CHALLENGES FACING THE DEVOLUTION OF EARLY CHILDHOOD EDUCATION PROGRAMMES IN KENYA:

A STUDY OF NANDI COUNTY PUBLIC ECDE CENTERS

BY

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DECLARATION

DECLARATION BY THE CANDIDATE

This research thesis is my original work and has not been submitted in any institution/ college for the purpose of examination.

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DECLARATION BY THE SUPERVISORS

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

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DEDICATION

I wish to dedicate this research thesis to my Husband Mr. William Kosgei and Children Edith, Sylvia and Amanda for their encouragement and support during my studies. I also wish to dedicate this thesis to my friends for providing a support throughout the study period.

ABSTRACT

Devolution gave the county governments mandate to implement education programs such as pre-primary education, childcare facilities and home craft centers. However, these have not been fully achieved. Therefore, this study focused to examine the challenges facing devolution of Early Childhood education programs in Nandi County, Kenya. The specific objectives were to assess the status of teacher adequacy, establish the kind of support accorded to ECDE teachers by Ministry of Education, find out the extent to which devolution has enhanced infrastructure development, establish the extent of availability of instructional materials and identify the strategies put in place by the county government to motivate teachers in order to improve service delivery in public ECDE centers. The study was guided by the Systems Theory. It adopted the descriptive survey design using the mixed methodology and the pragmatism paradigm. The target population comprised of 1387 pre-school teachers, 1 county Director of ECDE, 6 sub-county ECDE officers and 552 primary school head teachers. A sample size of 301 teachers and 226 head teachers was obtained. Stratified and simple random sampling was used to select teachers and head teachers while purposive sampling was used in selecting the county director of ECDE and 6 Sub-County ECDE Directors. Questionnaire and interview schedules were used for collecting data for the study. Validity and reliability of the instruments were determined before data collection. Quantitative data was analyzed using frequencies and percentages while content analysis was used to analyze qualitative information. The study found out that majority of the pre-schools in the study area lacked adequate pre-school teachers, textbooks and play materials. Majority of the employed pre-school teachers had undergone pre-school teacher training courses therefore they had adequate and current pedagogical skills which allowed them to effectively handle pre-school learners. Most of the pre-schools lacked adequate teaching and learning materials. Parents provided learning materials and feeding programmer for ECDE learners. Pre-schools had inadequate infrastructure since the county government have constructed 30% of classrooms in the study area. The study therefore recommended that there is need for county government, parents and other education stakeholders to provide instructional materials and construct more classrooms for efficient and improved service delivery in all the pre-schools in the study area. Further, it was recommended that there is need for employment of more trained pre-school teachers by the county government to improve learning. This is attributed to the fact that there were inadequate pre-school teachers employed by the county government yet early childhood education is a devolved function.

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ABBREVIATIONS

DEBs	District Education Boards
DEO	District Education Officer
DICECE	District Centers for Early Childhood
DICT	District Infrastructure Coordination Team
ECDE	Early child hood development education
EFA	Education for All
GER	Gross Enrolment Rate
GST	General Systems Theory
LDC	Long Day Care
MDGs	Millennium Development Goals
MOEST	Ministry of Education
NACECE	National Centers for Early Childhood Education
PEBs	Provincial Education Boards
SIMU	School Infrastructure Management Unit
TSC	Teacher Service Commission
UNCRC	United Nation Convention on the Rights of the Child
UNESCO	United Nations Educational, Scientific and Cultural Organization

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God Bless you All.

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Introduction

This chapter presents the background to the study and statement of the problem. It also highlights the purpose of the study, its objectives, justification and significance of the study, scope, assumptions, limitations and delimitations of the study. It further, provides the theoretical as well as conceptual framework and the operational definition of key terms.

1.2 Background to the Study

Education is critical in equipping the recipients with the skills attitudes and competences required in promoting self and national development (Gross Giacquinta & Bernstein, 2001). Thus, education is considered the cornerstone of the development process of a nation. While it increases the productive capacity of its constituent individuals, education has an incremental effect on the society's aspirations in the economic, social-cultural and political realms. Global nations have put up notable efforts to ensure the right of education for all, but despite these activities more than 100 million children worldwide have no access to primary education (UNESCO, 2010).

Ayot and Briggs (1992), acknowledged education as the cornerstone of improving the socio-economic and welfare of the people and the society at large. Education training as investment assures higher individual earnings than investing in alternative segments of the financial system (Psacharopoulos & Woodhall, 1985; World Bank, 2008). Furthermore, IBED (2005) and Ojiambo (2009) postulated that schooling is the foundation of Human, Cultural, Social, and Monetary capital and considered as valid in

terms of both character and collective excellence. In addition, KIPPRA (2008) found that establishment of first-rate training is crucial in producing the chances and advantages of social and monetary advancement.

In young children care and development is the establishment of social relations and the starting point of human resource development. According to Mullis, Martin, Foy & Arora, (2012), early childhood is the most critical period for cognitive and social development. Children being active learners from birth, and the first years are vital in determining what the person becomes in adulthood, hence early childhood development and education (ECDE) should be recognized as a first step of basic education and a fully integrated sector within national education systems. Provision of ECDE should consequently be universally accessible and free for all children because high quality ECDE provides the foundation for life-long learning and stimulates children's social, emotional, physical, cognitive and linguistic development (Hirst, Jewis, Sojo & Cavagh, 2011).

Early Childhood Development (ECD) has been defined differently depending on contexts. For example, it has universally been defined as the period from birth (or prenatal) to eight years old (UNESCO, 2010; UNICEF, 2011). Early childhood development and education (ECDE) relates to how well a child is tracking in their education over the period. It looks at the physical health and wellbeing; social competence; emotional maturity; language, cognitive and communication skills and general knowledge (International Labor Organization (ILO), 2012). The importance of ECDE to the global community prompted the convention of the World Conference on

Education for All (EFA) that took place in Jomtien, Thailand, in March 1990 (UNICEF, 2011). The conference articulated the significance of the early years as the foundation for the life of an individual (UNESCO, 2010). Further, the Dakar Convention of 2000 recognizes ECDE as number one objective in Education for All (EFA) goal by 2015 and Sustainable Development Goals (UNICEF, 2011). The spirits of the two conventions called for policy formulations to entrench ECDE as a basic human right of the child.

Although most governments across the globe recognize the importance of ECDE, the provision of quality ECDE has met several challenges, most of which are contextual. Infrastructure, trained teachers, and teaching and learning resources have been lacking in adequate measures to satisfactorily aid quality of ECDE learning (EI, 2010). In Canada, Bonnechere Union Public Library (BUPL, 2006) reports that ECDE teacher turnover rates rose owing to low remunerations by the municipal government upon which recruitment of the teachers are bestowed. In Hungary, where ECDE is subsidized by the government, enrolment is generally high in ECDE centers far beyond the infrastructural capacities of such centers (OECD, 2006). Cuyvers, De Weerd, Dupont, Mols, and Nuytten (2011) investigated the importance of infrastructure to the well-being of learners and consequently to positive educational outcome in Antwerp, (Belgium). They found that differences in students' well-being can be linked to the quality of the infrastructure of the schools they attend.

