4; SD = 1.1). In this case, 64.5% of the participants cumulatively disagreed (35.5% disagreed; 29.0% strongly disagreed) that there was soft landings on the slides. Only 16.1% agreed and 6.5% strongly disagreed that there was soft landing from slides in their ECD centres. This shows that the majority of the ECD centres do not have soft landing for their slides, exposing the children to dangers of hurting themselves, hence making it difficult for children to engage in outdoor activities.

4.7.2.5 Status of Playground in ECD Centres

The study sought to investigate the status of playgrounds in ECD centres in Kisii Central Sub-County. It was measured using a four itemed Likert scale questionnaire. The results were analyzed to show frequencies, percentages, mean and standard deviation for each item. Similarly, the combined mean and standard deviation was also computed as presented in Table 4.14 below.

Table 4.14: Status of Playground in ECD Centres

Playground	SD	D	U	A	SA	Mean	STD
Play space adequate	12 12.9%	21 22.6%	15 16.1%	30 32.3%	15 16.1%	3.2	1.1
The playground well kept	24 25.8%	33 35.5%	12 12.9%	15 16.1%	12 9.7%	2.5	1.1
The playground fenced and has a gate	21 22.6%	42 45.2%	6 6.5%	15 16.1%	9 9.7%	2.4	1.1
There are sharp and dangerous object	30 32.3%	39 41.9%	9 9.7%	15 16.1%	0 0.0%	2.1	1.0
Composite mean of status of playground in ECD Centres						2.6	1.1

Source: Survey Data (2023)

From the results in Table 4.14, the status of ECD Centers' playgrounds were found to be of average condition in terms of their suitability for use by the preschool learners. This was revealed by a composite mean rating of 2.6 (SD=1.1) in the scale of 1 to 5 on the status of playgrounds in the ECD centres. This suggests that most of the ECD centres within the sub-county have playgrounds that are not very appropriate for preschool learners. For example, the play spaces were found to be slightly above average in terms of their adequacy (Mean=3.2; SD=1.1). However, the participants' views were spread from strongly disagree to strongly agree; 32.3% of the participants agreed and 16.1% strongly agreed that their play-grounds were adequate in space. On the flip side, 35.5% of participants cumulatively disagreed that play space were adequate with 22.6% disagreeing while 12.9% strongly disagreed. This shows that playgrounds were only adequate in less than half of the ECD centres within the sub-county. Similarly, during the interview with the head teachers, one of them had this to say;

The playground in our ECD centre is not adequate for all our children. Moreover, we modern equipment for outdoor activities designed for child development. However, our children are able to take part in regular activities based on improvisation of what is available within our environment. [Interview: Head-Teacher 3, 26th May, 2021]

Equally, it emerged that the available playgrounds were not well maintained (Mean = 2.5; SD=1.1). This position was taken by the majority (61.3%) of the participants who refuted the claim that the playground was well kept. On the contrary, only 25.8% of the participants agreed that the playground were well kept. In fact, the results showed that most of the playgrounds were not fenced and did not have gates. This was reflected by the mean item rating of 2.4 (SD = 1.1) with about two thirds (67.8%) of the respondents confirming that their centres' playgrounds were not fenced and had no gates at all. This makes the playgrounds insecure for the children.

On the flip flop, the results also show that participants disagree that their playgrounds were insecure (Mean = 2.1; SD = 1.1). This view was presented by majority of the participants (75.2%) who cumulatively disagreed with the statement that there their playgrounds were insecure. Specifically, 41.9% agreed while 32.3% strongly agreed. However, there were 16.1% of the participants who agreed that there were sharp and dangerous objects in the playground, which exposes children to possible injuries.

4.7.2: Summary of Ratings of Infrastructural Facilities in ECD Centres

The five aspects of infrastructural facilities in ECD centres in Kisii Central Sub-County were summarized using means and standard deviations and the findings are presented in Table 4.15.

Table 4.15: Summary of Infrastructural Facilities Ratings

Sub-scales/Dimensions of Infrastructural Facilities	<i>Mean</i>	<i>Standard Deviation</i>
Status of Learning Structures/Buildings	2.3	1.0
Status of Toilets in ECD Centres	2.7	1.2
Status of the Furniture in ECD Centres	2.9	1.2
Status of the Physical/Psychomotor Materials/Equipment in ECD Centres	2.5	1.1
Status of Playground in ECD Centres	2.6	1.1

Overall mean rating of Infrastructural Facilities	2.6	0.9
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Source: Survey Data (2022)

From Table 4.15, it is evident that pre-primary learning centres in Kisii Central Sub-County, in general, have average rating in infrastructural facilities status. This was reflected by an overall mean rating of 2.6 with a standard deviation of 0.9 in a scale of 1 to 5. This suggests that, on average, infrastructural facilities in ECD centres in Kisii Central Sub-County have average status in terms of infrastructural facilities. In particular, the status of the furniture, as an aspect of infrastructural facilities, in ECD Centres received the highest rating ($Mean=2.9$; $SD=1.2$), implying that the ECD centres, on average, have above average status on their furniture. It was followed by status of toilets in ECD centres which received a mean rating of 2.7 ($SD= 1.2$), reflecting that the learner toilets are in fair status.

Status of the physical/psychomotor materials/equipment in ECD Centres and status of playground in ECD Centres received almost similar rating at 2.5 ($SD=1.1$) and 2.6 ($SD=1.1$), respectively. It is evident from the findings of the study that learning structures/buildings received the worst ratings in terms of status, as reflected by a mean rating of 2.3 ($SD =1.0$). This suggests that preschools in Kisii Central Sub-County must strive to improve infrastructural facilities, especially in the status of physical/psychomotor materials/equipment, status of playground and the status of learning structures/buildings given the respective ratings that are barely above average. During the interview session with the head teachers, here is an excerpt of one of the respondents;

Existing play equipment in some ECDE centres is often poorly maintained, posing safety risks to children. Without regular maintenance, equipment can become dangerous and unusable, further limiting play opportunities for children. [Interview: Head-Teacher 6, 26th May, 2021]

Some ECDE centres are housed in temporary or poorly constructed buildings that lack the space or facilities to accommodate play equipment. The lack of safe and secure outdoor play areas further exacerbates this issue (Mike, & Aiko, 2019). Moreover, Play equipment such as swings, slides, climbing frames, and seesaws provide opportunities for

children to engage in physical activities, which are crucial for their health and physical development and hence must always be at their best shape and condition to be used by the learners.

4.7.3 Relationship between Infrastructural Facilities in ECD centres and Acquisition of Basic Core Competencies among ECD learners

The study investigated the relationship between infrastructural facilities in ECD centres and acquisition of basic core competencies among ECD learners. The investigation was done using Pearson Product Moment Correlation analysis to establish the magnitude and direction of the relationships between the individual aspects of infrastructural facilities in ECD centres and acquisition of core basic competencies among the learners. Accordingly, the means of each aspect of infrastructural facilities were correlated with the level of acquisition of core basic competencies among ECD learners. The significance value was set at 0.05, implying that a p-value less than 0.05 would lead to conclusion that there is a statistically significant relationship between the variables, while p-value greater than 0.05 would lead to a conclusion that the correlation is not statistically significant. The correlation results are summarized in Table 4.16 below.

Table 4.16: Correlation between infrastructural facilities and Acquisition of Basic Core Competencies

Aspect of infrastructural facilities	N	<i>r</i>	<i>p-value</i>
Status of Learning Structures/Buildings	93	.259	.012
Status of Toilets in ECD Centres	93	.223	.032
Status of the Furniture in ECD Centres	93	.337	.001
Status of the Physical/Psychomotor Materials/Equipment in ECD Centres	93	.437	.000
Status of Playgrounds in ECD Centres	93	.504	.000
Overall rating of Infrastructural Facilities	93	.569	.000

Source: Survey Data (2023).

It is evident that although the five aspects of infrastructural facilities exhibited positive correlation with acquisition of basic core competencies. It emerged that the status of Playgrounds in ECD Centres recorded the strongest correlations at $r=.504$, followed by the Status of the Physical/Psychomotor Materials/Equipment in ECD Centres at $r=.437$. Both of them had statistically significant relationships with acquisition of basic core competencies at $p=.000$. On the other hand, status of toilets in ECD centres ($r=.223$,

$p=.032$) and status of learning structures/buildings ($r=.259$, $p=.012$) which also had statistically significant positive correlation with acquisition of core basic competencies having the lowest correlation coefficients. Likewise, the results of the study established that the status of furniture in ECD Centres also has statistically significant correlation ($r=.337$; $p=.001$) with acquisition of core basic competencies among the learners in ECD centres.

Finally, the finding of the study established that overall combined infrastructural facilities had statistically significant positive, but moderate correlation ($r=.569$, $p=.000$) with acquisition of core basic competencies among the learners in ECD centres. Thus, an improvement in infrastructural facilities is likely to improve the level of acquisition of core basic competencies among the learners in ECD centres and vice versa. The findings of the study are consistent with those of Chepkonga (2017) which established that there was significant relationship between learning facilities and provision of quality ECDE in West Pokot County. The lack of adequate learning facilities was found to influence negatively provision of quality education. In order to establish the influence of infrastructural facilities on acquisition of core basic competencies among the learners in ECD centres, the research data was further subjected to multiple regression analysis as shown in Table 4.17 below.

4.7.4 Relationship between Infrastructural Facilities in ECD centres and Acquisition of Core Basic Competencies among the Learners in ECD Centres

H₀1: Provision of infrastructural facilities has no influence on acquisition of basic competencies among learners in ECD centres.

To establish the relationship between infrastructural facilities in ECD centres and acquisition of basic competencies among learners in ECD centres, the null hypothesis that “*provision of infrastructural facilities has no influence on acquisition of basic competencies among learners in ECD centres*” was tested. Infrastructural facilities was measured using five aspects, namely: Status of Learning Structures/Buildings, Status of Toilets in ECD Centres, Status of the Furniture in ECD Centres, Status of the Physical/Psychomotor Materials/Equipment in ECD Centres and Status of Playground in ECD Centres. Mean response across a set of Likert-type scale responses in each item was computed to create an approximately continuous variable within an open interval of 1 to 5, as determined to be suitable for the use of parametric data by Johnson and Creech (1983), Carifio and Perla (2008) and Sullivan and Artino (2013) among others. High scale rating was interpreted to imply a corresponding high provision of infrastructural facilities that would positively influence acquisition of basic competencies.

The study adopted multiple regression analysis with the investigated null hypothesis being $H_0: \beta_1=\beta_2=\beta_3= \beta_4 = \beta_5=0$ and the corresponding alternative hypothesis being H_1 : at least one $\beta_i \neq 0$. If the null hypothesis is true, then from $E(Y) = \beta_0 + \beta_{i=1-5} X_{i=1-5}$ the population mean of Y is β_i for every X_i value which indicates that X (Provision of Infrastructural Facilities) has no influence on Y (Acquisition of Core Basic Competencies in ECD centres) and the alternative being that X (Provision of Infrastructural Facilities) influences Y (Acquisition of Core Basic Competencies in ECD centres). The priori significance level was set at 0.05, such that if the p-value was less than 0.05 then the null hypothesis would be rejected and a conclusion reached that a significant difference exists. On the other hand, if the p-value was greater than 0.05, then it would be concluded that a significant difference does not exist. Table 17 shows the results of the regression model summary.

Table 4.17: Regression Model on Infrastructural Facilities on Acquisition of Core Basic Competencies

<i>Variable</i>	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>T</i>	<i>Sig.</i>	<i>95% CI</i>	<i>Part</i>
<i>Constant</i>	0.764	0.549		1.392	0.167	(-.292, 1.862)	
1. <i>Status of Learning Structures/Buildings</i>	0.361	0.323	0.374	1.117	0.267	(-0.282, .992)	0.096
2. <i>Status of Toilets in ECD Centres</i>	0.054	0.106	0.072	0.513	0.609	(.009, .323)	0.036
3. <i>Status of the Furniture in ECD</i>	0.108	0.048	0.117	2.250	0.014	(.061, .196)	0.101
4. <i>Status of the Physical/Psychomotor Materials/Equipment</i>	0.454	0.160	0.472	2.832	0.006	.376, .512;	0.385
5. <i>Status of Playground in ECD Centres</i>	0.488	0.155	0.493	3.148	0.001	.277, .699	0.443
$R=.584$, Adjusted $R^2=.304$, $F(5, 87)= 9.029$, $p=.000$							

$Y = \alpha + \beta X_1 + \beta X_2 + \beta X_3 + \beta X_4 + \beta X_5 + \epsilon$, where Y= Acquisition of Core Competencies; X_{1-5} = Five Aspects of Infrastructural Facilities and ϵ is the error term. ;

$$Y = .764 + 0.361X_1 + 0.054X_2 + 0.108X_3 + 0.454X_4 + 0.488X_5 + \epsilon.$$

The model reveals that Infrastructural Facilities, as measured by the five sub-scales, accounted for 30.4% (Adjusted $R^2=.304$) of the variation in acquisition of core basic competencies among the learners in ECD centres. This reveals that about 30% of variation in the acquisition of core basic competencies among learners in ECD centres is explained by the composite change of the five aspects of infrastructural facilities. Furthermore, the five aspects of infrastructural facilities exhibited a fairly high degree of joint correlation ($R=.584$) with acquisition of core basic competencies among learners in ECD centres. It is also evident in the ANOVA output results that Infrastructural

Facilities, as measured by the five aspects, is indeed a significant predictor of acquisition of core basic competencies among learners in ECD centres, $F(5, 87)=9.029, p=.000$. The fairly low value of F suggests that the variability within each of the variables was generally smaller than variation between the variables, implying that the difference in acquisition of core basic competencies among learners in ECD centres is not by chance but as a result of difference in Infrastructural Facilities within the ECD centres. Consequently, the knowledge on the level of each aspect of Infrastructural Facilities in ECD centres can be used to significantly predict the level of acquisition of core basic competencies among learners therein.

The analysis further reveals that the five aspects of infrastructural facilities had varying influence on the acquisition of core basic competencies among the learners in the ECD centres. For instance, whereas three of the aspects had significant positive un-standardized coefficients, some other two had insignificant un-standardized coefficients. For example, status of the Furniture in ECD Centres had a un-standardized coefficient value of 0.108 within a 95% C.I (.061, 196); status of the physical/psycho-motor materials/equipment in ECD centres had a un-standardized coefficient value of 0.454 within a 95% C.I (.376, .512) and Status of playground in ECD centres with coefficient value of .488 at 95% CI (.277, 699) which were all significant. On the other hand, the coefficients values for Status of Learning Structures/Buildings ($B=-0.361; t=-0.117, p=0.267$) and Status of Toilets in ECD Centres ($B=0.054; t=0.513, p=0.609$) were insignificant.

However, given that the three of the aspects of Infrastructural Facilities on Acquisition of Core Basic Competencies (Status of the Furniture in ECD Centres, Status of the Physical/Psychomotor Materials/Equipment in ECD Centres and Status of Playground in ECD Centres) had significant un-standardized co-efficient values, there is a sufficient evidence to reject the null hypothesis ($H_0: \beta_1=\beta_2=\beta_3=\beta_4=\beta_5=0$). Therefore, the alternative hypothesis was supported with the conclusion that provision of infrastructural facilities has statistically significant influence on acquisition of core basic competencies among learners in ECD centres.

Further exploration of multiple regression results, reveal that status of playgrounds in ECD centres had the greatest influence on learners' acquisition of core basic

competencies in ECD centres. A unit improvement in status of playground in ECD centres would result in improvement in learners' acquisition of core basic competencies by .488 units, when other factors are held constant. On the same note, when the status of playground in ECD centres improves by one standard deviation, the level of learners' acquisition of core basic competencies would improve by .493 standard deviations. The second aspect of infrastructural facilities in terms of influence was Status of the Physical/Psycho-motor Materials/Equipment in ECD Centres which had an unstandardized coefficient value of .454, implying that for one unit improvement in this aspect, there is a corresponding improvement in the level of learners' acquisition of core basic competencies by .454 units, when other factors are held constant. Similarly, one unit improvement in status of the furniture in ECD centres results in a corresponding improvement in the level of learners' acquisition of core basic competencies by .108 units. On the flip flop, the effects of both status of learning structures/buildings and status of toilets in ECD Centres were not statistically significant ($p > .05$) in the regression model.

Equally important is the part correlation coefficients, which indicate the contribution of each aspect of infrastructural facilities to the total R squared. For example, the results show that status of playground in ECD Centres had a part correlation coefficient of .443, Status of the Physical/Psycho-motor Materials/Equipment in ECD Centres of .385 and status of toilets in ECD centres of .036. Squaring these values depict how much of the total variance in the level of acquisition of core basic competencies is uniquely explained by each variable and how much *R* squared would drop if it were not included in the model.

Thus, status of playground in ECD centres which had the greatest contribution to the model uniquely explains 19.6% of the variance in acquisition of core basic competencies among learners in ECD centres and status of the physical/psycho-motor materials/equipment in ECD Centres uniquely explains 14.8% of variance. However, both status of learning structures/buildings and status of toilets in ECD Centres each only accounted for a negligible amount (<1%) of the variance in the acquisition of core basic competencies among the ECD learners. It is worth mentioning that total *R* Squared value for the model (0.304 or 30.4 % explained variance) was not equal to the sum total of all the squared part correlation values because of the fact that overlaps or shared variance were removed. Nonetheless, it was concluded that infrastructural facilities in regression

model was adequate in predicting acquisition of core basic competencies of learners in ECD centres. The model was statistically significant at $F(5, 87) = 9.029, p = .000$, accounting for 30.4% (Adjusted $R^2 = .304$) of the variation in the level of acquisition of core basic competencies among the learners in ECD centres within Kisii Central Sub-County.

4.8 Suitability of Service Providers and Acquisition of Basic Competencies among Pre-Primary Learners in Kisii Central Sub-County

The second objective of the study was to investigate the extent to which service providers suitability predicts the acquisition of basic core competencies among pre-primary learners. The study operationalized service providers as teachers/caregivers, head teachers, centre managers and health workers. To achieve this objective, the level of suitability of teachers/caregivers, head teachers, centre managers and health workers was explored. Secondly, regression analysis was used to establish the level of influence of service provider's suitability on acquisition of basic competencies.

4.8.1 Descriptive of Service Providers Suitability

This section sought to investigate the suitability of service providers in pre-primary schools. The service providers considered were teachers/caregivers, head teachers, centre managers and health services providers. Thus, a set of requirements was defined for each category of service provider to measure compliance to the requirements.

4.8.1.1 Suitability of ECD Teachers/Caregivers

Suitability of ECD teachers/ caregivers was measured using 11 items where the participants were to indicate their responses through a yes or no binary format. The results were analyzed and tabulated into frequencies and percentages as shown in Table 4.18 below.

Table 4.18: Suitability of ECD Teachers/Caregivers

Learning Structures	SD	D	U	A	SA	Mean	STD
They are above 18 years.	1 (1.1%)	6 (6.5%)	10 (10.8%)	34 (36.6%)	42 (45.2%)	4.1	0.9
Have minimum academic qualification of KCSE D+ or its equivalent	18 (19.4%)	27 (29.0%)	9 (9.7%)	24 (25.8%)	15 (16.1%)	2.9	1.2
They possess ECD certificate or better certificate offered by the Government or any other institutions authorized by the Government.	12 (12.9%)	21 (22.6%)	6 (6.5%)	33 (35.5%)	24 (25.8%)	3.4	1.2
They are trained and qualified to administer first aid by St John's Ambulance, Red Cross or equivalent.	24 (25.8%)	36 (38.7%)	6 (6.5%)	15 (16.1%)	12 (12.9%)	2.5	1.2
They are registered by the Teachers Service Commission	18 (19.4%)	33 (35.5%)	3 (3.2%)	27 (29.0%)	12 (12.9%)	2.8	1.2
Developed Progress Assessment tool and Primary School Readiness	25 (26.9%)	23 (24.7%)	12 (12.9%)	16 (17.2%)	17 (18.3%)	2.3	1.1
Communicate well with parents and other members of society.	17 (18.3%)	16 (17.2%)	12 (12.9%)	23 (24.7%)	25 (26.9%)	2.9	1.2
Have valid medical records renewable annually	28 (30.1%)	24 (25.8%)	5 (5.4%)	19 (20.4%)	17 (18.3%)	2.1	0.9
Have a valid certificate of good conduct and should	25 (26.9%)	31 (33.3%)	6 (6.5%)	19 (20.4%)	12 (12.9%)	1.9	1.1
Caregivers other than teachers shall undertake a short course on child care by authorized government institutions.	18 (19.4%)	16 (17.2%)	11 (11.8%)	24 (25.8%)	24 (25.8%)	2.9	0.9
Untrained ECDE teachers should only act as teacher assistants and should have undergone the five-week ECD short-course.	29 (31.2%)	25 (26.9%)	4 (4.3%)	18 (19.4%)	17 (18.3%)	2.1	1.0
Composite mean on suitability of ECDE teachers/caregivers						2.7	0.8

Source: Survey Data (2023)

In terms of age requirement, a significant majority (81.8%) of the respondents confirmed that all their ECD teachers/caregivers were above 18 years, years of majority, indicating

that they met the requirement, as reflected by a mean rating of 4.1 (SD=0.9). Only 7.6% of respondents held a contrary opinion. Further, majority (72.0%) of the surveyed teachers indicated that they had minimum academic qualification of KCSE D+ or its equivalent and had a valid certificate of good conduct without any criminal records, reflected suitability rating of 3.7 (SD=1.2). Further to this, 61.3% of them possessed a certificate in ECD or better certificate offered by the Government or any other institutions authorized by the Government, translating to a mean suitability rating of 3.4 (SD=1.2). Thus, based on the three indicators, the ECD teachers/caregivers were suitable. Likewise, during the interview with the head teachers, one of them had this to say;

All the teachers in our ECD centre meet the set minimum qualification of at least KCSE D+. They are trained with certificate in ECD. However, a few of them are not registered with Teachers Service Commission.

[Interview: Head-Teacher 5, 25th May, 2021]

This shows that most of the ECD centres in Kisii Central Sub County had qualified teachers who were well equipped with the necessary skills to foster foundational skills such as literacy, numeracy, and motor skills in young children for optimal acquisition of Basic Competencies among Pre-Primary Learners. Hiring qualified and suitable ECD teachers makes the teacher to assess each child's unique needs and learning styles. This individualized approach helps address specific developmental delays or advanced capabilities, ensuring that all children develop at their optimal pace.

On the flip flop, the results showed that majority (64.5%) of the ECD teachers/caregivers were not qualified or trained by St John's Ambulance, Red Cross or equivalent to administer first aid. In addition, majority (55.9%) of the ECDE teachers agreed that they did not have valid medical records which were renewable annually. On the same note, many (58.0%) of the ECDE teachers confirmed that they had not undertaken any short course on child care by authorized government institutions. Also, the results show that the teachers and caregivers had no adequate qualification to offer care to the children in most of the ECD centres as per the guidelines. In support of this, the Sub County Director of ECD had this to say during the interview;

Some of the ECD centres are managed by individuals with no teacher training. In some of the cases, the centre owners lack the requisite KCSE D+ as a minimum making them incompetent. The challenge is that such owners proceed to undertake daily running of the centres contrary to the guidelines. [Interview: Sub County Director of ECD, 18th June, 2021]

The results also show that more than half (54.9%) of the ECD teachers/caregivers were not registered by the Teachers Service Commission. Just about a third 35.5% were able to develop good progress assessment and primary school readiness tools . Equally, the results also show that only 51.6% of ECDE teachers/care givers were able to communicate with parents in which case, 48.4% were not able. This makes it difficult to professionally implement the ECD curriculum by effectively engaging with the parents for the benefit of the children. Qualified ECDE teachers often have strategies to involve parents in their children's education, creating a collaborative approach to learning. Parental involvement is linked to better educational outcomes and stronger developmental support at home. Therefore, ECDE teachers with less training will not effectively and constructively involve the parents for good learning to take place among the children. In fact, during the interview with the QASO, he had this to say;

In some centres, assistant teachers have not undergone the mandatory 6 week training for ECD teachers. However, the management of the centres still allows them to take part in active teaching of the children thus comprising on the quality of ECD education. [Interview: QASO, 11th June, 2021]

On curriculum implementation with regard to suitability of personnel, the results of the survey showed that a sizeable number (51.6%) of the participants objected to the requirement that untrained ECDE teachers should only act as teacher assistants and should have undergone the five-week ECD short-course. This shows that majority of the ECD teachers/care givers did not believe that lack of training affects the ability of a teacher and subsequent quality of teaching/learning. They do not believe that untrained personnel if engaged should only serve as assistant teachers and not as teachers. This belief ultimately affects the quality of Early Childhood Development and Education. Moreover, untrained teachers may not understand the developmental stages of young

children, leading to inappropriate teaching methods that can hinder cognitive, emotional, and social development. Also, the engagement of untrained teachers in pre-school education can lead to a range of negative outcomes that can affect children's development, safety, and future academic success. It is therefore imperative to invest in well-trained and qualified early childhood educators for acquisition of basic competencies among pre-primary learners.

4.8.1.2 Suitability of Head Teachers

Suitability of Head-teachers was measured using 3 items where the participants were to indicate their responses through a yes or no binary format. The results were analyzed and tabulated into frequencies and percentages as shown in Table 4.19 below.

Table 4.19: Suitability of Head Teachers

Item	SD	D	N	A	SA	Mean	SD
Has a minimum academic qualification shall be KCSE D+ or its equivalent.	8 (8.6%)	10 (10.8%)	6 (6.4%)	31 (33.3%)	38 (40.9%)	3.6	0.8
Has pre-school professional certificate, preferably Diploma in ECDE.	12 (12.9%)	13 (14.0%)	5 (5.3%)	26 (27.9%)	37 (39.8%)	3.4	1.0
Is in charge of day to day running of the institution.	18 (19.4%)	13 (14.0%)	10 (10.8%)	23 (24.7%)	29 (31.2%)	3.1	1.2
Composite mean on suitability of head teachers						3.4	0.9

Source: Survey Data (2023)

From the results, it emerged that a significant majority (74.2%) of the ECD centres had head teachers with a minimum academic qualification of KCSE D+. This suggests that most of the pre-primary centres in Kisii Central Sub-County ensured that their head-teachers met this criterion. Further, the study found that majority of the centres were ensuring that the head-teachers had pre-school certificate, preferably Diploma in ECDE (67.7%). However, only 26.9% did not have professional certificate of this level thus making it difficult for implementation of ECD curriculum. This shows that majority of the ECDE head teachers were suitable enough and had good academic qualification to steer management of the ECDE centres. Qualified head teachers ensure that the curriculum is implemented effectively, catering to the developmental needs of young children. Moreover, they provide strong instructional leadership, guiding ECDE teachers

to employ best practices in early childhood education. Further, it emerged that, in majority (55.9%) of the ECD centres the Head-Teacher were in full charge of day to day running of the institution and were allowed to fully discharge this duty.

4.8.1.3 Suitability of Centre Managers

Suitability of ECD Centre managers was measured using 4 items where the participants were to indicate their responses through a yes or no binary format. The results were analyzed and tabulated into frequencies and percentages as shown in Table 4.20 below.

Table 4.20: Suitability of Centre Managers

Item	SD	D	U	A	SA	Mean	STD
Minimum academic qualification of KCSE D+ or equivalent	6 (6.5%)	11 (11.8%)	7 (7.5%)	29 (31.1%)	40 (43.0%)	3.7	0.9
Professionally trained teacher (minimum ECD Certificate).	9 (9.7%)	11 (11.8%)	7 (7.5%)	29 (31.1%)	37 (39.8%)	3.6	1.0
Where the owner is not a professionally trained teacher; they have hired a manager who is a professionally trained teacher.	9 (9.7%)	13 (14.0%)	10 (10.8%)	27 (29.0%)	34 (36.6%)	3.4	1.1
Composite mean on suitability of center managers						3.0	0.8

Source: Survey Data (2023)

In this regard, in terms of academic qualification, majority of the centre managers had minimum academic qualification of KCSE D+ or equivalent (93.5%) with only 6.5% indicating that their center managers did not meet this criterion. This shows that ECD centres have complied with this requirement in most cases. In majority (70.9%) of the ECD centres, the centre managers were professionally trained teachers (minimum ECD Certificate) thus meeting the set guidelines. However, in some 21.5% of the cases where the manager was not a professionally trained teacher, they admitted to hiring a manager who is not professionally trained. Qualified managers bring a wealth of knowledge and experience in early childhood education, ensuring that the curriculum and care practices

are developmentally appropriate and effective. They can implement best practices and evidence-based strategies that promote children's learning and development.

4.8.1.4 Suitability of Health Services Provider

Health, safety, and nutrition in early childhood education are of utmost importance when it comes to operating a high-quality ECD centre. While health and safety might seem like basic elements of a good childcare facility, these factors can support the cognitive development of pre-schoolers. Suitability of Health Service Providers in ECD was measured using 4 items where the participants were to indicate their responses through a yes or no binary format. The results were analyzed and tabulated into frequencies and percentages as shown in Table 4.21 below.

Table 4.21: Suitability of Health Services Provider

Item	SD	D	U	A	SA	Mean	STD
Have Degree and Diploma holders – (stationed at MOH headquarters, provincial and district hospitals).	9 (9.7%)	12 (12.9%)	25 (26.8%)	23 (24.7%)	24 (25.8%)	3.2	1.2
Have minimum qualification of Diploma with C+ or equivalent.	8 (8.6%)	9 (9.7%)	9 (9.7%)	28 (30.1%)	39 (41.9%)	3.7	1.2
Trained according to the MOH laid down guidelines. NB: MOH shall undertake to train all health workers on Community Integrated Management of Childhood Illnesses (CIMCI).	1 (1.1%)	6 (6.5%)	10 (10.8%)	34 (36.6%)	42 (45.2%)	4.1	0.9
There is a nurse in-charge of the health centres.	24 (25.8%)	36 (38.7%)	6 (6.5%)	15 (16.1%)	12 (12.9%)	2.5	1.2
Composite mean on suitability of health services provider						3.4	1.0

Source: Survey Data (2023)

The study sought to investigate the suitability of health service providers that are in close proximity to the ECDE centres. In terms of personnel handling health issues at the ECD centres, although many of the participants acknowledged that they were aware of the

guideline that one should be a Degree and Diploma holders stationed at MOH headquarters, referral hospitals and sub county hospitals, more than a quarter (26.8%) of the respondents were not sure whether the personnel handling health issues at the ECD centres were degree and diploma holders. However, majority (72.0%) of the participants intimated that personnel handling health issues of their ECDE learners held a minimum qualification of Diploma with C+ or equivalent. Further, 81.8% of the sampled teachers believed that the personnel were trained by MOH on Community Integrated Management of Childhood Illnesses (CIMCI). The participants also reported that they were aware that such personnel were nurses-in-charge of a health centres. The results show that 29.0% of the surveyed teachers were aware of the existing guidelines relating to the qualification of the personnel to handle health issues within the centres. However, 71.0% were not aware of the existing guidelines relating to the qualification of the personnel to handle health issues. Teachers' knowledge of health guidelines is essential for safeguarding the well-being of pre-school learners, ensuring legal compliance, enhancing educational outcomes, building trust with parents, supporting professional development, and promoting overall health and safety in the educational environment.

4.8.2: Summary of Ratings of Service Providers Suitability in ECD Centres

The ratings on the four aspects of Service Providers Suitability in ECD centres in Kisii Central Sub-County were summarized using means and standard deviations and the findings are presented in Table 4.22 below.

Table 4.22: Summary of Service Providers Suitability Ratings

Sub-scales of service providers	<i>Mean</i>	<i>Standard Deviation</i>
Suitability of ECD Teachers/Caregivers	2.7	0.8
Suitability of Head Teachers	3.4	0.9
Suitability of Centre Managers	3.0	0.8
Suitability of Health Services Provider	3.4	1.0
Overall mean rating of service providers	3.1	0.9

Source: Survey Data (2023)

From Table 4.22, it is evident that pre-primary learning centres in Kisii Central Sub-County, in general, have above average rating in service providers' suitability. This was reflected by an overall mean rating of 3.1 with a standard deviation of 0.9 in a scale of 1 to 5. This suggests that, on average, service providers in ECD centres in Kisii Central Sub-County offer above average services. In particular, the head teachers of the ECDE

centres received the highest ratings ($Mean=3.4$; $SD=0.9$), implying that the head teachers of the ECD centres, on average, were rated highest suitable. It was followed by Health Services Provider in ECD centres which received a mean rating of 3.3 ($SD= 1.0$), reflecting that Health Services Provider to the learners in ECDE centres is fairly good.

Suitability of the ECD Centre Managers and ECD Teachers/Caregivers received suitability ratings of 3.0 ($SD=0.8$) and 2.7($SD=0.8$), respectively. It is evident from the findings of the study that ECDE teachers/caregivers received the worst ratings in terms of suitability, as reflected by a mean rating of 2.7. Therefore, majority of the ECD teachers/caregivers were not qualified or trained to administer first aid, they had no valid medical records and some had not undertaken any short course on child care by authorized government institutions. ECD teachers/caregivers who are not qualified or trained to administer first aid might not recognize the signs of a medical emergency quickly, leading to delays in getting necessary help. Immediate and appropriate first aid can prevent minor injuries from becoming severe.

4.7.3 Relationship between Suitability of Service Providers in ECD centres and Acquisition of Basic Core Competencies among ECD learners

The study investigated the relationship between suitability of service provider in ECD centres and acquisition of basic core competencies among the learners. The investigation was done using Pearson Product Moment Correlation analysis to establish the magnitude and direction of the relationships between the individual aspects of service providers in the centres and acquisition of core basic competencies among the learners. Service providers was categorized into four headings, namely: ECD Teachers/Caregivers, Head Teachers, Centre Managers and Health Services Provider. Mean response across a set of Likert-type scale responses on their suitability indicators was computed to create an approximately continuous variable within an open interval of 1 to 5 to suit the use of parametric data. Higher scale rating was interpreted to imply a corresponding higher service providers' suitability and vice versa. Consequently, the means of each aspect of service provider were correlated with the level of acquisition of core basic competencies among ECD learners. The significance value was set at 0.05, implying that a p-value less than 0.05 would result into a conclusion that there is statistically significant relationship between the variables, while p-value greater than 0.05 would mean that the correlation is not statistically significant. The correlation results are summarized in Table 4.23.

4.8 Service Providers Suitability and Acquisition of Basic Competencies among Pre-Primary Learners

Table 4.23: Correlation of between Suitability of Service Providers and Acquisition of Basic Core Competencies among ECDE Learners

Aspect of service providers	n	r	p-value
Suitability of ECD Teachers/Caregivers	93	.605	.000
Suitability of Head Teachers	93	.550	.000
Suitability of Centre Managers	93	.533	.001
Suitability of Health Services Provider	93	.296	.004

Source: Survey Data (2023).

It is evident that although the four aspects of service providers' suitability exhibited positive correlation with acquisition of basic core competencies, the magnitude of correlations varied though with all of them being statistically significant. It emerged that suitability of ECD teachers/caregivers recorded the strongest correlations at $r=.605$, followed by the suitability of head teachers at $r=.550$. Both of them had statistically significant relationship with acquisition of basic core competencies at $p<.001$. Similarly, centre managers' ($r=.533$, $p=.001$) and health services providers' ($r=.296$, $p=.004$) suitability all had statistically significant positive correlation to acquisition of core basic competencies. These findings suggest that improvement in each of the service providers is likely to improve the level of acquisition of the core basic competencies among the learners in ECD centres and vice versa.

In addition, in order to establish the influence of service providers' suitability on acquisition of core basic competencies among the learners in ECD centres, the research data was further subjected to multiple regression analysis as in Table 4.24.

4.8.4 The Influence of Suitability of Service Providers on Acquisition of Core Basic Competencies among the Learners in ECD Centres

H_{01} : *Suitability of service providers has no influence on acquisition of basic core competencies among learners in ECD centres.*

To establish the influence of service providers' suitability on acquisition of basic core competencies among learners in ECD centres, the null hypothesis that "*suitability of service providers has no influence on acquisition of basic core competencies among learners in ECD centres*" was tested.