Equally, De Paola, Ponzo, and Scoppa (2009) examined the effects of class size on students' achievement using data from a project offering special remedial courses in Mathematics and Language skills to freshmen enrolled at an Italian medium sized public

University. It was found that larger classes determine a significant and sizeable negative effect on student performance in Mathematics. The two studies (Cuyvers, et al., 2011; De Paola & Scoppa 2009) however, need to motivate researchers to investigate infrastructural capacities and class sizes with intention to determine quality of education offered among devolved systems across the globe, including Kenya.

The early stages of life of an individual have an important influence in the life of learners. The level of education of a household, its poverty level, and income level determines its demand for more education especially for its siblings. Families with less educated parents and low standards of living lack financial support for their children and consequently such children may not at all enroll in the learning programs or may drop out of the educational system (Dowling, & O'Malley, 2009).

According to UNESCO (2001) African countries face many challenges in terms of improving basic education where ECDE is also affected. Similarly, UNESCO (2012) on Education for All (EFA) global monitoring report goal No. 1 on expanding early childhood education care and education stated that early childhood is a critical period that lays the foundation for success in education and beyond; therefore, early childhood care and education should be at the center of Education for All (EFA) and broader development Agendas. It cites hunger, poor health and malnutrition as some factors which hinder children's cognitive development and capacity to learn. The report also notes that evidence based on a 2009 survey in programs for internal student assessment (PISA) show that a 15 years old student who attended at least a year of pre-primary school outperformed students who had no access to this vital education in most parts of

the world. Quality pre-school programmes are important in preparing young children for primary school education. A global perspective of Australia, India, Turkey and Uruguay demonstrate the short and long-term benefits of pre-school education. This range from a head start in literacy and numeracy skills to improved attention, effort and initiative – all of which lead to better education and employment outcomes (Hanson, 2005).

ECDE includes early training, learning and eagerness for school, as well as, the conveyance of basic health care, adequate nutrition, fostering and stimulation within a caring environment (Kabiru & Njenga, 2001). Several international bodies have underscored the importance of ECDE, and policies have been developed in reinforcement of the same. However, there are many factors that work against the quality of ECDE in Kenya in diverse ways.

Evidence of the crucial contribution of high-quality early childhood development and education (ECDE) to brain development, future academic success, health outcomes, and overall national economic growth has been well established (Black et al., 2017; Duncan et al., 2007; Engle et al., 2011). Education policy makers in developing countries, who in recent years have been focusing on the rapid growth of the education system at the primary level, are becoming interested in advancing similar gains in the ECDE subsector. These policy makers' demands for increased ECDE provision have occurred in tandem with recent international commitments toward expanded and improved ECDE provision, as articulated in Sustainable Development Goal 4.2, which calls for increased *access to quality* early childhood education for all children by 2030 (United Nations, 2016).

Sustainable Development Goal 4.2's joint emphasis on access *and* quality is notable. It is a misconception that the 1990 World Conference on Education for All in Jomtien, Thailand, ignored quality in its push toward increased access to education. In fact, the documentation of the Jomtien proceedings specifically focused on quality (UNESCO, 1990). However, despite the emphasis on quality of education at Jomtien, the implementation of the Education for All movement routinely emphasized access at the expense of quality (UNESCO, 2004). It is uncertain how much of the decrease in primary education quality in the 1990s was due to the expansion of the school-going population from the elite to a wider representation of society. In Ethiopia, for example, "aggregate enrollments in grades 1–12 rose at a steady pace of about 9 percent a year between 1992–1993 and 2001–1002; and in grades 1–4, the first cycle of primary schooling, they grew even faster: at 15 percent a year" (World Bank, 2005).

Since 1999, education policy makers globally have increased emphasis on ECDE, as the scientific community continues to generate convincing evidence regarding the critical importance of the early childhood period in determining later school and life success. International aid agencies, such as the World Bank and the United Nations Children's Fund (UNICEF), are encouraging developing countries to expand provision of preprimary education and to improve the quality of those services (Sayre, Devercelli, Newman, & Wodon, 2015; UNICEF and World Bank Group, 2016). In response to the growing demand for ECDE in their own contexts, and to the compelling scientific and economic evidence about the return on investing in young children (Heckman, 2006; McCoy, Zuilkowski, Yoshikawa, & Fink, 2017), several countries in sub-Saharan Africa

have both expanded the provision of quality pre-primary education and undertaken policy reforms to achieve this expansion.

Another study by Holland (2011) investigated young children's perception of melodic construction aimed at finding clues about their children's broader cognitive development in non-musical domains in Winconsin, USA. The analyzed data revealed common themes with varied results of eagerness or hesitancy to participate, whether bells were moved or played, exploration of bells, internalization of rhythm, cognitive readiness for melodic construction, and role of visual representation. Equally, Kim, Wigram and Gold (2008) investigated the effects of improvisational music therapy on joint attention behaviors in pre-school children with autism in selected Asian countries using 25 ECDE learners (aged 1 to 5 years old) selected from different learning centers. The findings were that joint attention skills and pro-social behaviors were found to be improving through the improvisational therapy.

According to Hoffman (2010), early childhood encompasses the period of human development from the prenatal stage through the transition into the early primary grades. Van der Gaag (2012) stresses that during the children's early years there are four main critical domains of development; which are physical, cognitive, linguistic and socio-emotional. Therefore, ECD links the young child's cognitive, emotional, social and physical processes with the care and services provided by the schools to support the children's development (Bandy, 2009). The benefits of supporting ECD include improved cognitive development, greater educational success and increased productivity in life (Young, 2008).

Pence (2004) argues that the skills developed in early childhood form the basis for future learning and labor market success, and the failure to develop these skills can negatively affect educational attainment and productivity and earning potential. Without access to quality ECD, poor children often fall behind their more advantages peers before they even begin school. As they get older, the gaps widen: they are likely to perform poorly in school, earn less as adults and engage in risky social behaviors (Hoffman, 2010). Young (2008) found that ECD investments have a positive impact on older girls and women. In addition to the direct impact of ECD interventions on young children, positive externalities can occur in the areas of girls' education and women's labor force participation rate (Freitas, Shelton & Tulge, 2008).

In Zimbabwe, Chikutuma and Mawere (2013) found that the Early Childhood Development inclusion in the primary schools was not quite viable as it failed to cater for the all-round development of learners. For example, age appropriate equipment were not available and appropriate activities were not being administered and that the environment itself was not conducive to the age groups' needs of learning through play (Chikutuma & Mawire 2013). Taruvinga, Mushoriwa, Hannah and Muzembe (2011) found that a number of schools lacked qualified personnel, knowledge and as a result most of the teachers had negative attitudes towards the introduction of the ECDE programs.

Moyo, Wadesango and Kurebwa (2010) investigated the factors that affect the implementation of Early Childhood Development Programs (ECD). Results indicated, among others, that the qualifications of teachers affected their ability to deliver effective lessons. Large classes reduced teacher-pupil interaction. It was also revealed that teachers

and parents had positive attitudes towards Early Childhood Development programs. The quality of ECDE education was affected due to inadequate infrastructure and quality teachers. However, the situation among regional governments or devolved units in Kenya has not been focused upon. The present study thus chose to focus in this area.