To test this study hypothesis, the study adopted the use of multiple regression analysis to assess the null hypothesis being $H_0: \beta_1=\beta_2=\beta_3=\beta_4$ and the corresponding alternative hypothesis being H_1 : at least one $\beta_i \neq 0$. If the null hypothesis is true, then from $E(Y) = \beta_0 + \beta_{i=1-4} X_{i=1-4}$ the population mean of Y is β_i for every X_i value which indicates that X (suitability of service provider) has no influence on Y (Acquisition of Core Basic Competencies in ECD centres) and the alternative being that X (suitability of service provider) influences Y (Acquisition of Core Basic Competencies in ECD centres). The significance level was priori set at 0.05, such that if the p-value was less than 0.05 then the null hypothesis would be rejected and a conclusion reached that a significant difference exists. On the other hand, if the p-value was greater than 0.05, then it would be concluded that a significant difference does not exist. Table 24 shows the results of the regression model summary.

Table 4.24: Regression Model on Suitability of Service Provider on Acquisition of Core Basic Competencies

Variable	B	SE	Beta	t	Sig.	95% CI	Part corr.
Constant	0.180	0.407		.443	.659	(-.629, .989)	
Suitability of ECD Teachers/Caregivers	1.458	0.668	1.174	2.181	.032	(.130, 2.785)	.171
Suitability of Head Teachers	4.820	1.523	3.612	3.164	.002	(1.793, 7.847)	.248
Suitability of Centre Managers	2.126	0.702	2.454	3.029	.003	(.731, 3.521)	.237
Suitability of Health Services Provider	.370	0.490	.167	.756	.452	(-1.344, 604)	-.059

$R=.679$, Adjusted $R^2=.436$, $F(4, 88)= 18.797$, $p=.000$

$Y = \alpha + \beta X_1 + \beta X_2 + \beta X_3 + \beta X_4 + \epsilon$, where Y= Acquisition of Core Competencies; X_{1-4} = Four Aspects of Suitability of Service Provider and ϵ is the error term. ;

$$Y = .180 + 1.458X_1 + 4.820X_2 + 2.126X_3 + 0.370X_4 + \epsilon.$$

The model reveals that service provider suitability, as measured by the four sub-scales, accounted for 43.6% (Adjusted $R^2=.436$) of the variation in acquisition of core basic competencies among the learners in ECD centres. This reveals that about 44% of variation in the acquisition of core basic competencies among learners in ECD centres is explained by the composite change of the four aspects of service providers. Equally, the four aspects of service providers exhibited a fairly high degree of joint correlation ($R=.679$) with acquisition of core basic competencies among learners in ECD centres. It is also evident in the ANOVA output results that service providers' suitability, as measured by the four aspects, is indeed a significant predictor of acquisition of core basic

competencies among learners in ECD centres, $F(4, 88)=18.797$, $p=.000$. The high (> 1.96) value of F suggests that the variability in acquisition of core basic competencies among learners in ECD centres is not by chance but as a result of the differences in service providers' suitability within the ECD centres. Thus, the knowledge on the level of each aspect of service providers' suitability in ECD centres can be used to significantly predict the level of acquisition of core basic competencies among learners therein.

The analysis further reveals that the three aspects of service providers had varying influence on the acquisition of core basic competencies among the learners in the ECD centres. For instance, whereas three of the aspects had significant positive influence on acquisition of core basic competencies, one of them had insignificant un-standardized influence. For example, ECD teachers/caregivers had a un-standardized coefficient value of 1.458 within a 95% C.I (.130, 2.785), Suitability of Head Teachers had a un-standardized coefficient value of 4.820 within a 95% C.I (1.793, 7.847) and Suitability of Centre Managers with coefficient value of 2.126 at 95% CI (.731, 3.521) which were all significant. On the other hand, it was surprising that the coefficients values for Suitability of Health Services Provider ($B= 0.370$; $t=-0.756$, $p<.05$) was insignificant.

Nonetheless, given that suitability of ECD teachers/caregivers, suitability of head teachers and suitability of centre managers all had their p-values less than 0.05, there is a sufficient evidence to reject the null hypothesis ($H_0: \beta_1=\beta_2=\beta_3=\beta_4=0$). Therefore, the alternative hypothesis was supported with the conclusion that ECDE centres service providers' suitability as statistically significant influence on acquisition of core basic competencies among learners in the ECD centres.

In fact, comparative interpretation reveals that head teachers' suitability had the greatest influence on learners' acquisition of core basic competencies in ECD centres. A unit improvement in the suitability of head teachers in the ECD centres would result into an improvement in learners' acquisition of core basic competencies by 4.820 units, when other factors are held constant. On the same note, when suitability of head teachers improves by one standard deviation, the level of learners' acquisition of core basic competencies would improve by 3.612 standard deviations.

The second aspect of service provider in terms of influence given their suitability was centre managers which had an un-standardized coefficient value of 2.126, implying that

for one unit improvement in this aspect, there is a corresponding improvement in the level of learners' acquisition of core basic competencies by 2.126 units, when other factors are held constant. Similarly, one unit improvement in the suitability of ECD teachers/caregivers in ECD centres results in a corresponding improvement in the level of learners' acquisition of core basic competencies by 1.458 units. On the flip flop, the effect of suitability of health services provider in ECD centres was not statistically significant ($p>.05$) in the regression model.

Equally important is the part correlation coefficients, which indicate the contribution of each kind of service provider suitability to the total R squared. For example, the results show that suitability of the head teacher had a part correlation coefficient of .248, suitability of centre managers of .237 and suitability of ECD teachers/caregivers of .171. Squaring these values depict how much of the total variance in the level of acquisition of core basic competencies is uniquely explained by each variable and how much *R* squared would drop if it were not included in the model.

Thus, suitability of head teachers which had the greatest contribution to the model uniquely explains 6.2% of the variance in acquisition of core basic competencies among learners in ECD centres, suitability of ECD centre managers uniquely explains about 5.6% of variance and suitability of ECD teachers/caregivers only accounted for 2.9% of the variance in the acquisition of core basic competencies among the learners. It is worth noting that total *R* Squared value for the model (0.436 or 43.6 % explained variance) was not equal to the sum total of all the squared part correlation values because of the fact that the overlaps or shared variance were removed. Notwithstanding, it was concluded that service providers' suitability in regression model was adequate in predicting acquisition of core basic competencies of learners in ECD centres. The model was statistically significant at $F(4, 88) = 18.797, p=.000$, accounting for 43.6% (Adjusted $R^2=.436$) of the variation in the level of acquisition of core basic competencies among the learners in ECD centres within Kisii Central Sub-County.

4.9 Guidelines on Food, Health and Safety and the Acquisition of Basic Competencies among pre-primary learners

The third objective of the study was to investigate the influence of guidelines on food, health and safety on the acquisition of basic core competencies among pre-primary

learners. To achieve this objective, first, descriptive statistics was used to explore the level of implementation of guidelines on food, health and safety, secondly, a regression analysis was used to establish the level of influence of implementation of guidelines on food, health and safety on acquisition of basic competencies.

4.9.1 Descriptive of Service Providers Suitability

The study adopted 5 likert scale to capture health guidelines and safety guidelines in ECDE centres at Kisii Central Sub County.

4.9.1.1 Health Guidelines

Implementation of health guidelines was measured using 14 items, where the participants were to indicate their responses on Likert scale ratings. The items in this scale were rated on a 5-point Likert scale where 1= Strongly Disagree (SD), 2 = Disagree (D), 3= Undecided (U), 4 = Agree ;(A) and 5 = Strongly Agree (SA).The results were analyzed to show frequencies, percentages, mean and standard deviation for each item. Similarly, the combined mean and standard deviation was also computed as presented in Table 4.25.

Table 4.25: Implementation Health Guidelines

Statement	SD	D	U	A	SA	Mean	STD
Growth monitoring and promotion services offered at the centre	30 32.3%	42 45.2%	15 16.1%	6 6.5%	0 0.0%	1.9	0.8
Health cards for all children available	9 9.7%	33 35.5%	21 22.6%	24 25.8%	6 6.5%	2.8	1.0
Nearest health centre work with teachers to provide health services	3 3.2%	12 12.9%	6 6.5%	45 48.4%	27 29.0%	3.8	0.8
Food brought from home are stored in racks in the ECD centre	3 3.2%	9 9.7%	0 0.0%	54 58.1%	27 29.0%	4.0	0.8
The kitchen has lockable doors and windows	3 3.2%	9 9.7%	6 6.5%	45 48.4%	30 32.3%	3.9	0.8
The kitchen is well-ventilated	12 12.9%	18 19.4%	15 16.1%	27 29.0%	21 22.6%	3.3	1.1
Drying racks are available	6 6.5%	12 12.9%	15 16.1%	33 35.5%	27 29.0%	3.7	0.9
Health certificates are available for the cook	24 25.8%	27 29.0%	6 6.5%	21 22.6%	15 16.1%	2.7	1.2
De-worm children at the centre	9 9.7%	24 25.8%	9 9.7%	30 32.3%	21 22.6%	3.3	1.1
De-worming tablets are provided by staff of a nearby health centre	15 16.1%	18 19.4%	9 9.7%	27 29.0%	24 25.8%	3.3	1.2
The centre has a health facility	36 38.7%	48 51.6%	3 3.2%	6 6.5%	0 0.0%	1.7	0.8
The health facility has equipment and adequate medical supplies	15 16.1%	21 22.6%	51 54.8%	6 6.5%	0 0.0%	2.5	0.8
Health facility has a medically qualified health worker	0 0.0%	6 6.5%	51 54.8%	24 25.8%	12 12.9%	3.4	0.6
Sick children are treated at the health facility	6 6.5%	18 19.4%	9 9.7%	45 48.4%	15 16.1%	3.4	1.0
Composite Mean of Implementation Health Guidelines						3.2	1.1

Source: Survey Data (2023)

From the results in Table 4.25, it is evident that the level of implementation of health guidelines in the ECDE centres in Kisii Central Sub-county is above average, as reflected by a composite mean rating of 3.2 with a standard deviation of 1.1 in the scale of 1 to 5. However, there was a divergent opinion on the level of implementation of some health policy guidelines. For example, it emerged that growth monitoring and promotion services were not offered at most of the centres. This was interpreted from the mean item rating of 1.9 (SD = 0.8) on the statement that growth monitoring and promotion services were offered at the centre. This shows that there was a general disagreement by the participants that growth monitoring and promotion services were offered at their centres. Specifically, majority of the participants (77.5%) generally disagreed with the statement.

However, only 6.5% of participants agreed that growth monitoring and promotion services were offered at their centre with 16.1% being undecided. Cumulatively, a significant majority of the participants reported that these services were not offered at their ECD centres thus showing that growth and monitoring services are lacking in most ECD centres in Kisii Central Sub-County.

As to whether all children have health cards in the centres, the results showed that they were only available in a few of the centres. This opinion was reflected by the item mean response rating of 2.8 (SD = 1.0) from the item that sought to establish whether health cards were available for all children in the centre. Whereas, some 32.3% of the respondents asserted that their centres had health cards for all the children, another 45.2% of them confirmed that their centres do not have health cards for all the children. However, some 22.6% of them were noncommittal on the matter. This shows that a larger proportion of participants reported that health cards were not available for all children, suggesting that in most ECD centres, health cards are not available for all children.

In terms of how food brought from home by the children is stored, the results showed that although the ECD centres were making effort at ensuring safety of these foods, they have not fully achieved it. This was shown by a mean positive response rating of 4.0 (SD= 0.8) that food brought from home is stored in racks in the ECD centre. This shows that while a significant majority (87.1%) agreed that in their centres, food brought from home are stored in racks, some others accepted that food is never stored in racks in their centre. Equally, it was also found that while kitchens have lockable doors and windows in a majority of the centres, in some others they do not have lockable doors and windows. This emerged from a mean of 3.9 (SD=0.8) for the item that “the kitchens have lockable doors and windows” showing a general level of agreement with a few dissenting voices. This was shown by the fact that while a majority (80.7%) of the participants either agreed or strongly agreed that their kitchen have lockable doors and windows, some 12.9% of the respondents indicated that this was not the case in their centre and another 6.5% of the respondents remained noncommittal on the statement. This shows that while there was considerable effort in many of the ECD centres to ensure food safety, others were not trying as much.

In terms of ventilation, this health policy was found to be moderately (Mean = 3.3; SD= 1.1) implemented in ECD centres. This was shown by the fact that although 51.6% of the participants either agreed or strongly agreed that their kitchen is well ventilated, close to a third (32.3%) others disagreed or strongly disagreed with the statement. This shows that while kitchens in a majority of the ECD centres were well ventilated, in another respectable proportion of them the kitchens were not well ventilated, posing health risk among the learners.

The results also showed that drying racks are available in some of the ECDE centres but not in all of them, as was reflected by a mean rating of 3.7 (SD = 0.9). This view was established as majority (64.5%) of the participants either agreed or strongly agreed that drying racks are available in the kitchen at their ECD centres. On the contrary, close to a fifth 19.4% of the participants generally accepted that drying racks were not available in their ECDE centres. This shows that there are drying racks in some of the ECD centres, but not in others.

With regard to health certificates for the cooks, the study found that health certificates were not available for cooks in most ECD centres. This emerged from the response to the item that “health certificates are available for the cook” with a mean = 2.7 with a standard deviation of 1.2. The participant’s views were spread across the spectrum with some 29.0% disagreeing and 25.8% strongly disagreeing with the statement. However, 22.6% of participants agreed and another 16.1% strongly agreed that health certificates are available for the cooks in their centres, while 6.5% of participants were undecided. Cumulatively, 54.8% of participants disagreed while 38.7% agreed that health certificates are available for cooks in their centre. This shows that in majority of ECD centres in Kisii Central Sub-County, cooks do not have health certificates. Not having health certificate compromises the good working and service delivery of the cooks as well as indicating their unsuitability for the job. Unqualified personnel may not follow strict hygiene practices, increasing the risk of spreading infectious diseases. Moreover, untrained cooks may not follow proper hygiene practices, leading to the contamination of food with bacteria, viruses, or parasites. Without knowledge of safe cooking temperatures and methods, food might be undercooked, increasing the risk of foodborne pathogens. Therefore, ensuring that qualified, certified cooks manage kitchen operations in ECDE centers is crucial for safeguarding the health and well-being of young children.

Equally, the results also show that although many of the schools collaborate with nearest health facilities to provide health services to the ECD learners, this was not the case in others. This proved by the fact that whereas 77.4% of the surveyed teachers either agreed or strongly agreed with the statement that the “nearest health centre work with teachers to provide health services”, 16.1% of them negated the statement and another 6.5% of them were undecided. The item attracted a mean response rating of 3.9 (SD = 0.9) showing that the participants generally agreed with the statement. The view was convergent as shown by the standard deviation of 0.9 being less than 1 indicating that the responses were clustered around the mean. Thus, the study has established that whereas not in all, a majority of ECD centres work with nearest hospitals to access and provide health services to the learners in their centres. Equally, during interview with the Sub County Director of ECD, he had this to say;

*The health and safety guidelines are availed to all the ECD centres in our county. The management are advised on what is expected from them regarding health and safety of children. Moreover, the ministry conducts registration inspection to ensure ECD centres are affiliated to a nearby health facility to address health issues for children in their schools.
[Interview: Sub County Director of ECD, 18th June, 2021]*

On the contrary, it emerged that many of the centres do not have appropriate health facilities. This was established when the respondents were probed on whether their center was close to any health facilities (Mean 1.8 and SD of 0.8). This shows a convergent level of disagreement from the participants. Specifically, majority of the participants (51.6%) disagreed while a further 38.7% strongly disagreed with the statement and another 3.2% were undecided on the item. Only 6.5% of participants alluded that their centres were in proximity to appropriate health facilities. This shows that most of the ECD centres were not close to the health facilities that meets the standard prescribed by government

In terms of whether the health centres had appropriate equipment and adequate medical supplies, the results showed a mean rating of 2.5 (SD = 0.8) indicating that the participants generally disagreed that that the nearby health centres had appropriate equipment and adequate medical supplies. In this case, majority (54.8%) of the

participants were not sure regarding the statement that the health facility has equipment and adequate medical supplies. This is attributed to the fact that most ECD centres do not necessarily have health facilities close them, hence the undecided response. Further, 38.7% of the participants cumulatively disagreed with the statement that the available and nearby health facilities? had appropriate and adequate medical equipment. This shows that the few health facilities near ECDE centres are not well equipped to provide the required medical services.

Equally, the study established that even deworming of the children is not regularly done within the surveyed ECDE centres as expected. This emerged from the mean response rating of 3.3 (SD= 1.1) to the statement that sought to establish whether deworming of children at the centre was done. The respondents were sharply divided over the matter, with 54.9% of them either agreeing or strongly agreeing and another 35.5% of them either disagreed or strongly disagreed with assertion that children are regularly dewormed in the ECDE centres. However, some 9.7% of the respondents remained undecided. This shows that although in most ECD centres children are dewormed as expected, in a respectable proportion of the centres it is not done. Similarly, during the interview with the head teachers, one of them had this to say;

To maintain good health of the children our teachers instruct children on safety practices such as washing of hands and avoiding dirt. Safe water is provided in school for children and the children are also occasionally given deworming tablets. We only give deworming tablets to our children when we them receive from the nearby health centre, which is only occasional [Interview: Head-Teacher 11, 19th May, 2021]

With regard to qualification of personnel from the nearby health facilities, the results showed that many respondents believed that the personnel had appropriate qualifications, as was reflected by a mean response rating of 3.5 (SD = 0.6). In this case, although the majority (54.8%) of participants were not sure, 38.7% cumulatively agreed that the health facility near their ECDE centre had medically qualified health workers. This shows that in cases where there was a health facility, there were qualified personnel attached to it.

Likewise, the results showed that many of the sick children are treated at the nearby health facilities. This was corroborated by a mean rating of 3.5 (SD = 1.0), with nearly

two thirds (64.5%) of the participants either agreeing or strongly agreeing with the statement that the sick children are treated at the nearby health facilities. Only 25.9% of the participants negated the claim that most children that are sick are usually treated at health facility close to the ECDE centre. Cumulatively, majority of participants agreed that their sick children are treated at the nearby health facility, showing that most of the ECD centres undertook to have the children treated at nearby health facilities.

4.9.1.2 Implementation of Feeding Program

Implementation of nutrition guidelines was measured using 20 items under feeding program. The results were analysed to show frequencies, percentages, mean and standard deviation for each item. Similarly, the combined mean and standard deviation was also computed as presented in Table 4.26 below.

Table 4.26: Implementation of Feeding Program

Statement	SD	D	U	A	SA	Mean	STD
The centre has a feeding program facilities	15 16.1%	24 25.8%	0 0.0%	33 35.5%	21 22.6%	3.2	1.2
The feeding program is managed by parents	18 19.4%	36 38.7%	6 6.5%	21 22.6%	12 12.9%	2.7	1.2
The feeding program is managed by centre administrators	9 9.7%	18 19.4%	6 6.5%	36 38.7%	24 25.8%	3.5	1.1
The utensils are cleaned properly	0 0.0%	12 12.9%	12 12.9%	48 51.6%	21 22.6%	3.8	0.7
Feeding process is orderly (washing hands, all children served, no pushing, small babies helped to feed)?	0 0.0%	6 6.5%	0 0.0%	51 54.8%	36 38.7%	4.3	0.6
Children are allowed to enter the kitchen	36 38.7%	45 48.4%	9 9.7%	3 3.2%	0 0.0%	1.8	0.8
Children are given milk at the centre	24 25.8%	39 41.9%	6 6.5%	15 16.1%	9 9.7%	2.4	1.1
The porridge is enriched (i.e. milk and sugar added to it)	12 12.9%	21 22.6%	45 48.4%	9 9.7%	6 6.5%	2.7	0.9
The children are given nutritionally balanced meals	12 12.9%	18 19.4%	36 38.7%	21 22.6%	6 6.5%	2.9	0.9
Children are fed once a day	30 32.3%	39 41.9%	15 16.1%	9 9.7%	0 0.0%	2.0	0.9
Children are fed twice a day	3 3.2%	12 12.9%	18 19.4%	39 41.9%	21 22.6%	3.7	0.8
The food is served by kitchen staff	6 6.5%	12 12.9%	15 16.1%	33 35.5%	27 29.0%	3.7	0.9
The food is served by teachers	24 25.8%	33 35.5%	12 12.9%	15 16.1%	9 9.7%	2.5	1.1
The cooks have valid and current health certificates	24 25.8%	30 32.3%	21 22.6%	12 12.9%	6 6.5%	2.4	1.1
The cooks handle the food in a hygienic manner	6 6.5%	12 12.9%	9 9.7%	36 38.7%	30 32.3%	3.8	0.9
Parents contribute to the feeding program	3 3.2%	9 9.7%	6 6.5%	39 41.9%	36 38.7%	4.0	0.9
Feeding program is funded by government	36 38.7%	48 51.6%	6 6.5%	3 3.2%	0 0.0%	1.7	0.7
The feeding program is supported by a donor	24 25.8%	39 41.9%	15 16.1%	9 9.7%	6 6.5%	2.3	1.0
The school feeding program is satisfactory to children	18 19.4%	27 29.0%	6 6.5%	24 25.8%	18 19.4%	2.9	1.2
The school feeding program has	6 6.5%	15 16.1%	12 12.9%	33 35.5%	27 29.0%	3.6	1.0

Composite mean on the implementation of feeding program**3.0 1.2**

Source: Survey Data (2023)

The results of the survey revealed that just merely about half of the ECD centres in Kisii Central Sub-County have put in place mechanisms of implementation school feeding programs as reflected by a composite mean rating of 3.0 (SD=1.2). For example, it emerged that although many of the ECD centres had feeding program facilities, not all of them had. This was established by a mean response rating of 3.2 (SD=1.2), with 35.5% of the participants having agreed and a further 22.6% strongly agreed that their centre had feeding program facilities. However, 41.9% of the participants generally confirmed that they had no feeding program facilities in their ECDE centre. This shows that 58.1% of the surveyed teachers cumulatively agreed that they have a feeding program facilities while 41.9% of them disagreed, showing that in a significant proportion of the ECD centres, there was no recognizable feeding programme facilities.

On how feeding programs are managed in the ECDE centres, the finding of the study show that the management of the school feeding programme in some ECDE centres in Kisii Central Sub County was carried by parents (Mean 2.7; SD 1.2). However, majority (58.1%) of the participants generally disagreed with the assertion their school feeding program was being managed by parents. Only 35.5% of the sampled teachers alluded that school feeding program for the learners in their centres was being managed by parents. Similarly, during the interview session with the head teachers, one of the respondents had this to say; when he said;

We have a feeding programme for our ECD centre funded by the parents. This was established to ensure that the food consumed by children is of the required hygienic standard. However, the teachers manages the programme and monitor the safety of food consumed by the children while at the centre. [Interview: Head-Teacher 4, 23rd May, 2021]

Equally, the results of the study showed that the school feeding program in some of the centres are managed by centre administrators. This was proved by mean rating of 3.5 (SD=1.1) with 64.5% of the surveyed teachers confirming that in their centres the school feeding programme is managed by centre managers. Only 29.1% of them said that their centre managers do not manage their feeding programme. This shows that many school feeding programmes in the ECD centres are managed by centre administrators/managers

On financing of the school feeding program, the results showed that in many ECDE centres parents contribute to the feeding program (Mean = 4.0; SD = 0.9). The view was supported by 80.6% of the study respondents (teachers) who confirmed that parents finance feeding programme in their centres. Only 9.7% of participants disagreed with 3.2% strongly disagreeing while the remaining 6.5% were neutral. This shows that majority of the surveyed teachers agree that parents contribute to the school feeding program.

The mean rating of 1.7 (SD.= 0.7) shows that a majority the participants generally disagreed with the assertion that the feeding program in ECDE centres were always funded by the government. However, 9.7% others were either undecided or asserted that in their centres feeding programme is largely funded by the government. This shows that although the government does not fund feeding program in most of the ECD centres, it does so in at least some of the centres. Likewise, the study finding showed that some of the ECD centre feeding programs were supported by donors (mean=2.3; SD=1.0). Specifically, while majority of the participants (67.5%) disagreed, some 25.8% of them were undecided on the statement that their centre receives donor funding for feeding program.

As to whether the school feeding program is satisfactory to children, this was found to be moderate with a mean rating of 2.9 (SD = 1.2). While 48.4% of the participants disagreed with the claim that the school feeding program is satisfactory to children, a respectable proportion (45.2%) of them accepted that the school feeding program in their centre is indeed satisfactory to children. This indicates that although the feeding programs are not satisfactory in some of the ECD centres, it is satisfactory in other ECD centres Kisii Central Sub-County.

On the whether the management and running of the school feeding programme face any challenges, the results showed that the school feeding program in many of the ECDE centres had quit a number of the challenges, as reflected by a mean rating of 3.6 with a standard deviation of 1.0. This shows that majority of the ECD centres experience challenges with the school feeding program.

On the flip flop, the results showed that the utensils are cleaned properly (mean = 3.8; SD = 0.7) and feeding program was found to be orderly and highly coordinated (Mean=4.3;

SD=0.6) in most of the centres. This emerged from the response to the item that feeding process is orderly (washing hands, all children served, no pushing, small babies helped to feed), where there was general convergence of agreement among a majority of the respondents that this true. Specifically, 54.8% of the participants agreed while 38.7% strongly agreed that the feeding process is orderly (washing hands, all children served, no pushing, small babies helped to feed) giving a cumulative total of 93.5% who agreed that the feeding process was orderly.

As a food management guideline, the results showed that children are generally not allowed to enter the kitchen (Mean = 1.8; SD= 0.7). The low mean and standard deviation show that the views were convergent as majority of the participants either disagreed (48.4%) or strongly disagreed (38.7%) with the claim that children are allowed to enter the kitchen. However, only 3.2% of participants agreed to the statement while 9.7% were undecided. This shows that 87.1% of participants generally disagreed that children are allowed to enter the kitchen. Thus, it is clear that children are not allowed to enter the kitchen as a food safety measure.

On the other hand, in terms of quality of the nutrition, the results show that children are rarely given milk in many of the ECD centres. This was reflected by a relatively low positive mean of 2.4 (SD=1.1) in response to the item that “children are given milk at the centre”. This indicates that majority of the participants disagreed with the statement. In particular, 41.9% of them disagreed and a further 25.8% strongly disagreed with the statement. However, only 16.1% and 9.7% of participants agreed and strongly agreed, respectively, with the statement. Thus, cumulatively 67.7% of participants disagreed while 25.8% others agreed that children are given milk at their ECDE centres. This shows that children are not given milk in many of the ECDE centres in Kisii Central Sub-County.

Equally, on whether the porridge given to the children at the ECD centres is enriched, the result show that this was only true in a few of the centres. This was interpreted from a mean response rate of 2.7 with a standard deviation of 0.8, where more than a third (35.5%) of the respondents accepted that children are not given enriched porridge in their centre. Only 16.2% of the participants alluded that porridge given to the children in their centre was enriched (i.e. milk and sugar added to it), reflecting that in only a few of the ECD centres was the porridge enriched. Likewise, whereas only some 29.1% of the

surveyed teachers alluded that the children are given nutritionally balanced meals in their centres, close to one out of every three (32.3%) of the teacher respondents revealed that children in their centres do not get nutritionally balanced diet. This shows that most ECDE centres in Kisii Central Sub County were not adequately and sufficiently feeding their learners, yet the nutritional guidelines from the ministry of education is that learners should be served with nutrient rich porridge, regular provision of milk to children as well as nutritionally balanced meals. Implementing these guidelines can help promote healthy growth, cognitive development, and overall well-being in children

On the frequency of feeding, it emerged that in most of the centres children are fed only once a day, as was reflected by a mean response rate of 2.0 (SD=0.9). Even so, in terms of food service to the children, the results showed that food is largely served by the kitchen staff (Mean = 3.7; SD = 0.9). However, in some cases (mean=2.5, SD=1.1) the food was served by teachers; this was contrary to the opinion that food is only served by the kitchen staff. This therefore means that, in cases where food is not served by the kitchen staff, it is done by the teachers at the ECD centres.

It emerged from the results of the study that majority of cooks in the ECD centres within Kisii Central sub-county do not have valid and current health certificates, thus failing to comply with school food handling guidelines. This was shown by the fact that majority (58.1%) of participants disagreed that the cooks have valid and current health certificates with only 19.4% others agreeing that their cooks have valid health certificates. Nonetheless, the findings of the study show that although the cooks, in a majority of the centres, generally handle food in a hygienic manner, this was not true in all the centres. Cumulatively, 71.0% of participants agreed that the cooks handle the food in a hygienic manner but some 19.4% of the participants accepted that cooks in their centres do not handle food hygienically as expected.

4.9.1.3 Implementation of Safety and Protection Guidelines

To investigate implementation of safety and protection guidelines, a Likert scale of 27 items was developed to collect the views of teacher respondents. The results were analysed to show frequencies, percentages, mean and standard deviation for each item. Similarly, the combined mean and standard deviation was also computed as presented in Table 4.27.

Table 4.27: Implementation Safety and Protection Guidelines

Statement	SD	D	U	A	SA	Mean	STD
A list of emergency contacts readily available to the staff	3 3.2%	9 9.7%	9 9.7%	42 45.2%	30 32.3%	3.9	0.8
Fire-fighting equipment readily available	27 29.0%	45 48.4%	3 3.2%	12 12.9%	6 6.5%	2.2	1.0
A first aid kit available with safe drugs	18 19.4%	30 32.3%	6 6.5%	24 25.8%	15 16.1%	2.9	1.2
All medicines kept out of children's reach	6 6.5%	12 12.9%	0 0.0%	48 51.6%	27 29.0%	3.8	0.9
ECD centre fenced, has a lockable gate and no footpath across the centre	21 22.6%	24 25.8%	0 0.0%	30 32.3%	18 19.4%	3.0	1.3
Children are escorted to and from the ECD centre by an adult, older sibling 12 years and ;above	6 6.5%	9 9.7%	15 16.1%	36 38.7%	27 29.0%	3.7	0.9
Parents and teachers ensure and adhere to the scheduled arrival and departure times	8 9.7%	9 9.7%	0 0.0%	42 45.2%	33 35.5%	3.9	1.0
Parents provide the photographs, names and identification documents of the persons who collect/pick the child and nobody else is allowed to pick the child from the centre	24 25.8%	36 38.7%	9 9.7%	15 16.1%	9 9.7%	2.4	1.1
Where transport is provided, the school bus has adequate and comfortable seats fitted with child appropriate safety belts for each child	9 9.7%	18 19.4%	9 9.7%	33 35.5%	24 25.8%	3.5	1.1
No open vehicle is used to transport ECD children	0 0.0%	0 0.0%	6 6.5%	51 54.8%	36 38.7%	4.3	0.4
Vehicle are comprehensively insured and regularly serviced and maintained as per manufacturer's guide	3 3.2%	9 9.7%	18 19.4%	36 38.7%	27 29.0%	3.8	0.8
The driver and assistant have certificate of good conduct	0 0.0%	6 6.5%	15 16.1%	42 45.2%	30 32.3%	4.0	0.6
The assistant sit with the children to man the door, escort and ensure children cross the	0 0.0%	3 3.2%	6 6.5%	45 48.4%	39 41.9%	4.3	0.5

road safely							
The telephone numbers of the parents and the school are displayed inside the bus	12 12.9%	18 19.4%	6 6.5%	33 35.5%	24 25.8%	3.4	1.1
The bus display on the outside the name, address and telephone number of the ECD centre/school	6 6.5%	12 12.9%	0 0.0%	42 45.2%	33 35.5%	3.9	1.0
The school bus or any other vehicle used for school transport does not exceed speed limit of 60 km/hr	0 0.0%	0 0.0%	6 6.5%	51 54.8%	36 38.7%	4.3	0.4
The vehicle doesn't expose the children to any pornographic material either verbal, audio-visual or print media	0 0.0%	3 3.2%	6 6.5%	48 51.6%	36 38.7%	4.2	0.5
For all school/ECD centre trips/visits, parents give consent and bus conform to transport regulations for children	0 0.0%	9 9.7%	15 16.1%	42 45.2%	27 29.0%	3.9	0.7
Parents driving have a waiting place supervised by an adult. Driving speed inside the centre is a maximum of 5 km/hr	12 12.9%	21 22.6%	9 9.7%	30 32.3%	21 22.6%	3.3	1.1
In case of sickness or serious accidents in the ECD centre, the teacher contacts the parent/guardian immediately	0 0.0%	6 6.5%	0 0.0%	48 51.6%	39 41.9%	4.3	0.6
Teacher who contracts a contagious disease stays at home until certified healthy by a medical practitioner	3 3.2%	12 12.9%	9 9.7%	42 45.2%	27 29.0%	3.8	0.8
When a teacher is sick an alternative arrangement is made to provide care for the children	6 6.5%	9 9.7%	0 0.0%	45 48.4%	33 35.5%	3.9	0.9
Children are trained not to touch anybody else's blood, share cutting objects or use any sharp objects	9 9.7%	15 16.1%	0 0.0%	39 41.9%	30 32.3%	3.7	1.1
Children are trained not to accept food items such as soda, sweets or any gift from anybody without the parent's or teacher's permission	3 3.2%	9 9.7%	0 0.0%	48 51.6%	33 35.5%	4.0	0.8
No smoking, drinking alcohol or	0	6	0	48	39	4.3	0.6

use of any illicit drugs in the ECD centre	0.0%	6.5%	0.0%	51.6%	41.9%		
No corporal punishment, emotional/psychological abuse is applied to children in the centre	0	6	0	57	30	4.2	0.5
Strangers, idlers, drug peddlers are not allowed in the vicinity of the ECD centre compound and environs	0.0%	6.5%	0.0%	61.3%	32.3%	4.4	0.4
	0	0	0	54	39		
	0.0%	0.0%	0.0%	58.1%	41.9%		
Composite mean on safety and protection guidelines						3.7	1.0

Source: Survey Data (2023)

The findings of the study revealed that safety and protection guidelines are moderately implemented in the ECDE centres in Kisii Central Sub-County, as indicated by a composite mean rating of 3.7 in the scale of 1 to 5 with a standard deviation of 1.0. This finding suggests whereas some safety and protection measures are well implemented in the ECDE centres, others are not as implemented as expected. For example, the study shows that, as a safety measure, many of the ECD centres have a list of emergency contacts readily available to the staff (Mean = 3.9; SD= 0.8). This was shown by the fact that 45.2% the participants agreed and another 32.3% of them strongly agreed that a list of emergency contacts are readily available to the staff in their ECDE centres. However, some 9.7% of the participants disagreed and another 3.2% of them strongly disagreed that a list of emergency contacts are readily available to the staff. This shows that although many ECD centres have emergency contacts ready for their staff to use during emergencies, some of them do not keep the emergency contacts.

It emerged from the findings of the study that firefighting equipment are not readily available in many of the ECD centres. This was based on the response to the statement that “Fire-fighting equipment are readily available” which attracted a mean response rate of 2.2 (SD=1.0), indicating that the participants generally disagreed with the statement. A significant majority (77.4%) of the participants accepted that their centres do not have readily available fire-fighting equipment, only 19.4% of them alluded that their centres have readily available fire-fighting equipment. This shows that many of ECD centres in Kisii Central Sub-County are generally not prepared with regard to dealing with cases of fire.

The results also showed that first aid kits were only available in some of the ECD centres and not available in others. This was reflected by a mean response rate of 2.8 ($SD=1.2$). In fact, more than a half (51.7%) of the respondents accepted that their centres do not have first aid kits with safe drugs, only 41.9% of them indicated that their centre have a first aid kit with safe drugs and some 6.5% were none committal on the matter. indicate that although a significant proportions of participants alluded that their centres have first aid kits, a majority of them confirmed that their ECD centres do not have a first aid kit.

In terms of drug management, the results showed that the ECD centres were making adequate effort to keep drugs out of the reach of children. This was revealed by responses to the statement that all medicines are kept out of children's reach, as indicated by a mean response rate of 3.8 with a standard deviation of 0.9. On fencing, the results showed that the proportion of ECD centres which are fenced are almost equal to the proportion of the ones not fenced. This emerged from the mean response rating of 3.0 ($SD=1.3$) on the item which investigated whether ECD centres are fenced, have lockable gates and have no footpaths across the centre. Majority (51.7%) of participants responded to the affirmative, while 48.4% of them responded to the negative that their ECD centre is fenced, has a lockable gate and no footpath across the centre. This shows that almost half of the ECD centres are not fenced nor have a lockable gates. This exposes children to outsiders and distractions.