Fagbeminiyi (2011), used survey approach through self-administered questionnaires to also explore the role of parents in early childhood education in Ikeja, Lagos State, Nigeria. It was revealed that parental involvement, that is emotional care and support has a very big influence on early childhood education, particularly the academic performance of the child and the age which the child is being sent to school.

There are several ECDE centers established by the government and others by the private sector in Kenya and this implies that most children have access to ECDE. Nevertheless, the quality of education in some of the schools is threatened by conflict, malnutrition, poverty, and ignorance among the stakeholders involved. Another obstacle to children's welfare is the low status of women in the society. This affects the capitals, monetary and social support that they can offer to their children. The spread of HIV/AIDS leads to amplified percentage of parents who are HIV positive or who have died of AIDS. Subsequently, the numbers of affected, infected and orphaned children continue to increase. The affected bear the effects of taking care of an infected mother. This renders them less effective in education since in most cases they are absent from school and psychologically they are not able to concentrate with their school work (Gross et al, 2001).

The overwhelming evidence about the importance of ECDE has made many people and governments world-wide to be aware of the need to have quality programs for young children (Moorhead, 2005). India for instance has community based ECDE programs that provide comprehensive and relatively cheap and integrated programs. The programs are virtually in all Indian states and offer supplementary nutrition for children up to six years and expectant and nursing mothers. In Colombia, the government partly finances the cost of early childhood development education. Colombian parents pay half of the care givers salary and security while the government finances a loan scheme to help mothers run the nurseries. In Mauritius, mothers of 20-45 years are usually trained to take care of young children in their homes. MOEST (2003) Report indicates that Thailand has worked out a funding scheme to support ECDE programs in the community on continuing bases.

In Australia, the delivery of early childhood education services is undertaken by the state and territory governments (Ruthankoon, 2003). Furthermore, many local governments are also involved in the provision of such services, and the result of this division of powers and responsibilities is a great deal of variation in the way in which ECE is provided. Their current system of delivery of early childhood education within and across the different states and territories is complex and multifaceted, with services being provided in a mix of contexts, including kindergartens, stand-alone preschools, long day care (LDC) settings, early learning centers, and preschool programs within the independent school sector. These services are also delivered through a variety of different “providers” that involve “complex procedure and connections between government, voluntary and church groups, public education systems, Catholic and other religious schools,

community organizations, free-market forces, small business owner-operators (Devarajani et al, 2001).

In 1989, Kenya signed the United Nation Convention on the Rights of the Child (UNCRC). This was followed by the signing of African Charter on the rights and wellbeing of the child in 1990. In the same year Kenya was involved in authorized discussion of world seminar on EFA in Jomtien. After one decade, Kenya ratified Millennium Development Goals (MDGs) in 2000 and also partook in the world education forum in Dakar and Senegal. All these policies accentuated the prominence of ECD programs in refining all-inclusive child development. In addition to ratification of global policies Kenya enacted children's Act in 2001 which to date is a legal instrument which protects children as well as advocating for them (Kabiru & Njenga, 2001). The World Bank project undertaken from 1997 to 2004 delivered another key opening for the state to enlarge its vision on early childhood. Focusing on community capacity building and teacher training for quality delivery of service, the venture underscored the significance of attending strongly to children's learning, health and nutritional needs.

According to Muriu (2012), the efforts of the various stakeholders culminated in the development of national Early Childhood Development Policy Framework. The structure offers principles of ECD and outlines duties of partners in the delivery of services to young children. The implementation of the policy aimed at ensuring heightened access, equity, quality, financing and effectual management of ECD amenities. As a result, Kenya as a nation has prioritized development of infants and young children. Several global policies point out the importance of early years and Kenya has ratified these policies by signing, showing its commitment and willingness to promote wellbeing of

young children. National Early Childhood Development Policy Framework targeted all children, primary caregivers and the community. The structure also is responsible for the social, emotional and physical environment of the child. They can either create a conducive or unconducive environment for young children.

To adequately take care of the three groups several agencies or institutions are of paramount importance in undertaking certain roles and responsibilities to enhance access, equity and quality of ECDE. Keriga and Bujra (2009), note that the framework clearly outlined the roles of various institutions in promoting ECD services. However, translation of the stated roles to practice is quite debatable. ECDE is important in preparing children in physical, mental and social development. This prepares them to enter into the main education streams by equipping them with the skills attitudes and competences needed. It is on this ground that the Kenya government was concerned with attainment of EFA by 2015 and is therefore putting efforts to address the issues related to access to education, ECDE included.

In Kenya, Murundu, Indoshi, and Okwara (2010), sought to establish the school factors influencing implementation of ECDE Curriculum in Emuhaya sub-county. They found out that lack of suitable teaching and learning resources, inappropriate diet, understaffing, inappropriate medium of instruction and teacher-child ratio, and poor grouping practices were the factors hindering effective implementation of the curriculum in ECDE centers Similarly, Rotumoi and Too (2012) investigated the influence of resource availability on the choice of teaching methodologies by pre-school teachers in Baringo District (Kenya). The data revealed that availability and adequacy of space and number of ECDE children

had a great influence on the teaching methods teachers adopted. Inadequate finance, poor storage facilities and lack of commitment were cited as reason for failure of the use of child centered methods of teaching. It is therefore emerging that implementation of ECDE programs by devolved units remained unfocused upon ever since the management of the same was devolved to county governments in Kenya. Thus, it was interesting to compare the level of investment in infrastructure among counties in Kenya, and to compare teaching quality as well as the teaching and learning materials that have been acquired by different county governments for ECDE programs.

According to UNESCO (2014), despite the state's achievements in policy implementation, there are still obstacles that stand in the way. Challenges experienced include limited technical/ human resource capacity which has led to delays in meeting some targets such as completion of various building projects by public works department, the movement of key personnel through transfer, retirement or voluntary departure, lack of appropriate institutional framework which makes inter-sectorial collaboration difficult and funding by donors. Cuts in funding from major donors contributed to delays.

In addition, a study by Kanga (2011) indicated that County Governments are ill prepared to manage ECDE programs, that they lack elaborate framework that make ECDE work well under their management. Moreover, World Bank report (2011) indicate that most public ECDE centers in Kenya have stalled programs marked by irregularity and delay of teachers' salaries, inconsistent feeding programs, poor infrastructure and unclear policy guidelines. However, the constitution of Kenya 2010 bequeaths the management of Early Childhood Education to County Governments. The 47 County Governments are expected to put up adequate infrastructures, recruit qualified teachers and provide enough

teaching and learning materials for the enhancement of quality ECDE in public pre-schools.

On the other hand, constitution of Kenya (2010) has established two levels of government, the National and the County with each given specific role to perform as far as managing education is concerned. The National government is concerned with curricula, examinations, policy, standards, granting charters to tertiary institutions, universities and other learning institutions dealing with research, secondary education, special needs education, employment of teachers and management of co-curricular activities. The county government on the other hand handles village polytechnics, pre-primary education, home crafts and other learner care facilities. The basis of such devolution is hinged on the Basic Education Act (GoK, 2013), and the Sessional Paper No.14 of 2012 on educational reforms and trainings. With these principles in place there was need to readjust the education structure so as to meet the requirements in the constitution.