However, the results showed that many of the children are escorted to and from the ECD centres by an adult such as an older sibling, as reflected by a mean response rating of 3.7 with a standard deviation of 0.9 indicating a convergent opinion shared by majority of the participants. Specifically, 38.7% of participants agreed and 29.0% strongly agreed with the statement that children are escorted to and from their ECD centres by an adult. On the other hand, only 9.7% of the respondents disagreed and 6.5% strongly disagreed with the statement, suggesting that only a small proportion of the children are not escorted by an adult to and from school. In addition, the results show that many of the parents and teachers adhere to the scheduled arrival and departure times (Mean = 3.8; $SD = 1.1$). Cumulatively, whereas only 19.4% of the surveyed teachers refuted the claim that parents and teachers always ensure and adhere to the scheduled arrival and departure times, an overwhelming majority (80.7%) of the respondents supported the claim. This is an

indication that there is good coordination between parents and teachers to ensure that children arrive in school and are picked on time.

However, on the question of to whom the child is dropped or who picks the child from school, the results showed that there is no serious attention to whoever picks and collects them. The response on the statement “parents provide the photographs, names and identification documents of the persons who collect/pick the child and nobody else is allowed to pick the child from the centre”, which attracted a positive mean response of 2.5 (SD=1.1), indicates that there was a sharp division of opinion among the surveyed teachers on this matter. For instance, whereas 25.8% of participants alluded that parents provide the photographs, names and identification documents of the persons who collect/pick the child and nobody else is allowed to pick the child from the centre, 64.5% of them disagreed with the statement. This shows that, in most cases, conscious effort is rarely made to appropriately identify the person in charge of dropping or picking children to and from ECD centres.

In cases where the school provides transport, the results of the survey established that although many of the school buses have adequate and comfortable seats fitted with with child appropriate safety belts for each child, this was not true in a significant proportion of the buses. This was reflected by a mean response rate of 3.5. (SD = 1.1), with 61.3% of the participants agreeing while 29.1% others disagreeing that their school buses have adequate and comfortable seats fitted with child appropriate safety belts. This confirms that although most ECD centres provide comfortable transport in terms of seats and seat belts, a significant proportion of them still have buses that are uncomfortable and unsafe for the children. On the flip flop, the results of the survey established that no open vehicle is used to transport ECD children (Mean = 4.3; SD = 0.4) in a significant majority of the ECD centres. Whereas only 6.5% of the surveyed teachers were undecided, in more than nine out of every ten (93.5%) cases no open vehicles are used to transport children to and from ECD centres in Kisii Central Sub-County. This suggests that the implementation of this guideline on transport has been significantly realized, thus enhancing elements of transport safety for the children.

Likewise, as to whether vehicles are comprehensively insured and regularly serviced, the results showed that although a sizable number of ECD centres have implemented this,

others have not. This was shown from the teachers' response on the statement that "vehicles are comprehensively insured and regularly serviced and maintained as per manufacturer's guide". The item attracted a positive mean response of 3.8 (SD = 0.8), indicating that many of the respondents generally had a convergent opinion of agreement with the statement. In fact, 38.7% of the participants agreed, 29% others strongly agreed with the statement and only 12.9% of them disagreed that vehicles are comprehensively insured and regularly serviced and maintained as per the manufacturer's guide. This shows that although majority of the surveyed teachers held a strong belief that the vehicles transporting the children in their centres are comprehensively insured and well maintained thus safe for use, some few of them were not satisfied.

In terms of the conduct of transport crew, the study found out that the drivers and assistants in most cases (mean=4.0; SD=0.7) have certificates of good conduct. This was confirmed by a majority (77.5%) of the participants who acknowledged that their drivers and assistants both have certificates of good conduct. This in an indication that majority of the ECD centres are making an effort of ensuring child safety by engaging transport crews with no criminal record. Equally, with regard to management of the children during transport, the results indicate that in most (Mean = 4.2; SD= 0.6) of the cases the assistant sits with the children to man the door, escort and ensure children cross the road safely. On the contrary, the results showed that whereas it was practised in most of the cases, there was no or little conscious effort to ensure that the telephone numbers of the parents and the school are displayed inside some of the buses, as was reflected by a mean response rate of 3.4 (SD = 1.1). In this case, although 61.3% of the participants agreed that the telephone numbers of the parents are displayed inside their school bus and some 32.3% of them disagreed. This shows that in nearly a third of the scenarios, there are no parents' contacts displayed in the vehicles transporting the children, thus making it difficult to contact them in case of emergencies during transport. Equally, the results of the study established that although in most (Mean=3.9; SD=1.0) of the cases the school address and telephone contact is always displayed on the school buses for transporting children to ECD centres, in some cases this is not done.

In terms of driving speed, it emerged that although majority of the school vehicles does not exceed speed limit of 60 km/hr (Mean = 4.3; SD = 0.4), a few of them do not adhere to this speed limit. Specifically, whereas more than nine out of ten of the respondents

(93.5%) observed that their school bus does not exceed speed limit of 60 km/hr, the rest revealed that sometimes their buses speed limit exceeds 60 Km/hr. This shows that although most of the buses transporting children to and from the ECD centres stick to the appropriate speed limit, some of them do not follow these regulations. Equally, the results of the survey indicate that some parents violate the rule of driving within the ECD centres, for example a sizeable proportion (Mean = 3.3; SD = 1.1) of the polled teachers accepted that some parents violate the rule of a maximum speed of 5 km/hr of driving within the centre. This shows that some of the ECD parents also contributed towards unsafe environment for learning.

However, what came out clearly from the results of the survey was that the vehicles transporting children to the ECD centres were found not to expose children to inappropriate content. This was reflected by the response in the statement that “the vehicle doesn’t expose the children to any inappropriate materials either through verbal, audio-visual or print media” and with a mean response of (Mean 4.3; SD = 0.5) this indicated that majority of the participants agreed with this statement. In fact, 90.3% of the participants confirmed that their vehicles do not expose their children to any pornographic material either verbal, audio-visual or print media during transport. The results also show that ECD centres conform to regulations on transport for minors by ensuring that parents/guardians approve all trips by giving consent on behalf of their children. The results also show that although not in all the cases, many of the school/ECD centre trips/visits, parents give consent to their children (Mean = 3.9; SD= 0.7). This shows that despite majority of ECD centres seeking parents’ consent for trips, there are circumstances where this is not done thus violating this regulation.

However, the results showed that the ECD centres have adopted the best practice of contacting parents in cases of serious accidents at the centre. Regarding the statement that “in case of sickness or serious accidents in the ECD centre, the teacher contacts the parent/guardian immediately”, the results attracted a positive response mean of 4.3 (SD = 0.6), showing that this opinion was convergent among participants. Specifically, 51.6% of the participants agreed and 41.9% of them strongly agreed, only 6.5% of the participants disagreed that in case of sickness or serious accidents in the ECD centre, teachers contact the parent/guardian immediately. The results reinforce the idea that ECD centres contact parents in cases of serious emergencies involving their parents.

As to the handling of contagious diseases and infection among the teachers, the results showed that majority of the ECD centres were adopting best practice. The results showed that a teacher who contracts a contagious disease stays at home until certified healthy by a medical practitioner (Mean = 3.8; SD= 0.8). Nearly three quarters (74.2%) of sampled ECDE teachers agreed (45.2% agree; 29% strongly agreed) that a teacher who contracts a contagious disease stays at home until certified healthy by a medical practitioner. However, 16.1% of the participants disagreed with the statement thus indicating that in some cases, this is not the practice in the ECD centres. However, when teachers fail to stay home when sick with contagious diseases, they risk the lives of the children. The reason however could be due to instances where there is only one teacher without an assistant. Nonetheless, the results of the study show that in cases where a teacher is sick and in school, the ECD centres generally make alternative arrangements to ensure continuous care for the children. This was interpreted from a mean response on the item that “when a teacher is sick an alternative arrangement is made to provide care for the children” which attracted a mean rate of 3.9 (SD = 0.9). Whereas more than four out of five (83.9%) of the participants agreed, some 16.2% of the study respondents disagreed that when a teacher is sick an alternative arrangement is made to provide care for the children. This shows that there are ECD centres which are unable to make alternative arrangement for taking care of kids when their teacher is unwell. This suggests that teachers who are infected with contagious diseases sometimes do not stay away from school for fear of their learners remaining unattended.

Other protective measures that were applied in the ECDE centres include preparing the children to self-protective. For example, the findings of the study show that children are trained not to touch anybody else’s blood, share cutting objects or use any sharp objects (Mean = 3.7; SD = 1.1). Likewise, the results showed that children are trained not to accept food items such as soda, sweets or any gift from anybody without the parent’s or teacher’s permission (Mean = 4.0; SD = 0.8) to ensure their safety.

In the same vain, the results also revealed that there is no smoking, drinking alcohol or use of any illicit drugs allowed within the ECD centre (Mean = 4.3; SD=0.6). Almost all the teachers who took part in this survey confirmed that there is no smoking, drinking alcohol or use of any illicit drugs allowed in their ECD centre. This suggests the

administrations of the ECD centres are making conscious efforts to protect the children from exposure to illicit drugs and smoking.

In addition, it emerged from the results of the survey that strangers, idlers, drug peddlers are not allowed in the vicinity of most of the ECD compounds and their environs. This was revealed by a mean response rate of 4.4 (SD = 0.4), with almost unanimous agreement (99.1%) that strangers, idlers, drug peddlers are not allowed in the vicinity of the ECD centre compound and environs.

Similarly, the study found that there was no corporal punishment or emotional/psychological abuse applied to children in the centre (Mean = 4.2; SD = 0.5). Specifically, 93.6% of the participants agreed that there was no corporal punishment or emotional/psychological abuse applied to children in their ECDE centres. However, only 6.5% of the teachers who took part in the study accepted that there are some elements of corporal punishment applied to the children in their centre. This shows that, although it is minimal, there are some instance of corporal punishment or emotional/psychological abuse applied to children in the centre.

4.9.2: Summary of Ratings on the Implementation of Guidelines on Food, Health and Safety in ECD Centres

The ratings on the three aspects of food, health and safety in ECD centres in Kisii Central Sub-County were summarized using means and standard deviations and the findings presented in Table 4.28 below.

Table 4.28: Summary of Implementation of Guidelines on Food, Health and Safety

Indicators	<i>Mean</i>	<i>Standard Deviation</i>
Implementation of Health guidelines	2.7	0.8
Implementation of Feeding program	3.0	1.2
Implementation of Safety and Protection	3.7	1.0
Rating on implementation food, health and safety	3.1	1.0

Source: Survey Data (2023)

From Table 4.28, it is evident that pre-primary learning centres in Kisii Central Sub-County, in general, have above average rating in the implementation of food, health and safety. This was reflected by an overall mean rating of 3.1 with a standard deviation of

1.0 in a scale of 1 to 5. This implies that, generally, there is above average implementation of food, health and safety in ECD centres in Kisii Central Sub-County. Implementation of safety and protection guidelines received the highest ratings ($Mean=3.7$; $SD=1.0$), while implementation of health guidelines was rated the least at 2.7 ($SD=0.8$). However, the implementation of school feeding program received mean ratings of 3.0 ($SD=1.2$), which is generally above average. These ratings intimate that, on average, implementation of food, health and safety is just slightly above average in majority of the ECD centres in Kisii Central Sub-County.

4.9.3 Relationship between Implementation of Guidelines on Food, Health and Safety in ECD centres and Acquisition of Basic Core Competencies among ECD learners

The study investigated the relationship between implementation of food, health and safety guidelines in ECD centres and acquisition of basic core competencies among the learners. The investigation was done using Pearson Product Moment Correlation analysis to establish the magnitude and direction of the relationships between the individual aspects of implementation of guidelines on food, health and safety in the centres and acquisition of core basic competencies among the learners. The prior significance value was set at 0.05, implying that a p-value less than 0.05 would result into a conclusion that there is statistically significant relationship between the variables, while p-value greater than 0.05 would mean that the correlation is not statistically significant. The correlation results are summarized in Table 4.29 below.

Table 4.29: Correlation of between Implementation of Guidelines on Food, Health and Safety and Acquisition of Basic Core Competencies

Variables	n	<i>r</i>	<i>p-value</i>
Implementation of Health guidelines	93	.196	.000
Implementation of Feeding program	93	.329	.001
Implementation of Safety and Protection guidelines	93	.362	.000

Source: Survey Data (2023).

It is evident that although the three aspects of implementation of food, health and safety guidelines in ECD centres exhibited statistically significant positive correlation with acquisition of basic core competencies, the magnitude of correlations varied. It emerged that implementation of safety and protection guidelines recorded the strongest correlations at $r=.362$, followed by the implementation of feeding program guidelines at $r=.329$. Both of them had statistically significant relationship with acquisition of basic core competencies at $p<.001$. On the same note, implementation of health guidelines, was the weakest, it had statistically significant positive correlation to acquisition of core basic competencies ($r=.196, p=.001$). These findings suggest that improvement in each of these variables is likely to improve the level of acquisition of the core basic competencies among the learners in ECD centres and vice versa.

Further, to establish the influence of implementation of food, health and safety guidelines on acquisition of core basic competencies among the learners in ECD centres, the research data was subjected to a multiple regression analysis.

4.9.4 Influence of Implementation of Guidelines on Food, Health and Safety on Acquisition of Core Basic Competencies among the Learners in ECD Centres

H_0 : *Implementation of guidelines on food, health and safety has no influence on acquisition of basic core competencies among learners in ECD centres.*

To establish the influence of implementation of food, health and safety guidelines on acquisition of core basic competencies among the learners in ECD centres, the null hypothesis that “*Implementation of guidelines on food, health and safety has no influence on acquisition of basic core competencies among learners in ECD centres*” was tested.

To test this hypothesis, the study adopted the use of multiple regression analysis with the investigated null hypothesis being $H_0: \beta_1=\beta_2=\beta_3$ and the corresponding alternative hypothesis being H_1 : at least one $\beta_i \neq 0$. If the null hypothesis is true, then from $E(Y) = \beta_0 + \beta_{i=1-3} X_{i=1-3}$ the population mean of Y is β_i for every X_i value which indicates that X (Implementation of food, health and safety) has no influence on Y (Acquisition of Core Basic Competencies in ECD centres) and the alternative being that X influences Y. Table 4.30 below shows the results of the regression model summary.

Table 4.30: Regression Model on Suitability of Service Provider on Acquisition of Core Basic Competencies

<i>Variable</i>	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>Sig.</i>	<i>95% CI</i>	<i>Part</i>
<i>Constant</i>	<i>1.44</i>	<i>0.449</i>		<i>3.223</i>	<i>.002</i>	<i>(.556,</i> <i>9</i> <i>2.342)</i>	
Implementation of Health guidelines	<i>.108</i>	<i>0.311</i>	<i>0.038</i>	<i>0.348</i>	<i>.729</i>	<i>(-.509, .725)</i>	<i>.034</i>
Implementation of Feeding program	<i>.128</i>	<i>0.057</i>	<i>1.27</i>	<i>2.246</i>	<i>.005</i>	<i>(.018, .425)</i>	<i>.085</i>
Implementation of Safety and Protection	<i>.231</i>	<i>0.096</i>	<i>0.252</i>	<i>2.406</i>	<i>.003</i>	<i>(.040, .501)</i>	<i>.16</i>
<i>R=.375, Adjusted R²=.112, F(3, 89)= 4.859, p=.004</i>							<i>7</i>

$Y = \alpha + \beta X_1 + \beta X_2 + \beta X_3 + \epsilon$, where Y= Acquisition of Core Competencies; X_{1-3} = Health, Feeding and Safety guidelines implementation and ϵ is the error term.

$$Y = 1.449 + 0.108X_1 + .128X_2 + .231X_3 + \varepsilon.$$

The model reveals that implementation of guidelines on health, feeding and safety accounted for 11.2% (Adjusted $R^2=.112$) of the variation in acquisition of core basic competencies among the learners in ECD centres. This reveals that more than one out of ten cases (11%) of variation in the acquisition of core basic competencies among learners in ECD centres is explained by the composite change of the level of implementation of guidelines on health, feeding and safety. However, the three guidelines displayed a fairly low degree of joint correlation ($R=.375$) to the acquisition of core basic competencies among learners in ECD centres. It is also evident in the ANOVA output results that implementation of guidelines on health, feeding and safety combined is indeed a significant predictor of acquisition of core basic competencies among learners in ECD centres, $F(3, 89) = 4.859$, $p=.004$. The high (> 1.96) value of F suggests that the variability in acquisition of core basic competencies among learners in ECD centres is not by chance but as a result of the differences in the level of implementation of guidelines on health, feeding and safety within the ECD centres. This suggests that the knowledge on the level of implementation of guidelines on health, feeding and safety in ECD centres can be used to significantly predict the level of acquisition of core basic competencies among the learners.

The analysis further reveals that the level of implementation of guidelines on health, feeding and safety had varying influence on the acquisition of core basic competencies among the learners in the ECD centres. For instance, whereas implementation of school feeding program and implementation of safety guidelines both had significant positive influence on acquisition of core basic competencies, implementation of health guidelines had insignificant un-standardized influence.

Implementation of school feeding program had un-standardized coefficient value of .128 within a 95% confidence level (.018, .425) and implementation of safety and protection guidelines had un-standardized coefficient value of .231 within a 95% C.I (.040, .501). On the other hand, it was surprising that the coefficients values for implementation of health guidelines ($B= 0.108$; $t = 0.348$, $p=.729$) had no significant influence on acquisition of core basic competencies among the preschool learners in ECDE centres.

Nonetheless, given that the two aspects had significant un-standardized co-efficient values, there is sufficient evidence to reject the null hypothesis ($H_0: \beta_1=\beta_2=\beta_3=0$).

Therefore, the alternative hypothesis was supported and it was concluded that implementation of guidelines on food, health and safety in ECD centres has significant influence on acquisition of core basic competencies among learners.

In comparison, implementation of guidelines on safety and protection had the greatest influence on learners' acquisition of core basic competencies in ECD centres. A unit improvement in the level of implementation of safety and protection guidelines in the ECD centres would result into an improvement in learners' acquisition of core basic competencies by 0.231 units, when other factors are held constant. On the same note, when it improves by one standard deviation, the level of learners' acquisition of core basic competencies would improve by 0.252 standard deviations.