It is important to note that, ECDE being the initial stage of setting the learner's foundation, especially the aspect of cognitive and socialization domains, all stakeholders are required to critically address matters of accessibility, quality, relevance and equity of ECDE programs (Kibera & Kimokoti, 2007). Notably, the policy document indicates that, various stakeholders are engaged in service provision for learners, yet the resources available are insufficient for the number of learners requiring the same services. There is need therefore to maximize resources which are available so as to ensure that the ECDE services offered are accessed in an equitable manner, acceptable and socially relevant

way. This guarantees a more efficient coordination of service delivery among other partners (GoK, 2006).

According to Rural Education Action Program, (REAP) 2011), Early Childhood Education (ECE), implies; the exposure of education to learners during the early stage of their childhood. Pre-school Education is also considered to be a major input into a learners' formal education. The significance of pre-school Education includes progression of mental functions of learners in areas which include psychosocial, motor skills, language, cognitive domain and learning (Bowman, Burns & Donovan, 2001). Furthermore, studies by Campbell & Ramey, (2010) and Reynolds, Temple, Our, & Arteaga (2011) found out that pre-school education develops learners' school readiness with positive social and economic effects that last well into their adulthood from minimal chance of involvement in criminal activity, higher education accomplishment to higher employment status with better earnings.

Bilateral and multilateral partnerships in development have supported pre-school programs through capacity building, technical support, resource mobilization and advocacy including funding of the early childhood education programs via the Ministry of Education. A classic example includes improvement of infrastructure in ECDE centers especially in marginalized and poverty-stricken areas has been as a result of the World Bank's community support which have impacted positively on education quality and participation of services offered (Go, 2007).

The Government of the Republic of Kenya recognizes Early Childhood Development as an important pillar for accelerating the attainment of Education for All (EFA) and the

Sustainable Development Goals (Republic of Kenya, 2006). EFA's first goal stipulated that Governments need to expand and enhance comprehensive Early Childhood Development. According to a 2002 report by The World Fit for Children Conference, it was reported that it was important for every child to have a good start in life. Essential factors for a good start included quality nurturing, care and safe environment (Githinji & Kanga, 2011). The Government of Kenya (GOK) has had tremendous support, and collaborates with partners, to improve the welfare of the Kenyan child, but, these efforts are fragmented and with little impact. GOK's Sessional Paper No. 1 of 2005, *A Policy Framework on Education, Training and Research*, recommends the development of comprehensive ECD policy framework and service standard guidelines (Republic of Kenya, 2006).

The Kenyan government in an endeavor to embrace the NAEYC and NAECS guidelines formulated an assessment tool called Kenya School Readiness Assessment Tool (KSRAT) (Mochama, 2015). Through the newly established tool, ECDE children would be gauged using their chronological age and development. Assessment for learning is successful when it is embedded in teaching and learning.

Kabiru (1992), points out that retarding the development of pre-school education in Kenya still faces challenges of development. Teachers cannot effectively implement the National Centers for Early Childhood Education (NACECE) curriculums unless they are given tools of trade inform of facilities and materials". Kabiru and Njenga (2001) also note that quality service in pre-school is being hindered by lack of facilities necessary for holistic development, for example, play materials and nutrition and health support

programs. Gross Giacquinta & Bernstein (2001), posit that factors such as clarity and awareness of curriculum, teacher competence, support by management, availability of facilities and materials and the attitude of stake holders have an influence on the outcome of an innovation. There is need, therefore, to look into challenges influencing devolution of education in Nandi County, Kenya.

1.3 Statement of the Problem

The Early Childhood Development (ECD) is a very crucial stage in Child Growth and Development. The devolution of ECDE come with roles to the County Government to provide funds required for the development of the necessary infrastructure for institutions of basic education and training used for conducting pre-primary education, childcare facilities and home craft centers.

However, the devolution of ECDE education came with a myriad of challenges ranging from unclear policy framework on issues of management, underfunding of ECDE programs, to lack of preparedness of county governments to implement the devolved ECDE system of education (Elimu-Yetu Coalition, 2014). In addition, a study by Atieno (2014) in Kisumu County indicated that County Governments are ill prepared to manage ECDE programs, that they lack elaborate framework that make ECDE work well under their management.

Moreover, World Bank report (2010) indicate that most public ECDE centers in Kenya have stalled programs marked by irregular and delay of teachers' salaries, inconsistent feeding programs, poor infrastructure and unclear policy guidelines. However, the constitution of Kenya 2010 bequeaths the management of Early Childhood Education to

County Governments. The 47 County Governments are expected to put up adequate infrastructures, recruit qualified teachers and provide enough teaching and learning materials for the enhancement of quality ECDE in public pre-schools.

Throughout the world, nations aspire to create sturdy and operative policies for learners' education through decentralization of education in order to improve the progress of vulnerable needy learners. This can only be achieved through policy planning strategies that need to be utilized to take full advantage of resources available, improved and coordinated comprehensive programs and increased national and international investments in children (Rossiter, 2016; Powers, 2016). This has not been different in Kenya and Nandi County in particular. In 1985 District Centers for Early Childhood (DICECE) which actualized the decentralization of the ECDE program to the district level was founded. Through the Sessional Paper No.1 of 2005 the Kenya government responded to the EFA policies by recommending the advancement of a comprehensive ECD policy Framework and service standard guidelines to ensure quality service and access to ECDE. In 2010 a new Kenyan constitution was enacted whose function was to devolve services to county governments, ensuring equity, access, quality and special attention to the minorities and marginalized groups. Despite the fact that the government through various policy frameworks has facilitated devolution, access and service provision in ECDE centers has not been fully realized. It is on this basis that this research investigated the challenges facing devolution of early childhood education programs in Nandi County, Kenya.

1.4 Purpose of the Study

The purpose of this study was to examine challenges facing devolution of early childhood education programs in Nandi County, Kenya.

1.5. Objectives of the Study

The following are the specific objectives of this study:

i. To ascertain the status of teacher adequacy in delivering public ECDE centers programs in Nandi County
ii. To establish the kind of support accorded to ECDE teachers by Ministry of Education and delivering of public ECDE centers programs in Nandi County
iii. To find out the extent to which devolution has enhanced infrastructure development in ECDE centers in Nandi County.
iv. To establish the extent of availability of instructional materials influence delivering of public ECDE centers programs in Nandi County
v. To identify the strategies put in place by the county government to motivate teachers in order to improve service delivery in ECDE centers in Nandi County.

1.6 Research Questions

To meet the said objectives, the study was guided by the following research questions:

i. How is the status of teacher adequacy influence delivery of public ECDE centers programs in Nandi County?
ii. What kind of support is accorded to ECDE teachers by Ministry of Education influencing delivery of public ECDE centers programs in Nandi County?
iii. To what extent does devolution enhance infrastructure development in ECDE centers in Nandi County?

iv. How the availability of instructional materials is influences the delivery of public ECDE centers programs in Nandi County?

v. What strategies has the county government put in place to motivate teachers in order to improve service delivery in ECDE centers in Nandi County?

1.7 Significance of the Study

The study was designed to provide information that was useful to the county government and the entire DICECE office in Nandi County particularly on the actual benefits on pupils' access to ECDE services. The MOE may use the findings of this study in the policy formulation regarding funding of the ECDE centers in the county. The findings of the study may help to identify priority areas that need more funding in ECDE centers. The study findings might also help parents as stakeholders in education to understand the role of both the national government and county government in development of ECDE programs. The findings may also benefit future researchers by providing data on which future studies regarding capitation grants funding in ECDE centers in Kenya may be based.

1.8 Assumptions, Scope, Limitations and Delimitations

1.8.1 Assumptions

This study was undertaken based on the following assumptions:

(i) ECDE service provision is of uttermost importance towards county development.

(ii) Information given by head teachers, ECDE teachers and the DICECE officer were accurate and a true reflection on the devolution.

(iii) All the respondents co-operated and answered all questions as per the research.

1.8.2 Scope of the Study

The study was carried out in selected ECDE centers in Nandi County. The county has 797 ECDE centers (MOEST, 2015). The study determined the challenges facing devolution of Early Childhood Education Programs in Nandi County, Kenya. The study variables were; status of teacher adequacy, the kind of support accorded to ECDE teachers by Ministry of Education, the extent to which devolution has enhanced infrastructure development, extent of availability of instructional materials and the strategies put in place by the county government to motivate teachers in order to improve service delivery. The study adopted descriptive survey design. The target respondents were County Director ECDE, 6 sub-county directors of ECDE, Head teachers, and ECDE teachers. The study was carried out from September 2017 to September 2018.

1.8.3 Limitations of the Study

The information was collected the way it was at that particular time. It is possible that the information could have been different at other times. The research was based on the information given by the DICECE program Officer, head teachers and the ECDE teachers and their own opinions. The study was limited to selected ECDE centers in Nandi County and the findings may not be generalized to other counties in Kenya. The sample of the study may not give adequate and reliable results thus it may not reflect the real situation in other counties.

1.8.4 Delimitations of the Study

The study was conducted in ECDE centers in Nandi County only. The findings of this study were limited to ECDE centers in the area and will not necessarily be generalizable to all the ECDE centers in other counties since the management systems in those institutions may be significantly different. The findings may not necessarily reflect what

goes on in other counties or Sub-Counties since their context with respect to the influence of service provision in ECDE centers may also be significantly different from the one in other counties in Kenya. The study was conducted over a three months period that comprises a school term. The target population for the study that comprises the ECDE teachers and the head teachers are accessible during days of the school term.

1.9 Theoretical Framework

This study was guided by the Systems Theory by William and Edward (1903) as cited by Von Bertalanffy (2013) which postulates that a system has interrelationships that exist between all elements and constituents of society. The essential factors in public problems, issues, policies, and programs must always be considered and evaluated as interdependent components of a total system. The systems theory refers to the science of systems that resulted from Von Bertalanffy's (2013) General systems Theory (GST) among others, in initiating what became a project of systems research and practice. It is composed of regularly interacting or interrelating groups of activities for example in noting the influence in organizational psychology as the field evolved from "an individually oriented industrial psychology to a system and developmentally oriented organizational psychology" (William & Edward, 1903).

In systems theory, it was recognized that organizations are complex social systems, which indicates that reducing the part from the whole reduces the overall effectiveness of organizations. Any institution such as a school puts procedures and structures in place so that it can operate. Schools operate as systems in that they interact the various sub-sections that are geared towards providing ultimate success in its functions. Its primary

connotation is it's interrelatedness of parts which are linked to each other. These parts include the various subject-panels, teachers, pupils, parents, the entire community, and the surrounding environment. All units when put together work for a common goal of providing quality education.

The provision of instructional materials depends on how the various parts of the system have been utilized. The schools and the community will always consult in order to access these vital materials from the surrounding environment in terms of procuring, improvising or utilizing the locally available ones .It is important for schools to note that while undertaking the task of providing these essential materials care must be taken so that the procurement process may not be a barrier to the substantial provision of these vital materials which are paramount if learning is to take place.

This systems theory was adopted in this study because schools are systems in which there are inputs which undergo a process to produce quality outputs. Inputs are energy imports that sustain the system. The inner system [school] has the following Inputs teachers, classrooms, good leadership styles, Instructional Materials among others.

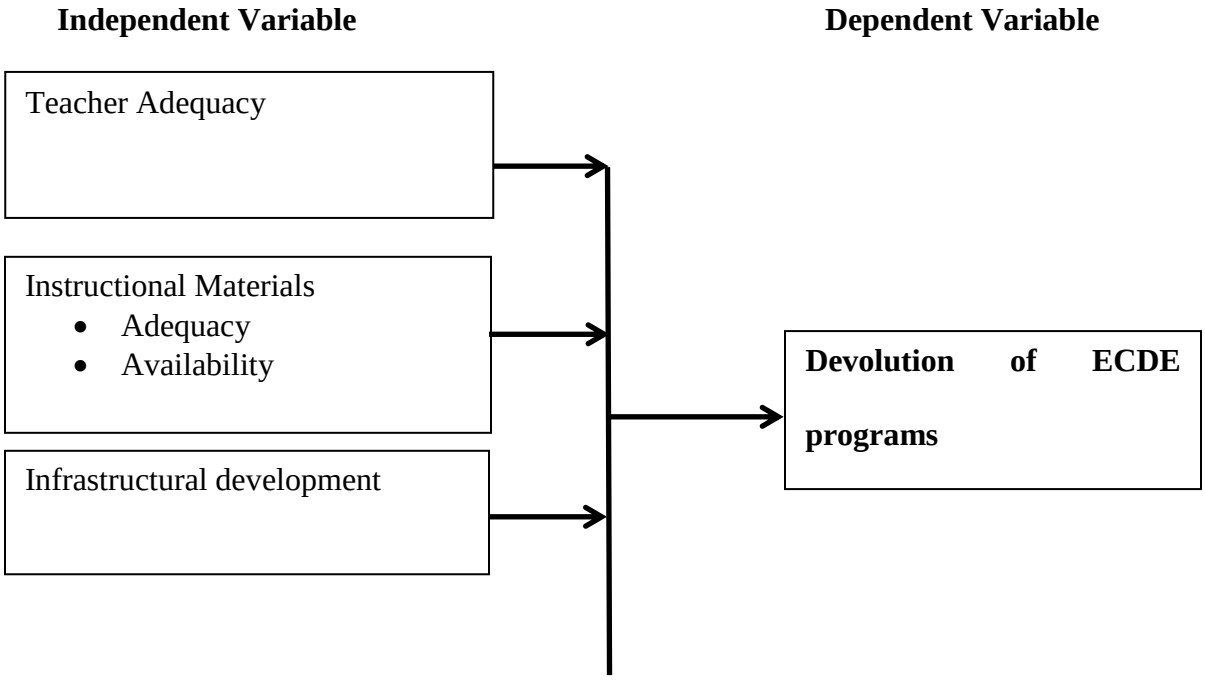
Through inputs, the system's part transforms the material. Instructional Materials in this case was seen as an example of such materials. The transformation process is dependent on the quality of the inputs. If the inputs for example instructional material is poorly procured the transformation will not be effective and therefore the desired outputs may not be achieved. In this respect the procurement of it in a school organization is viewed as an input into the school system. When the input (Instructional Materials) is processed

through the instructional process, it yields to an output in form of quality delivery of instruction.