The second variable in terms of influence was implementation of school feeding program?? guidelines which had un-standardized coefficient value of 0.128, implying that for one unit improvement in the implementation of this guideline, there is a corresponding improvement in the level of learners' acquisition of core basic competencies by 0.128 units, when other factors are held constant. Similarly, one standard deviation improvement in the implementation of school feeding program guidelines in ECD centres results in a corresponding improvement in the level of learners' acquisition of core basic competencies by 0.127 standard deviations. On the flip flop, the effect of implementation of health guidelines in ECD centres was not statistically significant ($p>.05$) in the regression model.

Exploring part correlation values, indicate that implementation of safety and protection guidelines, which had the greatest contribution to the model, uniquely explains 2.8% of the variance in acquisition of core basic competencies among learners in ECD centres. Likewise, implementation of feeding program guidelines uniquely explains about 1% of variance. On the other hand, implementation of health guidelines only accounted for < 1% of the variance in the acquisition of core basic competencies among the learners. However, it is worth noting that total *R Squared* value for the model (0.112 or 11.2 % explained variance) was not equal to the sum total of all the squared part correlation values because of the fact that the overlaps or shared variance were removed. Notwithstanding, it was concluded that implementation of health, feeding program and safety guidelines in ECDE centres in regression model was adequate in predicting acquisition of core basic competencies of learners in the ECD centres. The model was

statistically significant at $F(3, 89) = 4.859, p=.004$, accounting for 11.2% (Adjusted $R^2=.112$) of the variation in the level of acquisition of core basic competencies among the learners in ECD centres within Kisii Central Sub-County.

4.10 Teaching Staff Establishment and the Acquisition of Basic Core Competencies among Pre-Primary Learners

The last objective of the study sought to investigate the relationship between teaching staff establishment and the acquisition of basic core competencies among pre-primary learners. Teaching staff establishment was measured using three indicators viz. number of teachers, teacher-child ratio and availability of Assistant teacher.

4.10.1 Number of Teachers in the ECD Centre

The participants were asked to indicate the number of teachers in their ECD centres. The data was analysed and results classified into groups showing frequency of each category. The results are presented in Table 4.31 below.

Table 4.31: Number of teachers in ECD Centres

No. of Teachers	Frequency	Percent
Only 1	33	35.5%
2- 3 teachers	45	48.4%
More than 3	15	16.1%
Total	93	100.0%

The results show that the highest number of the ECD centres had between 2 and 3 teachers while second highest of them had only one teacher, as indicated by 48.4% and 35.5% of the ECD teachers who took part in the survey, respectively. Only 16.1% of the surveyed teachers indicated that their centres had more than 3 teachers. These findings show that majority of ECD centres are generally under staffed. The fact that more than a third of the schools had only one teacher at the ECD centre shows that there is a problem. In case the teacher is ill or unable to attend school due to one reason or the other means that the children would go unattended in the school. This affects teaching/learning which consequently possess challenges to acquisition of basic competencies among pre-primary learners.

The study sought to investigate the differences on the level of acquisition of basic competencies among pre-primary learners based on the number of teachers. The objective was investigated by use of a One-way between-groups analysis of variance (ANOVA). The use of ANOVA was appropriate because there was one independent variable (number of teachers) with three levels (groups) and one dependent continuous variable (Acquisition of basic competencies among pre-primary learners). Number of teachers' was a re-coded variable by grouping the number of teachers into three levels namely: Group 1: Only 1 teacher; Group 2: 2-3 teachers; and Group 3: More than 3 teachers. One-way ANOVA was used to establish whether there are significant differences in the acquisition of basic competencies among pre-primary learners across the three number of teachers' groupings. Further, post-hoc tests was used to find out where differences in overall adjustment lie. The ANOVA results were summarized as shown in the SPSS output in the tables below:

Table 4.32: Descriptive: Acquisition of Basic Competencies

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
Group 1	33	2.7232	.35906	.06250	2.5959	2.8505	1.80	3.20
Group 2	45	2.9289	.33163	.04944	2.8293	3.0285	2.33	3.67
Group 3	15	2.9600	.45968	.11869	2.7054	3.2146	2.13	3.40
Total	93	2.8609	.37451	.03883	2.7838	2.9381	1.80	3.67

ANOVA: Acquisition of Basic Competencies

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.981	2	.490	3.702	.029
Within Groups	11.923	90	.132		
Total	12.904	92			

Multiple Comparisons Tukey HSD -Dependent Variable: Acquisition of Basic Competencies

(I) Ratio1	(J) Ratio1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.20566*	.08342	.041	-.4044	-.0069
	3	-.23677	.11334	.098	-.5069	.0333
2	1	.20566*	.08342	.041	.0069	.4044
	3	-.03111	.10852	.956	-.2897	.2275
3	1	.23677	.11334	.098	-.0333	.5069
	2	.03111	.10852	.956	-.2275	.2897

*. The mean difference is significant at the 0.05 level.

From the descriptive statistics, it is evident that the ECD centres which had more than three teachers had the highest mean acquisition of basic core competencies ($n=15$, $M=2.96$, $SD = 0.46$), while centres which had one teacher had the least acquisition of basic core competencies rating ($n=33$, $M=2.73$, $SD = 0.36$). The ECD centres that had 2-3 teachers had basic core competencies acquisition rating of 2.93 ($SD=0.33$). A one-way ANOVA which was conducted to determine the effect of teachers' numbers on the acquisition of core competencies confirm these differences. The results in the second table indicates a significant effect, [$F(2, 90) = 3.702$, $p = .029$], of number of teachers on the acquisition of core competencies among pre-school learners. Further, Post Hoc tests conducted using Tukey's HSD revealed a statistically significant difference between acquisition of core competencies rating of the ECD centres with one teacher ($M=2.73$, $SD = 0.36$) and the acquisition of core competencies rating of the ECD centres with 2-3 teachers ($M=2.96$, $SD=0.46$). However, a significant difference in learners' acquisition of core competencies was not established between those in ECD centres with 2-3 teachers and those in ECD centres with more than 3 teachers. This suggest that ECD centres with only one teacher presented a significantly lower acquisition of core competencies rating compared to those with 2-3 teachers. Given that a statistical significance difference was established, the effect size was calculated using eta squared. The resulting eta squared

value is .286, which according Cohen (1988) would be considered a large effect size. Thus, it was concluded that the number of teachers in ECD centres affect acquisition of core basic competencies among pre-primary learners, with learners in ECDE centres with only one teacher tend to acquire less competencies than their counterparts in centres with more than one teacher. The number of teachers accounts for 28.6% (*eta squared* =.286) of the variability in acquisition of core basic competencies among pre-primary learners in ECD centres in Kisii Central Sub-County.

4.10.2 Teacher-Child Ratio

The teacher-child ratio was conceptualized as the number of teachers who teach in the ECDE centre divided by the number of children in the ECDE centre. It is envisioned to be an important indicator of the quality of provision of core basic competencies, as it can affect the time teachers have to spend with each learner, the level of individual attention that each learner receives and the overall learning environment. To this end, the teacher respondents were asked to indicate the teacher-child ratio in their centre. The results were summarized in descriptive statistics and presented in Table 4.33 below.

Table 4.33: Descriptive Statistics of Teacher-Child Ratio

N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness
93	18.00	60.00	36.5269	12.85081	165.143	.207

Source: Survey Data (2023)

From the results, it is evident that on average each teacher takes care of about 36 ECD learners translating to teacher-child ratio of about 1:36, which is far higher than the stipulated ratios of 1:20 for ECDE learners. The minimum teacher-child ratio was established to be about 1:18 and the; maximum was 1: 60. The study established a positive skewness of .207, suggesting that many of the centres had teacher-child ratio more than the mean of 1:36. This shows that the guideline on Teacher-Child ratio is not met in most of the ECD centres, as teachers take care of many children than expected, making it difficult to provide them with quality developmental education. The United Nations Educational, Scientific and Cultural Organization (UNESCO) recommends a teacher-child ratio of less than 20 pupils per teacher for ECDE centres. Similarly, during

the interview session with the Sub County Director of ECD, it was found that most of the ECDE centres have shortage of teachers. He had this to say;

In terms of teaching staff, our centres face a great challenge since majority of the centres have low number of teachers. There are hardly any of the centres that meet the required teacher-child ratio of 1:25 [Interview: Sub County Director of ECD, 18th June, 2021].

This concurs with the general knowledge that from the introduction of FPE in the year 2003 by the Government of Kenya there has been a steady increase in enrolment in both public ECDE centres and primary schools without a corresponding increase in the number of teachers.

The teacher-learner ratio, or student-teacher ratio, is a critical factor in determining the quality and effectiveness of education. Teachers can give more personalized attention to each student, understanding their unique needs, strengths, and weaknesses. This personalized approach can lead to better academic outcomes and more tailored support. On the other hand, in learning centres with High Ratio (More students per teacher), it becomes challenging for teachers to provide individual attention, potentially leading to some students falling behind or not receiving the help they need. These observation concurs with that of Waita, et al., (2016) in their study on pupil-teacher ratio and its impact on academic performance in public primary schools in Central Division, where they also found that an optimal teacher-learner ratio is crucial for effective learning. While the ideal ratio may vary depending on the educational context and the needs of the students, maintaining a lower ratio is generally associated with better educational outcomes, more effective teaching, and a more supportive learning environment. Another study by Evarist, (2018) similarly found that students in smaller classes performed better on standardized tests and had improved long-term outcomes compared to those in larger classes.

4.10.3: Correlation Analysis between Teacher-Child Ratio and Acquisition of Basic Competencies among Pre-Primary Learners.

To investigate whether there was any statistical significant relationship between teacher-child ratio and acquisition of basic competencies among pre-primary learners. Pearson Product Moment Correlation Coefficient analysis was used to establish the relationship

between the variables, with scores on teacher-child ratio as the independent variable and ratings on basic competencies acquisition as the dependent variable. The correlation analysis result is shown in SPSS output, as indicated in Table 4.34below.

Table 4.34: Relationship between Teacher-Child Ratio and the Acquisition of Basic Core Competencies among Pre-Primary Learners

		Acquisition of Basic Core Competencies
Teacher-Ratio Ratio	Pearson Correlation	-.431 ^{**}
	Sig. (2-tailed)	.000
	N	93

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

The finding shows that there is fairly moderate reciprocal ($r = -.431, n = 93, p = .000$) relationship between teacher-child ratio and the acquisition of basic core competencies among pre-primary learners. The relationship was statistically significant, suggesting that there is indeed statistical significant indirect relationship between teacher-child ratio and the acquisition of basic core competencies among pre-primary learners, with lower teacher-child ratio resulting into improvement in the levels of acquisition of basic core competencies among pre-primary learners and vice-versa.

4.10.4 Regression Analysis of Teacher-Child Ratio on Acquisition of Basic Competencies among Pre-Primary Learners.

To estimate the level of influence of teacher-child ratio on acquisition of basic competencies among pre-primary learners, a coefficient of determination was computed. This was done using regression analysis and the results are as shown in Table 4.35below.

Table 4.35: Model Summary on Regression Analysis of Influence of Teacher-Child ratio on Acquisition of Basic Competencies among Pre-Primary Learners.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.431 ^a	.186	.177	.33978

a. Predictors: (Constant), Teacher-Child Ratio

The model shows that teacher-child ratio accounted for 17.7%, as signified by coefficient of Adjusted R Square of .177, of the variation in acquisition of basic competencies among pre-primary learners. Although this is a relatively small effect on the dependent variable, the effect is statistically significant within a standard error of estimate of .339. However, to determine whether teacher- learner ratio is really a significant predictor of acquisition of basic competencies among pre-primary learners, Analysis of Variance (ANOVA) was computed as shown in Table 4.36below.

Table 4.36: ANOVA –Influence of Teacher-Child ratio on Acquisition of Basic Competencies among Pre-Primary Learners

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.397	1	2.397	20.766	.000 ^b
Residual	10.506	91	.115		
Total	12.904	92			

a. Dependent Variable: Acquisition of Basic Core Competencies

b. Predictors: (Constant), Teacher-Child Ratio

In the ANOVA table, the F statistic is equal to 20.77. The distribution is F (1, 91) and the probability of observing a value greater than or equal to 20.77 is .000 which is less than 0.001. Thus there is strong evidence that the value of teacher-learner ratio is not equal to zero. In this regard, it can be noted that teacher-child ratio is a significant predictor of acquisition of core basic competencies [$F(1, 91) = 20.77, p = .000 < .001$]. In addition, Table 4.37 shows the results of the regression model with respect to coefficient values.

Table 4.37: Regression Model Summary on Influence of *Teacher-Child ratio on Acquisition of Basic Competencies among Pre-Primary Learners*

Model	Unstandardized		Standardized	t	Sig.	95.0% Confidence	
	B	Std.	Beta			Lower	Upper
1 Constant	3.320	.107		31.120	.000	3.108	3.532
Teacher-Child	-.013	.003	-.431	-4.557	.000	-.018	-.007

a. Dependent Variable: Acquisition of Basic Core Competencies

An examination of the standardized coefficient values, indicate that there would be an improvement in the level of acquisition of core basic competencies by .431 standard deviations when teacher-child ratio is reduced by one standard deviation, as shown by Beta value of -.431. Similarly, it is shown that when teacher-child ratio is reduced by one unit there would be a subsequent statistically significant improvement in acquisition of core basic competencies by .013 units ($t = -4.557, p=.000$), though with a fairly wide variation in the estimate (95% CI = -.018, -.007). However, it was concluded that the teacher-child regression model was adequate to predict the level of acquisition of core basic competencies among the pre-school learners. This was confirmed by the fact that the model was statistically significant, $F(1, 91) = 20.766, p = .000 < .005$, accounting for 17.7% (*Adjusted R*²=.177) of the variation in the level of acquisition of core basic competencies among the preschool learners in the ECDE centres within Kisii Central Central Sub-County.

4.10.3 Availability of Assistant Teachers

It is envisaged that an assistant teacher plays an important role in supporting the main teacher to ensure that the learners get maximum benefit from the learning activities that the teacher plans and carries out for them. In this regard, the participants were asked to indicate whether they had assistant teachers in their ECD classrooms. This was aimed at establishing the extent of workload and available attention accorded to the ECD Children. The findings were summarized into frequency and percentage and presented in the chart in Figure 4. below

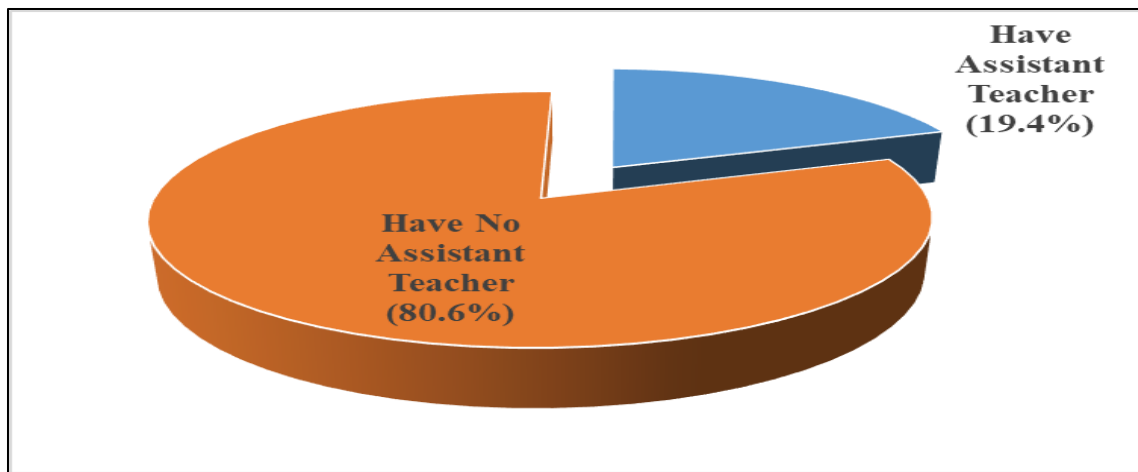


Figure 4.3: Availability of Assistant Teachers

From the results, it is evident that a significant majority (80.6%) of the ECDE centres had no assistant teacher with only 19.4% of them having assistant teachers. This shows that most of the ECD centres had only one teacher, suggesting that ECDE centres face challenges in caring for the children in case the main teacher is not available.

The study sought to investigate the relationship between the availability of assistant teacher and acquisition of core basic competencies among pre-school learners. It was established by testing the hypothesis that, there is no statistically significant difference in acquisition of core basic competencies between pre-school learners in centres with assistant teacher and the ones in centres without assistant teacher. The hypothesis was tested using independent-samples t-test. Independent-sample t-test was appropriate because the two variables used are availability of assistant teacher (Have assistant teacher coded as 1, and Have no assistant teacher coded as 2) and acquisition of core basic competencies between pre-school learners, being categorical and continuous, respectively. The scores of dependent variable (acquisition of core basic competencies) was computed from frequencies of responses by computing mean responses per respondents. Mean response across a set of questions of rating scale responses in each item was computed to create an approximately continuous variable, within an open interval of 1 to 5, that is suitable for the use of parametric methods, as explained by Tabachnick & Fidell (2001) and Sullivan & Artino (2013). This was done after reversing the negatively worded statements, where high scale ratings implied high perceived level of acquisition of core basic competencies.

Table 4.38: Availability of Assistant Teacher and Acquisition of Core Basic Competencies

Availability of assistant	n	Mean	SD	SEM	t-value	Sig. level	Effect Size
Have assistant teacher	18	3.24	0.27	0.064	5.429	.000	1.52
Have no assistant teacher	75	2.77	0.34	0.039			

The table gives the summary of the results of independent-sample t-test analysis investigating the effect of availability of assistant teacher on acquisition of core basic competencies among preschool learners in ECD centres. It is evident from the results that learners whose ECD centres had assistant teachers had relatively higher mean ($n=18$; $M=3.24$; $SD=0.27$) in acquisition of core basic competencies than their counterparts whose centre had no assistant teacher ($n=75$, $M=2.77$; $SD=0.34$). In fact, there was a significant difference in the acquisition of core basic competencies scores between the two groups of learners [$t(91) = 5.429$, $p = .000$]. In addition, the magnitude of the differences in the means was large (Cohen's $d = 1.52$), suggesting that the difference between the two means is greater than one standard deviation. Hence, the results of the study has shown that there was sufficient evidence to conclude that there is statistically significant difference in the level of acquisition of core basic competencies between the learners whose centres had assistant teacher and those whose centre had no assistant teacher. This suggests that availability of assistant teacher in ECD centre has statistical significant effect on acquisition of core basic competencies among the preschool learners, with learners in ECD centres with assistant teachers doing better in acquisition of core basic competencies than learners in centres without assistant teacher.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of data findings, conclusions and research recommendations. It also provides suggestions for further studies. The study sought to assess the extent to which the Kenyan pre-primary Education Policy Guidelines implementation predicts the acquisition of basic core competencies among pre-primary learners in Kisii Central Sub-County. The study aimed to achieve the following objectives: Establish the relationship between pre-primary centres' implementation of the Policy Guidelines on the provision of infrastructural facilities and the acquisition of basic competencies among pre-primary learners; determine the extent to which the implementation service providers suitability predicts the acquisition of basic core competencies among pre-primary learners; examine the influence of pre-primary centres' implementation of the pre-primary Policy Guidelines on food, health and safety on the acquisition of basic competencies among pre-primary learners; and find out the relationship between pre-primary centres' implementation of the Policy Guidelines on teacher child ratio and the acquisition of basic core competencies among pre-primary learners.

5.1 Summary of the findings

The findings of the study established that the level of acquisition of core basic competencies among the learners in ECD centres in Kisii Central Sub-County is generally not meeting expectations but only approaching expectation. This was interpreted from a composite mean rating of 2.56 in the acquisition of core basic competencies scale of 1 to 5, with a standard deviation of 0.74. This suggests that in majority of the ECD centres within Kisii Central Sub-County many learners have low ability to communicate and collaborate with each other

By the same token, the results of the survey established that many of the ECD learners have low competencies in communication skills. This was reflected by a mean rating of 2.41 (SD=0.75) in the scale of 1 to 5 on how the learners were able to explain their interests and ideas clearly to other children/teachers.

Respondents (teachers) rated their learners' ability to ask questions when they failed to understand something as either only approaching or simply below expectation (mean=2.37; SD=0.82). This suggests that, on average, many of the ECD learners in Kisii Central sub-county have low communication and self-efficacy skills which are a core competencies required among the learners at this level. Similarly, their ability to speak up for themselves when they need help or support was rated at 2.48 (SD=0.90) in the scale of 1 to 5, suggesting that majority of the learners have low self-efficacy.

Equally, the results of the study established that respect among some of the learners was wanting. This was shown by a low response rating of 2.33 (SD=0.63) on the item which sought to establish whether the learners try to always be respectful of others. This indicates that many of the ECD learners in the surveyed centres lack this virtue of respect to one another.

However, with regard to recognition of numbers, it occurred that the learners, on average, were rated at 2.63 (SD=0.86) in this competency. This means that the learners generally met expectations on recognition of numbers and counting of things appropriate to their age. On their ability to concentrate, the results of the survey established that they are generally above average in concentration. This finding suggests that a sizeable proportion of the ECD teachers who took part in the survey were satisfied with how their learners concentrate and pay attention to them. On the flip flop, the study established that the learners are poor in taking instructions. This was indicated by a mean response rating of 2.47 (SD=0.72) on the item which sought to find out whether the learners follow the instructions given to them by their teachers

On the other hand, it emerged that the learners were low in critical thinking and problem solving. This was interpreted from a low mean rating of 2.43 (SD=0.96). In addition, the results of the survey established that most of the learners in ECD Centres in Kisii Central Sub-County have difficulties in handling challenging tasks. This was shown by a mean rating of 2.09 (SD=0.65). This finding suggests that there is generally low acquisition of competencies that relate to critical thinking and problem solving among the learners in ECD centres in Kisii Central Sub-County.

However, the results of the survey revealed that the ECD learners in Kisii Central Sub-County are generally very active and creative when it comes to play activities. This was

shown by a mean rating of 3.48 with a standard deviation of 1.2 on whether the learners are able to come up with new, creative ideas during play activities.

5.1.2 Summary of Ratings of Infrastructural Facilities in ECD Centres

It is evident that pre-primary learning centres in Kisii Central Sub-County, in general, have average ratings in infrastructural facilities status. This was reflected by an overall mean rating of 2.6 with a standard deviation of 0.9 in a scale of 1 to 5. This suggests that, on average, infrastructural facilities in ECD centres in Kisii Central Sub-County have average status in terms of infrastructural facilities. In particular, the status of the furniture, as an aspect of infrastructural facilities, in ECD Centres received the highest rating ($Mean=2.9$; $SD=1.2$), implying that the ECD centres, on average, have above average status of learner furniture. It was followed by status of toilets in ECD centres which received a mean rating of 2.7 ($SD= 1.2$), reflecting that the learner toilets are in fair status.

Status of the physical/psychomotor materials/equipment in ECD Centres and status of playground in ECD Centres received almost similar rating at 2.5 ($SD=1.1$) and 2.6 ($SD=1.1$), respectively. It is evident from the findings of the study that learning structures/buildings received the worst ratings in terms of status, as reflected by a mean rating of 2.3 ($SD =1.0$). This suggests that preschools in Kisii Central Sub-County must strive to improve infrastructural facilities, especially in the status of physical/psychomotor materials/equipment, status of playground and the status of learning structures/buildings given the respective ratings that are barely above average.

5.1.3 Relationship between Infrastructural Facilities in ECD centres and Acquisition of Basic Core Competencies among ECD learners

It is evident that although the five aspects of infrastructural facilities exhibited positive correlation with acquisition of basic core competencies, the magnitude of correlations varied though with all of them being statistically significant. It emerged that status of Playground in ECD Centres recorded the strongest correlations at $r=.504$, followed by the Status of the Physical/Psychomotor Materials/Equipment in ECD Centres at $r=.437$. Both of them had statistically significant relationships with acquisition of basic core competencies at $p=.000$. On the other hand, status of toilets in ECD centres ($r=.223$, $p=.032$) and status of learning structures/buildings ($r=.259$, $p=.012$) which also had

statistically significant positive correlation with acquisition of core basic competencies had the lowest correlation coefficients. Likewise, the results of the study established that the status of furniture in ECD Centres also has statistically significant correlation ($r=.337$; $p=.001$) with acquisition of core basic competencies among the learners in ECD centres.

Finally, the finding of the study established those overall combined infrastructural facilities had statistically significant positive, but moderate correlation ($r=.569$, $p=.000$) with acquisition of core basic competencies among the learners in ECD centres. Thus, an improvement in infrastructural facilities is likely to improve the level of acquisition of core basic competencies among the learners in ECD centres and vice versa.

5.1.4 Summary of Ratings of Service Providers Suitability in ECD Centres

It is evident that pre-primary learning centres in Kisii Central Sub-County, in general, have above average rating in service providers' suitability. This was reflected by an overall mean rating of 3.1 with a standard deviation of 0.9 in a scale of 1 to 5. This suggests that, on average, service providers in ECD centres in Kisii Central Sub-County offer above average services. In particular, the head teachers of the ECDE centres received the highest ratings ($Mean=3.4$; $SD=0.9$), implying that the head teachers of the ECD centres, on average, were rated highest suitable. It was followed by Health Services Provider in ECD centres which received a mean rating of 3.3 ($SD= 1.0$), reflecting that Health Services Provider to the learners in ECDE centres is fairly good.

Suitability of the ECD Centre Managers and ECD Teachers/Caregivers received suitability ratings of 3.0 ($SD=0.8$) and 2.7($SD=0.8$), respectively. It is evident from the findings of the study that ECDE teachers/caregivers received the worst ratings in terms of suitability, as reflected by a mean rating of 2.7. This was shown by findings in the descriptive that majority of the ECD teachers/caregivers were not qualified or trained to administer first aid, they had no valid medical records and some had not undertaken any short course on child care by authorized government institutions.

5.1.5 Relationship between Suitability of Service Providers in ECD centres and Acquisition of Basic Core Competencies among ECD learners

It is evident that although the four aspects of service providers' suitability exhibited positive correlation with acquisition of basic core competencies, the magnitude of

correlations varied though with all of them being statistically significant. It emerged that suitability of ECD teachers/caregivers recorded the strongest correlations at $r=.605$, followed by the suitability of head teachers at $r=.550$. Both of them had statistically significant relationship with acquisition of basic core competencies at $p<.001$. Similarly, centre managers' ($r=.533$, $p=.001$) and health services providers' ($r=.296$, $p=.004$) suitability all had statistically significant positive correlation to acquisition of core basic competencies. These findings suggest that improvement in each of the service providers is likely to improve the level of acquisition of the core basic competencies among the learners in ECD centres and vice versa.

5.1.6 Summary of Ratings on the Implementation of Guidelines on Food, Health and Safety in ECD Centres

It is evident that pre-primary learning centres in Kisii Central Sub-County, in general, have above average rating in the implementation of food, health and safety. This was reflected by an overall mean rating of 3.1 with a standard deviation of 1.0 in a scale of 1 to 5. This implies that, generally, there is above average implementation of food, health and safety in ECD centres in Kisii Central Sub-County. Implementation of safety and protection guidelines received the highest ratings ($Mean=3.7$; $SD=1.0$), while implementation of health guidelines was rated the least at 2.7 ($SD=0.8$). However, the implementation of feeding program received mean ratings of 3.0 ($SD=1.2$), which is generally above average. These ratings intimate that, on average, implementation of food, health and safety is just slightly above average in majority of the ECD centres in Kisii Central Sub-County.

5.1.7 Relationship between Implementation of Guidelines on Food, Health and Safety in ECD centres and Acquisition of Basic Core Competencies among ECD learners

It is evident that although the three aspects of implementation of food, health and safety guidelines in ECD centres exhibited statistically significant positive correlation with acquisition of basic core competencies, the magnitude of correlations varied. It emerged that implementation of safety and protection guidelines recorded the strongest correlations at $r=.362$, followed by the implementation of feeding program guidelines at $r=.329$. Both of them had statistically significant relationship with acquisition of basic core competencies at $p<.001$. On the same note, implementation of health guidelines, was

the weakest, it had statistically significant positive correlation to acquisition of core basic competencies ($r=.196, p=.001$). These findings suggest that improvement in each of these variables is likely to improve the level of acquisition of the core basic competencies among the learners in ECD centres and vice versa.

5.1.8 Teaching Staff Establishment and the Acquisition of Basic Core Competencies among Pre-Primary Learners

The results show that the highest number of the ECD centres had between 2 and 3 teachers while second highest of them had only one teacher. These findings show that majority of ECD centres are generally under staffed. This affects teaching/learning which consequently possess challenges to acquisition of basic competencies among pre-primary learners.

It is evident that the ECD centres which had more than three teachers had the highest mean acquisition of basic core competencies ($n=15, M=2.96, SD = 0.46$), while centres which had one teacher had the least acquisition of basic core competencies rating ($n=33, M=2.73, SD = 0.36$). The ECD centres that had 2-3 teachers had basic core competencies acquisition rating of 2.93 ($SD=0.33$). A one-way ANOVA which was conducted to determine the effect of teachers' numbers on the acquisition of core competencies confirm these differences. The results in the second table indicates a significant effect, [$F(2, 90) = 3.702, p = .029$], of number of teachers on the acquisition of core competencies among pre-school learners. Further, Post Hoc tests conducted using Tukey's HSD revealed a statistically significant difference between acquisition of core competencies rating of the ECD centres with one teacher ($M=2.73, SD = 0.36$) and the acquisition of core competencies rating of the ECD centres with 2-3 teachers ($M=2.96, SD=0.46$). However, a significant difference in learners' acquisition of core competencies was not established between those in ECD centres with 2-3 teachers and those in ECD centres with more than 3 teachers. This suggest that ECD centres with only one teacher presented a significantly lower acquisition of core competencies rating compared to those with 2-3 teachers. Given that a statistical significance difference was established, the effect size was calculated using eta squared. The resulting eta squared value is .286, which according to Cohen's (1988) would be considered a large effect size. Thus, it was concluded that the of teachers in ECD centres affect acquisition of core basic competencies among pre-primary learners, with learners in ECDE centres with only one

teacher tend to acquire less competencies than their counterparts in centres with more than one teacher. The number of teachers accounts for 28.6% (*eta squared* =.286) of the variability in acquisition of core basic competencies among pre-primary learners in ECD centres in Kisii Central Sub-County.

It is evident that on average each teacher takes care of about 36 ECD learners translating to a teacher-child ratio of about 1:36, which is far higher than the stipulated ratios of 1:20 for ECDE learners. The minimum teacher-child ratio was established to be about 1:18 and the; maximum was 1: 60. The study established a positive skewness of .207, suggesting that many of the centres had teacher-child ratios more than the mean of 1:36. This shows that the guidelines on Teacher-Child ratio is not met in most of the ECD centres, as teachers handled many children than expected, making it difficult to provide them with quality developmental education. The United Nations Educational, Scientific and Cultural Organization (UNESCO) recommends a teacher-child ratio of less than 20 pupils per teacher for ECDE centres.

5.1.9 Correlation Analysis between Teacher-Child Ratio and Acquisition of Basic Competencies among Pre-Primary Learners.

The finding shows that there is fairly moderate reciprocal ($r = -.431$, $n =93$, $p=.000$) relationship between teacher-child ratio and the acquisition of basic core competencies among pre-primary learners. The relationship was statistically significant, suggesting that there is indeed statistical significant indirect relationship between teacher-child ratio and the acquisition of basic core competencies among pre-primary learners, with lower teacher-child ratio resulting into improvement in the levels of acquisition of basic core competencies among pre-primary learners and vice-versa.

5.2 Conclusions of the Study

From the findings, it is established that many of the ECD learners have low competencies in communication skills. Equally, the results of the study established that respect among some of the learners was wanting. Learners generally met expectations on recognition of numbers and counting of things appropriate to their age.

The results of the survey established that they are generally above average in concentration and that the learners are poor in taking instruction. On the other hand, it emerged that the learners were low in critical thinking and problem solving. The results

of the survey established that most of the learners in ECD Centres in Kisii Central Sub-County have difficulties in handling challenging tasks but generally very active and creative when it comes to play activities. Infrastructural facilities in ECD centres in Kisii Central Sub-County have average status in terms of infrastructural facilities, while learning structures/buildings received the worst ratings in terms of status. In terms of core competencies, it is evident that although the five aspects of infrastructural facilities exhibited positive correlation with acquisition of basic core competencies, the magnitude of correlations varied though with all of them being statistically significant with Status of Playgrounds in ECD Centres recorded the strongest correlations.

It is evident that although the four aspects of service providers' suitability exhibited positive correlation with acquisition of basic core competencies, the magnitude of correlations varied though with all of them being statistically significant.

It is evident that pre-primary learning centres in Kisii Central Sub-County, in general, have above average rating in the implementation of food, health and safety.

It is evident that although the three aspects of implementation of food, health and safety guidelines in ECD centres exhibited statistically significant positive correlation with acquisition of basic core competencies, the magnitude of correlations varied.

The results show that the highest number of the ECD centres had between 2 and 3 teachers while second highest of them had only one teacher.

The relationship was statistically significant, suggesting that there is indeed statistical significant an indirect relationship between teacher-child ratio and the acquisition of basic core competencies among pre-primary learners, with lower teacher-child ratio resulting into improvement in the levels of acquisition of basic core competencies among pre-primary learners and vice-versa.

5.3 Study Recommendations

The study found that different ECDE implement different the Policy Guidelines on the provision of infrastructural facilities and the acquisition of basic core competencies among pre-primary learners. The government through the ministry of education at the county government should come up with policies that are universally accepted and would

be easily adopted by almost all the ECDE centres and that the policies should encourage safety and conducive environment for learning.

The management of the ECDE centres and various service providers such as cooks should be those with adequate qualifications and trainings to help in fostering good learning environment for the optimal acquisition of basic core competencies among pre-primary learners.

The national and the county government should work hand in hand to come up with proper Policy Guidelines on food, health and safety in ECDE centers to guarantee safe and health stays of the learners in the school compound for optimal acquisition of basic core competencies among pre-primary learners.

The county government since ECDE is a devolved function, should ensure that their ECDE centres are adequately staffed with well trained and qualified teachers to reduce the teacher-child ratio and enhance optimal acquisition of basic core competencies among pre-primary learners

Suggested for further studies

Based on the study findings, the study propose that future studies should be done to comprehensively cover the school based factors influencing acquisition of basic core competencies among pre-primary learners.

The present study was only conducted in Kisii Central Sub County, hence its findings cannot be generalised for other regions within the country owing to cultural diversity, and socio-economic differences. Other studies on similar areas should also be done in other parts of the country before the generalisation of the findings are made.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER

Department of Special Needs Education and Early Childhood Development ,
School of Education, Humanities and Social Sciences
Jaramogi Oginga Odinga University of Science and Technology
P.O. BOX

BONDO

Dear

I am a student at Jaramogi Oginga Odinga University of Science and Technology studying a PhD. degree in Early Childhood Education. My research is entitled evaluation on implementation of national pre-primary education policy guideline of 2018 in preschools in Kenya. The aim of the study is to evaluate the implementation of the National pre- primary Education policy in ECDE Sub-sector.

Participation in the study is voluntary. You are free to withdraw at any time. All information gained through your participation will be held in the strictest confidence. Your name and school will not be published. Your participation is limited to filling the questionnaire and responding interview questions which will take 20 minutes of your time.

Your participation in the study will be greatly appreciated. If you feel your rights are being infringed please contact me on 0723569095 or my supervisors Prof. Benson Odongo on 0713748047 or Prof Charles Omoke on 0711170540

Yours truly,

Risper Onchiri

PhD. ECDE Student

Jaramogi Oginga Odinga University of Science and Technology.

NB Please sign below if you agree to be included in this study

Name (Optional)..... sign..... Date

APPENDIX II: INFORMED CONSENT FORM

I _____ consent to being interviewed by Risper Onchiri for her study on: interface between ECDE policy and practice in preschools in Kenya. I understand that:

Participation in this interview is voluntary.

That I may refuse to answer any questions I would prefer not to.

I may withdraw from the study at any time.

No information that may identify me will be included in the research report, and my responses will remain confidential. Pseudo- names will be used in the written report. The report will be written by the researcher and will then be handed over to her supervisor and further to the external examiner.