This is an indicator of how organizational interdependence of activities works in a way which seeks to explain "synergy" and interdependence in the system. Parts are arranged in a manner that produces a unified whole (Robbins & Coulter, 1999). It is therefore, evident that for a system to function all units must work together in order to realize the set objectives.

1.10 Conceptual Framework

A conceptual framework is a scheme of concepts or variables which the researcher utilizes in order to achieve set objectives (Oso & Onen, 2008). Basically, it is a diagrammatic presentation of a theory. In the study the Dependent variable was the Strategies used to motivate teachers, provision of school infrastructure, availability of instructional materials and teachers' adequacy. The study conceptualized how devolution can result into effective service provision in ECDE centers.



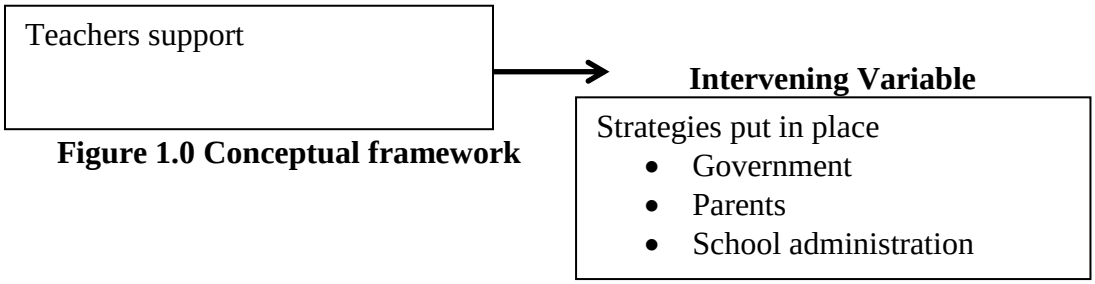


Figure 1.0 Conceptual framework

As shown in Figure 1.1 the independent variables were expected to have a direct impact on the quality of devolved service which is the dependent variable. However, there are some intervening variables which include administration capacity, management capacity and support services. An effective devolved service will lead to effective provision of service delivery. There are various strategies that the County government can adopt to improve teacher motivation in the County with the inception of devolution. Devolution of education in Kenya if adequately implemented will considerably facilitate the provision of infrastructure to ECDE centers and improve service provision in the ECDE centers. Shortage of number of teachers considerably affects the quality of education in Kenya; with the adoption of devolution there is considerable increase in student teacher ratio which can favorably improve the teaching quality in ECDE centers.

1.11 Operational Definitions of Key Terms

Devolution Refers to the statutory granting of powers from the central government of a sovereign state to governments at a subnational level, such as county.

Infrastructure It is the basic physical and organizational structures and facilities (ECDE centers buildings) needed for learning and teaching of ECDE.

Instructional materials According to this study, these are educational resources used to improve learners' knowledge, abilities, and skills, to monitor their assimilation of information, and to contribute to their overall performance of learners in ECDE centers.

Perception Organization, identification, and interpretation of sensory information in order to represent and understand the presented information, or the environment

Service Decentralization In this study this refers to the transfer of authority or the distribution of education from the central or national level to the sub- national or lower levels to the agents.

Service Provision The act of performing a task for the school that wants or requires it in exchange for acceptable compensation.

Teacher Adequacy According to Ministry of Education, Science and Technology (2011) teacher adequacy is the number of teachers that can

conveniently handle a given number of pupils. It is measured in terms of a ratio. In this study, a ratio of 35: 1 was regarded as adequate as outlined in this study.

Teacher Effectiveness Used to refer to the ability of a teacher to produce desirable results, thus, a class means score of above average which is in the national examinations. Teacher effectiveness was taken to be mainly determined by Parents Teacher Ratio and the number of lessons per teacher per week.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter deals with literature review which examines challenges influencing devolution of Early Childhood Education programs in Nandi County, Kenya, summary of literature review done on this topic of study. The literature was reviewed as per the objectives of the study. The aspects that were examined in this chapter included; assessment of teacher adequacy in public ECDE centers, extend to which devolution has enhanced infrastructure development in ECDE centers, support accorded to ECDE teachers, availability of instructional materials in ECDE centers and strategies put in place by the county government to motivate teachers finally the theoretical framework and Conceptual Framework.

2.2 Early Childhood Education

According to Rural Education Action Program, (REAP) 2011), Early Childhood Education (ECE), implies; the exposure of education by learners during the early stage of their childhood. Pre-school Education is also considered to be a major input into a learners' formal education. Bilateral and multilateral partnerships in development have supported pre-school programs through capacity building, technical support, resource mobilization and advocacy including funding of the early childhood education programs via the Ministry of Education. One such example includes World Bank's community support through infrastructural improvement of ECDE centers in Kenya and especially in marginalized areas; this in turn has impacted positively on the quality of education in

those areas as well as enhanced non-governmental participation in education improvement (RoK, 2007).

The Government of Kenya has confirmed obligation to the wellbeing of pre-school learners by committing itself to different international policy declarations. These declarations include United Nations Conventions on the Rights of the Child (CRC), the African charter on the rights and welfare of the child, Millennium Development Goals (MDGs) and the sustainable development goals (SDGs). Moreover, Kenya has contributed and recognized the deliberations of 1990 Jomtien World Conference on Education for All (EFA), the Dakar World Education Forum. The Jomtien and Dakar conferences emphasized on the importance of ECDE programs in enhancing an all-inclusive growth of learners. Besides, the government has additionally rendered all these global strategies into country wide goals to be executed at the District level (RoK, 2006).

Early childhood education is gradually more recognized as the critical period to arouse child development and thus improve chances to do well in later schooling and the labor market (Healy, 2011). It is also evident that Public investments in early childhood education provisions are expected to increase considerable social returns to the graduates (Dickens, Sawhill, & Tebbs, 2006). In addition, quality early childhood development experiences contribute to more dynamic human resources because children who are exposed to such experiences have better success in school as opposed to those with limited exposure hence grow and are able to access better paying jobs when they enter the job market. Such adults have higher living standards a by- product traced to interventions into the system to support early childhood education (RoK, 2006).

Early Childhood Development and Education (ECDE) have been defined in different contextual ways. It has universally been defined as the period from birth (or prenatal) to eight years old (UNESCO, 2010). Early childhood development and education (ECDE) relates to how well a child is tracking in their education over this period. It looks at the physical health and wellbeing including the social competence, emotional maturity, language and cognitive skills communication skills and general knowledge (International Labor Organization (ILO, 2012). The importance of ECDE to the global community prompted the convention of the World Conference on Education for All (EFA) that took place in Jomtien, Thailand, in March 1990 (UNICEF, 2008). The conference articulated the significance of the early years as the foundation for the life of an individual (UNESCO, 2010). Further, the Dakar Convention of 2000 recognizes ECDE as number one objective in Education for All (EFA) goal by 2015 (UNICEF, 2008). The spirits of the two conventions called for policy formulations to entrench ECDE as a basic human right of the child.

One of the first early childhood education initiatives in the United States was the Head Start program, started in 1965 (O'Sullivan, 2013). Head Start is a federal government education initiative that provided children from low-income family's free access to early education. It targets children of low socioeconomic status or those who qualify in some at-risk category. Head Start programs are funded by the federal Department of Health and Human Services (Roopnarine & Johnson, 2013). Teaching is acknowledged as a "complex activity that requires a myriad of knowledge, skills and capabilities" (Loughran, 2013). In Europe, pre-schools were created to provide humanitarian services related to health and welfare to children from poor families and those affected by war and

slum conditions (Moyo, Wadesango & Kurebwa, 2012). However, though created for the poor, the middle-class hijacked pre-school education by taking their children to these pre-schools in most countries except in France and Belgium. As a result, the provision to the poor diminished, thus affecting access to ECE negatively. This change of focus also affected the curriculum with a shift from concern for welfare to that of health, education and creative expression based on the Frobel, an idea of play (Bruce, 2011).

2.3 The Concept of ECD Programs Implementation in Kenya

Historical development of early childhood development education dates back to the ages of Aristotle. From the global perspective, Plato 428 and Aristotle 384 – 322 BC were great Greek philosophers who wrote about children's development. Both of them recognized the importance of beginning education with young children. Postman, (2011) specifically found that, if we educated children as early as possible we would have "Good Citizens". They considered human beings as good and they emphasized the development of the children's mind and body so that they could create a society in which good people followed "good laws" (Sifuna & Otiende, 2007 cite by Kanga, 2011).

In Europe before the turn of the century, nursery education program for the under-five in most countries remained poor, as it continued to be incorporated in the general elementary schools, except for a number of schools started by individuals mainly inspired by foreign educationists like Frobel and Pestalozzi (Kanga, 2011). The development of pre-school in Europe, and America was greatly influenced by the need to provide health, welfare and care of poor children from war and slum conditions (World Bank, 2014). In United States of America (USA) ECDE covers 0 – 8 years. Previously, in USA, they had

to cover from 0_5 years but changed later because of various reasons: According to research findings, significant developmental changes in children's intellectual, social and physical powers occur around 7 – 8 years more than when they are 5 years old. This brought about increase in actual number of children who were enrolled in Early Childhood Education (ECDE) after finding out that ECDE had long term benefits specially children from poor environment. So, in USA, they started a program known as Head Start. This was a program which sought to ensure that children were familiar with concepts they were supposed to have when they began schooling. For example, children from good environment knew something about computers than those from poor environment. So, they could be helped to know these fundamental actions and computers. When they did this, they found that the children from poor environment did the same as children from good environment (UNICEF, 2010).

Early childhood education program implementation in Kenya has a long history. Although in Kenya and Africa, institutionalized pre-school education is relatively a new phenomenon in general. Early Childhood Education (ECDE) itself was not a new phenomenon in our society. In the Kenyan traditional societies, children in ECD receive adequate care, stimulation and socialization from parents and other community members. Intellectual needs were also met through stories, riddles and games just to mention but a few. Institutionalization of preschool education is a byproduct of colonization (Kenya Institute of Education, 1992; UNICEF, 2009). As a colony many changes happened in the social, cultural and economic set up of communities that affected the way children were socialized giving birth to institutionalized pre-school education. The forces that

influenced the commencement and development of ECDE in Kenya to its current status trace its roots in the colonial period.

The first organized pre-school education movement was in the early 1940's in urban areas of Kenya to cater for Europeans and Asians living in the urban areas. The colonial administration established pre-school institutions in the urban centers where there was heavy concentration of European and Asian population to specifically serve these communities. The first pre-schools for African children can be traced back in the urban areas in African settlements (Republic of Kenya, 2009). This was mainly as a result of the effects of the 2nd world war.

The Africans who were involved in the war in other parts of the world came in touch with European brand of education. When the war was over and they came back to Kenya they had high educational aspirations for their children and hence copied their educational models including pre-school education. The mental attitudes of the Europeans and Africans towards each other were greatly changed by the war. This psychological effect also encouraged Africans to have a greater demand for education. The economic boom created by the World War II meant that many people flocked in the towns from the countryside to take up new jobs. This created bigger urban areas and hence the Africans copied pre-school models from the Europeans and Asians in their respective urban settlements and plantations (Republic of Kenya, 2011).

In the rural areas, the first preschools catered mainly for under-fives and emerged in the mid 1950's. These centers initially started as feeding centers in restriction camps and emergency villages between 1952 and 1957 in areas affected by the emergency especially

in central and eastern Kenya during the freedom fighters' movement war known as the Mau Mau. These centers were never meant to be schools. They were to provide custodial care for children while their parents were engaged in forced communal labor. In most of the villages, missionaries provided milk and medical checkup and treatment of the children. To pass time the children spent most of the day on play and other socialization activities. The centers became an important vehicle for ensuring improved health and nutritional status of many children. From this humble beginning the pre-school movement gradually spread to other parts of the country (Republic of Kenya, 2013).

According to Ocholla, (2009), the main objective of pre-primary education in Kenya presently is to provide an all-round or integrated development of the child from birth to the age of entry to the primary school. This source also asserts that "all-round" or integrated development in this case means nurturing the whole personality of the child encompassing the growth of the child's physical, mental, cognitive, emotional, spiritual and sociological attributes. To realize the main objectives of pre-primary education, MoE developed curriculum guidelines at the national level that allows early childhood care and education (ECDE) to address the natural cultural, and socioeconomic activities of each area (World Bank, 2009).

2.4 Relevance of Early Childhood Education to Development

World over, there is an increasing recognition of the importance of ECE, as this sets the basis for learning, behavior and health through the school years and into adult life. The short and long-term benefits of ECE programs for children are enormous and cannot be over emphasized. As alluded by Young (2002), the benefits have been noted across the

board by educators, socialists, behavioral scientists, economists, neuroscientists, biologists and even politicians. Sameroff, (2009) observed that by providing basic health care, adequate nutrition, nurturing and stimulation in a caring environment, it helps to ensure children's progress in primary school, continuation through secondary school, and successful entry into the work force.

Early childhood education aims at caring and nursing all dimension of the life of young children to enhance holistic development. The early years of zero to six years are important in laying the foundation for adulthood. Therefore, it’s of great importance that all the stakeholders concerned should treat this without any hitch. Hirst, Jewis, Sojo and Cavagh (2011) contend that early childhood education is of great value to all children and should be available to all. They argue that preschool provides a sound basis for learning and helps to develop skills, knowledge, personal competence and confidence and a sense of social responsibility. Therefore, every child should have access to early childhood education of good quality. He noted that there is a wide range of positive development and experiences in several countries, including increasing participating, and professional development of teachers to enhance increased enrolment and transition rate. However, the rates are quite slow.