Signed: _____ Date: _____

APPENDIX III: PRE-PRIMARY TEACHERS' QUESTIONNAIRE

QUESTIONNAIRE Code _____

SECTION A: BACKGROUND INFORMATION

Instructions: Please place an “X” in the appropriate box or blank that will reflect your answer. Your responses are very important. Your responses will be an essential part of this research study. Thank you in advance for your assistance. (**Note: All responses are treated with confidentiality**).

BACKGROUND INFORMATION OF THE CENTRE

1. ECD Centre No. Name
2. Type of pre-School Private/Public.....
3. Sub-County Year of Establishment.....
4. Registration Status..... Yes/ No. Registration No.....
5. Enrolment (Baby Class Boys..... Girls.....
Nursery Boys.....Girls.....
Pre-Unit..... Boys.....Girls.....
6. No. of teachers Male..... Female.....
7. Centre Sponsor..... County/ Private/Church

PART A: INFRASTRUCTURE

Tick the most appropriate: where 1= (Strongly Disagree) 2 = (Disagree) 3= (Undecided) 4 = (Agree) and 5 = (Strongly Agree)

1. PHYSICAL FACILITIES						
A) LEARNING STRUCTURE (BUILDING)						
1.	The centre has a standalone facility	1	2	3	4	5
2	Has Permanent buildings	1	2	3	4	5
3.	Buildings in good condition	1	2	3	4	5
4.	Adequate ventilation	1	2	3	4	5
5.	Class rooms of standard size (8m x 6m)	1	2	3	4	5
6.	has Classrooms with lockable doors	1	2	3	4	5
7	Classrooms has lockable windows	1	2	3	4	5
8.	Indoor space adequate	1	2	3	4	5
9.	has Cemented floor	1	2	3	4	5
10.	has earthen floor in good condition	1	2	3	4	5

11.	There is a fire extinguisher	1	2	3	4	5
12.	There is a fire assembly point in case of a fire outbreak	1	2	3	4	5
13.	There is an emergency exit in every classroom	1	2	3	4	5
14.	The centre has computers for children	1	2	3	4	5
15.	The centre floors are safe for children	1	2	3	4	5
16.	The pavements are safe for children	1	2	3	4	5
17.	The centre has ramps to cater for children with physical challenges	1	2	3	4	5
18.	First aid kit is available	1	2	3	4	5
19.	Is there is a resting place for the children (full day ECD centres)	1	2	3	4	5
B) TOILETS						
1.	Children Toilets Suitable and Clean	1	2	3	4	5
2.	Has enough toilet for boys and girls (1:25)	1	2	3	4	5
3.	The toilets are safe and age appropriate for ALL the children (including CSN)	1	2	3	4	5
C) KITCHEN						
1	Spacious and well ventilated	1	2	3	4	5
2	Located away from dumping area	1	2	3	4	5
3	Have hygienic waste handling equipment	1	2	3	4	5
4	Adequate supply of clean water	1	2	3	4	5
5	Have utensils storage areas	1	2	3	4	5
6	Close to food store and serving area	1	2	3	4	5
7	Be fitted with fire fighting equipments	1	2	3	4	5
8	Always kept clean	1	2	3	4	5
D) FOOD STORE						
1	Be spacious clean and well ventilated	1	2	3	4	5
2	Safe and secure	1	2	3	4	5
3	Have raised ranks that are not in contact with the walls	1	2	3	4	5
4	Have a spread area for perishable foods	1	2	3	4	5
5	Well maintained store records	1	2	3	4	5
E) DINING AREA						
1	Spacious, clean and well ventilated	1	2	3	4	5
2	Have adequate child size furniture that are safe	1	2	3	4	5
3	Well documented menu and food surface plan	1	2	3	4	5
4	Designed serving area	1	2	3	4	5
F) FURNITURE						
1.	Available and Adequate	1	2	3	4	5
2.	Children's suitable size tables	1	2	3	4	5
3.	Children's suitable size chairs	1	2	3	4	5
4.	Furniture in good condition	1	2	3	4	5
2. PHYSICAL/PSYCHOMOTOR MATERIALS/EQUIPMENT						
1.	• has adequate fixed equipment for the number of children at the centre	1	2	3	4	5
2.	• has adequate Play materials	1	2	3	4	5

3.	• Fixed play equipment in good condition	1	2	3	4	5
4.	• has Soft landing for slides	1	2	3	4	5
5.	• Equipment is appropriate in sizes for ECD children	1	2	3	4	5
6.	• Equipment are regularly serviced and maintained	1	2	3	4	5
7.	• swings at low level for ECD children	1	2	3	4	5
3. PLAYGROUND						
1.	• play space adequate	1	2	3	4	5
2.	• the playground well kept	1	2	3	4	5
3.	• the playground fenced and has a gate	1	2	3	4	5
4.	• the grass/bushes cut	1	2	3	4	5
5.	• there are sharp and dangerous object	1	2	3	4	5
6.	• there are holes and pits on the playground	1	2	3	4	5

PART B: PERSONAL SUITABILITY OF REGISTERED PROVIDERS, CAREGIVERS AND OTHER STAFF MEMBERS?

I. The ECD Teachers/Caregivers	Yes	No
(a) Shall be above 18 years.		
(b) Minimum academic qualification of KCSE D+ or its equivalent		
(b) Possess a certificate an ECD or better certificate offered by the Government or any other institutions authorized by the Government.		
Trained and qualified to administer first aid by St John's Ambulance, Red Cross or equivalent.		
(c) Registered by the Teachers Service Commission		
(e) Developed Progress Assessment tool and Primary School Readiness		
(f) Communicate well with parents and other members of society.		
(g) Have valid medical records renewable annually		
(h) Have a valid certificate of good conduct and should not have a criminal record.		
(m) Caregivers other than teachers shall undertake a short course on child care by authorised government institutions.		
(n) Untrained ECDE teachers should only act as teacher assistants and should have undergone the five-week ECD short-course.		
II. The Head teacher		
(a) Minimum academic qualification shall be KCSE D+ or its equivalent.		
(b) Has pre-school certificate, preferably Diploma in ECDE.		
(c) Shall be in charge of day to day running of the institution.		
The Manager		
(a) Appointed by the Minister for Education.		
(b) Minimum academic qualification of KCSE D+ or equivalent		
(c) Professionally trained teacher (minimum ECD Certificate).		
(d) Where the owner is not a professionally trained teacher; she/he should hire a manager who is a professionally trained teacher.		

XI. Health Service Providers:		
(a) Shall be Degree and Diploma holders – (stationed at MOH headquarters, provincial and district hospitals).		
(b) Shall take charge in different departments.		
(c) Shall have minimum qualification of Diploma with C+ or equivalent.		
(d) Enrolled Nurses shall be holders of Certificate and must have a minimum academic qualification of D+ or equivalent.		
(e) Must be trained according to the MOH laid down guidelines. NB: MOH shall undertake to train all health workers on Community Integrated Management of Childhood Illnesses (CIMCI).		
(f) Nurses– In-charge of a health centres.		
(g) They are the trainers of health workers.		
(h) Dispensaries - Mainly manned by Enrolled Nurses.		
(i) Integrated Management of Childhood Illnesses (IMCI) Training:		

PART C: HEALTH AND NUTRITION

1	Growth monitoring and promotion (GMP) services offered at the centre	1	2	3	4	5
2	health cards for all children available	1	2	3	4	5
3	nearest health centre work with teachers to provide health services	1	2	3	4	5
4	the centre have a feeding programme	1	2	3	4	5
5	food prepared at the centre	1	2	3	4	5
6	food brought from home are stored in racks in the ECD centre	1	2	3	4	5
7	food is prepared at the centre kitchen	1	2	3	4	5
8	the kitchen have lockable doors and windows	1	2	3	4	5
9	the kitchen is well-ventilated	1	2	3	4	5
10	the children take ten o'clock snack	1	2	3	4	5
11	the porridge is enriched	1	2	3	4	5
13	lunch is offered at the ECD centre	1	2	3	4	5
14	there are alternative arrangements for children who cannot eat the foods provided due to allergies or for other reasons	1	2	3	4	5
15	drying racks are available	1	2	3	4	5
16	the Cook is clean and neat	1	2	3	4	5
17	Health certificates are available for the cook	1	2	3	4	5
18	deworm children at the centre	1	2	3	4	5
19	the deworming tablets are provided by staff of a nearby health centre	1	2	3	4	5
20.	The center has a health facility	1	2	3	4	5
21.	The health facility has equipment and adequate medical supplies	1	2	3	4	5
22.	The health facility has a medically qualified health worker	1	2	3	4	5
23.	Sick children are treated at the health facility	1	2	3	4	5

CENTER FEEDING PROGRAM

1.	The centre has a feeding program	1	2	3	4	5
2.	The feeding program is managed by parents	1	2	3	4	5
3.	The feeding program is managed by centre administrators	1	2	3	4	5
4.	• The utensils are cleaned properly	1	2	3	4	5
5.	• feeding process is orderly (washing hands, all children served, no pushing, small babies helped to feed)?	1	2	3	4	5
6.	• Children are allowed to enter the kitchen	1	2	3	4	5
8.	Children are given milk at the centre	1	2	3	4	5
9.	Children are given plain porridge at the centre	1	2	3	4	5
10.	The porridge is enriched (i.e. milk and sugar added to it)	1	2	3	4	5
11.	The children are given rice and beans	1	2	3	4	5
12.	The children are given rice and peas	1	2	3	4	5
13.	The children are given maize and beans	1	2	3	4	5
14.	The children are given ugali and vegetables	1	2	3	4	5
15.	The children are given ugali and beans	1	2	3	4	5
16.	Children are fed once a day	1	2	3	4	5
17.	Children are fed twice a day	1	2	3	4	5
18.	The food is served by kitchen staff	1	2	3	4	5
19.	The food is served by teachers	1	2	3	4	5
20.	The cooks have valid and current health certificates	1	2	3	4	5
21.	The cooks handle the food in a hygienic manner	1	2	3	4	5
22.	Parents contribute to the feeding program	1	2	3	4	5
23.	Feeding program is funded by government	1	2	3	4	5
24.	The feeding program is supported by a donor	1	2	3	4	5
25.	The school feeding program is satisfactory to children	1	2	3	4	5
26.	The school feeding program has serious challenges	1	2	3	4	5

SAFETY GUIDELINES

	Safety and protection guidelines					
1.	A list of emergency contacts readily available to the staff	1	2	3	4	5
2.	Fire-fighting equipment readily available	1	2	3	4	5
3.	A first aid kit available with safe drugs	1	2	3	4	5
4.	All medicines kept out of children's reach	1	2	3	4	5
5.	Is the ECD centre fenced, does it have a lockable gate and no footpath across the centre	1	2	3	4	5

6.	Children are escorted to and from the ECD centre by an adult, older sibling 12 years and above	1	2	3	4	5
7.	Parents and teachers ensure and adhere to the scheduled arrival and departure times	1	2	3	4	5
8.	Parents provide the photographs, names and identification documents of the persons who collect/pick the child and nobody else is allowed to pick the child from the centre	1	2	3	4	5
9.	Where transport is provided, the school bus has adequate and comfortable seats fitted with child appropriate safety belts for each child	1	2	3	4	5
10.	No open vehicle is used to transport ECD children	1	2	3	4	5
11.	Vehicle are comprehensively insured and regularly serviced and maintained as per manufacturer's guide	1	2	3	4	5
12.	The driver and assistant have certificate of good conduct	1	2	3	4	5
13.	The assistant sit with the children to man the door, escort and ensure children cross the road safely	1	2	3	4	5
14.	The telephone numbers of the parents and the school are displayed inside the bus	1	2	3	4	5
15.	The bus display on the outside the name, address and telephone number of the ECD centre/school	1	2	3	4	5
16.	The school bus or any other vehicle used for school transport does not exceed speed limit of 60 km/hr	1	2	3	4	5
17.	The vehicle doesnt expose the children to any pornographic material either verbal, audio-visual or print media	1	2	3	4	5
18.	For all school/ECD centre trips/visits, parents give consent and bus conform to transport regulations for children	1	2	3	4	5
19.	Parents driving have a waiting place supervised by an adult. Driving speed inside the centre is a maximum of 5 km/hr	1	2	3	4	5
20.	In case of sickness or serious accidents in the ECD centre, the teacher contacts the parent/guardian immediately	1	2	3	4	5
21.	Teacher who contracts a contagious disease stays at home until certified healthy by a medical practitioner	1	2	3	4	5

22.	When a teacher is sick an alternative arrangement is made to provide care for the children	1	2	3	4	5
23.	Children are trained not to touch anybody else's blood, share cutting objects or use any sharp objects	1	2	3	4	5
24.	Children are trained not to accept food items such as soda, sweets or any gift from anybody without the parent's or teacher's permission	1	2	3	4	5
25.	No smoking, drinking alcohol or use of any illicit drugs in the ECD centre	1	2	3	4	5
26.	No corporal punishment, emotional/psychological abuse is applied to children in the centre	1	2	3	4	5
27.	Strangers, idlers, drug peddlers are not allowed in the vicinity of the ECD centre compound and environs	1	2	3	4	5

PART D: Level of Caregiver to Learner Ratio in the ECDE Centres

(a) How many teachers are in the centre? []

b) Teacher Child Ratio

i) 1:25 []

ii) 1:30 []

iii) 1:40 []

iv) 1:50 []

v) 1:60 []

vi) Above 1:60 []

b) An assistant teacher is available

Yes []

No []

PART E: PRE-PRIMARY CHILDREN’S ACQUISITION OF CORE COMPETENCIES

The statements given below relate to your aspects of pre-primary children’s acquisition of core competencies. Using the scale below, please tell us how much you agree or disagree with the following statements in relation to the sampled pupil by placing a number in the box provided

1-Strongly Disagree; 2-Disagree; 3-Undecided; 4-Agree; and 5-Strongly Agree

Table 4.9: Survey on Core Basic Competencies among the Pre-primary Learners

Item	1	2	3	4	5
The learners include others in their activities, even if they are not friends.					
They try to always be respectful of others.					
They can explain their interests and ideas clearly to other children/teachers.					
They recognize numbers and count things appropriate to their age					
They ask questions when they don’t understand something					
They sit still and pay attention to me					
They can find information they need to finish a task or solve a problem.					
They are supportive to their friends					
They can make age appropriate choices that benefit their well-being and keep them safe					
They listen when others have problems and can help solve conflicts.					
They engage with ideas or information that is challenging for them.					
They take instructions and follow it					
They speak up for themselves when they need help or support.					
They can come up with new, creative ideas during play activity					

APPENDIX IV: DOCUMENT ANALYSIS

Documents	Statements	Comments
i) National Pre-Primary Education Policy Standard Guidelines of 2018 For Kenya	Is it available? Do teachers refer to it as they provide services at the preschool?	
(ii) First Aid Rules and Guidelines	- Are they available? - What is the kits content?	
(iii) Health Records	- Are they available? - Are they up to date?	
(iv) Progress Records	-Are they available? Are they up to date? - Are they checked and signed by head teacher or d/ head teacher?	
v) Photos	How are the photos of the facilities	
vi) Public Health Act		
Admission Register		

Availability of first aid box and contents, Availability and source of water supply, Availability of refuse and sewage disposal system, Availability of safety measures in schools

1. Availability of first aid box and contents

First aid box and contents	Present	%
Availability of first aid box Contents		
Contents		
Emergency facilities		
a) Bandage		
b) Analgesics		
c) Iodine		
d) Anti- malaria		
e) Scissors/blade		
f) Slings/splints		
g) Methylated Spirit		
h) Embrocation/liniment		
i) Plaster		
j) Cotton wool		
k) ORS sachets		
l) Cup and spoon		
m) Record book for treatment		

2. Availability and source of water supply

Variables		
Water supply		
Available		
Not available		
Source of water		
a) Bore-hole		
b) Well		
c) Nearby stream		
Sanitary water supply		
• Present		
• Absent		

3. Availability of refuse and sewage disposal system

Refuse bins		
Refuse disposal		
a) Pit burning		
b) Open dumping		
c) Evidence of burning		
Sewage disposal system		
a) Water closet		
b) Pit trench		
c) Bush		

4. Availability of safety measures in schools

Safety Measure		
School fence		
State of the fence		
Complete		
Not complete		
Availability of fire extinguisher		
Gate		
Present		
Absent		

APPENDIX VII: INTERVIEW SCHEDULE FOR THE PRIMARY HEAD TEACHERS.

1. Is the learning environment (indoor and outdoor facilities) appropriate and adequate? **Probe on**, Is lighting adequate?, Are there playground equipment?, . Are there sleeping rooms for little children? Is the furniture appropriate for the physical size of the children? Is there enough space for the activity to take place, but not too much open space to encourage running?
2. Are the registered providers, caregivers and other staff members have relevant competencies
3. Are the health and safety guidelines for pupils and other staff in the ECDE centres in tandem with policy? Please elaborate
4. Is there a school feeding programme in existence? What are some of the reasons that informed its establishment? What is the quality of food provided for children
Probe for adherence to hygienic standards
5. Are the enrolment Policies and Admission Practices in the ECDE centres adhered to by the ECDE providers and caregivers? **Please elaborate**
6. Do you have adequate number of teachers and other caregivers? **Please elaborate**

APPENDIX VIII: FOCUS GROUP DISCUSSIONS FOR QUALITY ASSURANCES AND STANDARDS OFFICER AND CURRICULUM SUPPORT OFFICERS

1. Is the learning environment (indoor and outdoor facilities) appropriate and adequate? **Probe on**, Is lighting adequate?, Are there playground equipment?, . Are there sleeping rooms for little children? Is the furniture appropriate for the physical size of the children? Is there enough space for the activity to take place, but not too much open space to encourage running?
2. Are the registered providers, caregivers and other staff members have relevant competencies
3. Are the health and safety guidelines for pupils and other staff in the ECDE centres in tandem with policy? Please elaborate
4. Is there a school feeding programme in existence? What are some of the reasons that informed its establishment? What is the quality of food provided for children
Probe for adherence to hygienic standards
5. Are the enrolment Policies and Admission Practices in the ECDE centres adhered to by the ECDE providers and caregivers? Please elaborate
6. Do you have adequate number of teachers and other caregivers? Please elaborate

APPENDIX IX: MAP OF KISII CENTRAL SUB-COUNTY SHOWING ITS NEIGHBOURING SUB-COUNTIES



Map of Kisii Central Sub-County Showing its Neighbouring Sub-Counties