Children who participate in pre-school are more likely to enroll and remain in primary school and achieve better results than those who cannot access comprehensive early childhood care (UNICEF, 2009). Further, early gains in school readiness due to early childhood education have been shown to have enormous positive economic and social impacts lasting well into adulthood, from higher educational attainment and less chance

of involvement in criminal activity, to higher status employment and higher earnings (Schweinhart, 2007).

Duncan, Brooks-Gunn (1994) found that access to quality ECD interventions can improve education outcomes by reducing repetition and drop-out rates, improving learning outcomes, and increasing school achievement. In their submission, Oduolowu and Olowe (2011) noted that the early years of children are years of extreme vulnerability and tremendous potentials, during which adequate protection, care and stimulation are essential to provide the foundation for well-being and development. In providing this foundation during the early years, Early Childhood Education (ECE) becomes a key actor. Generally, ECE is aimed at promoting holistic development of children from birth to age 8. According to Olowe, Kutelu, and Majebi (2014), ECE is any group program that is designed to promote children's intellectual development, socio-emotional development, language development, physical development and learning from birth to age 8. Sooter (2013) agreed with Viatonu et al., (2011) by stating the aims of ECE to include fostering proper development of children, identifying and addressing their problems, harnessing their potentials, molding their characters, enhancing their learning and equipping them for life so that their actions are channeled towards positive personal, communal and global development. It is pertinent to note that all ECE activities and programs are geared towards giving positive early experiences to children. This further underscores the importance of early years.

School readiness for children is affected by a number of factors, including cognitive skills, physical, mental and emotional health, as well as their ability to relate to others

(Young 2008). Research also indicates that cognitive abilities are strongly affected by the quality of the environment and amount of stimulation and learning opportunities children are exposed to from birth (Osho, Aliyu, Okolie & Onifade, 2013).

Research findings by Education for All (EFA) Global Monitoring Report of 2007 indicate that ECDE is still not a priority in most of the developing countries like Kenya, although the governments have realized the value of such programs. This state is attributed to slow response to social and economic trends, and to the role of the family and the state in the implementation and management of ECDE projects (Muganga, 2013).

A study carried by Kanga (2011) at Nairobi slums showed that, in over the 191 public ECD projects had been implemented across the slums of Baba Dogo, Dandora, Fuata Nyayo, Gatwekera, Huruma, Kambi Muru, Kangemi, Kawangware, Kiambiu, Kianda, Kibera, Kichinjio, Kisumu Ndogo, Korogocho, and Laini Saba. The report further showed that as much as the government has always invested in EDE centers, those efforts are still very little as compared to those made by the private sector in ECD projects implementation in the Kenya's capital, the public ECD programs in the slums have suffered a great deal.

Research shows that there are large gains to be had from investing in early childhood development. For example, estimates place the gains from the elimination of malnutrition at 1 to 2 percentage points of gross domestic product (GDP) annually (World Bank, 2006). Analysis of results from OECD's 2009 Program of International Student Assessment (PISA) reveals that school systems that have a 10 percentage-point advantage in the proportion of students who have attended preprimary school score an

average of 12 points higher in the PISA reading assessment (OECD and Statistics Canada, 2011). Also, a simulation model of the potential long-term economic effects of increasing preschool enrollment to 25 percent or 50 percent in every low-income and middle-income country showed a benefit-to-cost ratio ranging from 6.4 to 17.6, depending on the preschool enrollment rate and the discount rate used (Lancet, 2011).

Yet despite all the evidence on the benefits of ECD, no country in the developing world can boast of comprehensive programs that reach all children, and unfortunately many fall far short. Programs catering to the very young are typically operated at small scale and usually through external donors or NGOs, but these too remain limited. For example, a recent study found that the World Bank made only $2.1 billion of investments in ECD in the last 10 years, equivalent to just a little over 3 percent of the overall portfolio of the human development network, which totals some $60 billion (Sayre et al., 2013).

Wangechi, (2012), states that the Early Childhood Development and Education (ECDE) make a positive contribution to a child's long-term development and learning. It facilitates an enabling and stimulating environment in foundation stages of lifelong learning. A shaky foundation subsequently affects the child's opportunity for holistic learning and growth. She asserts that Early Childhood Development (ECD) refers to the care, development, and learning of young children of ages 0 to 5 years and consists of the following major services: Nursery School, Pre-Unit Class, Kindergarten, Day Nursery, Playgroup, Madrassa, and Home-Based Care Centers. Elliot, (2006), in his article "pathways to the quality and equity for all children", states that the early years to children's life are essential without any question. A good beginning to Elliot is well

recognized as the foundation for future development, health and well-being not only in early years but throughout life.

In East Africa governments have long recognized the importance of ECDE for later school success, although programs have largely been funded not by governments but by local non-governmental organizations (NGOs) and International charitable agencies. Go (2012), also brings out the essence of early years of the child. According to the world conference on Education for All (EFA) that took place in Jomtien, Thailand, in March 1990, early years are significant as a foundation for the life of an individual. The deliberation has been upheld by research on brain development especially (Shore, 2013; Mustard, 2013; O'Donnell, 2013; Stephen, 2014), which stresses that the six years of life are extremely important. This is because the environmental experiences during this period are significant in influencing one's life.

According to Manoj (2011) in spite of the great importance ECDE has on the child, there have been challenges that to some extent have crippled this kind of education. This could be negatively affecting the child. The major challenges that were identified in this study are human resource capacity, resource support monitoring and evaluation (M & E) and other challenges of the policy's implementation. However, the current study investigated challenges facing the devolution of early childhood education programs in Nandi County, Kenya.

2.5 Devolution of Education

In many countries, early childhood education is undergoing various reforms. The aim of early childhood education and care is to provide developmental support and care for

children in their formative years so that they can acquire the skills necessary for future learning and success in school (Boakye-Boaten, 2010). This success is expected to benefit the social and economic development of society at large. Although Africa has undergone remarkable transformations since its contact with Europeans and other foreign cultural elements, the promotion of universal access to quality early childhood education and care remains a significant challenge for educators and policymakers in Africa. Boakye-Boaten (2010) provides insights into how Africa emerged from this contact with a "bruised cultural identity" that has impacted heavily on child development in Africa. Furthermore, Kolb (2014) illuminates the important role of mothers in children's education and claims that this role is undergoing significant shifts in Africa in contemporary times.

On one hand Serpel (2011) and Pence (2011) all discuss the changing view of childhood in Africa by pointing to significant gains in the recognition of children's rights. One major obstacle to children's welfare and education is poverty. Commenting on this, Hickman, (2014) argues that governments must reduce poverty among households and eradicate other forms of violence against children if early childhood education is to make a meaningful impact in Africa. Additionally, Pence and Shafer (2006) focuses on the use of indigenous knowledge in the development of early childhood policy and practices. Through the examination of the Early Childhood Development Virtual University (ECDVU) program, which provides distance education capacity-building programs in Africa, the authors described the generative curriculum model in which students contribute to the learning process by infusing indigenous knowledge and practices into

the curriculum. Ng'asike (2014) notes that effective early childhood education should incorporate childhood contexts in light of rights-based approaches.

The advent of the new constitution in Kenya changed the way government operations are handled. It led to the creation of two tiers of government, national and county governments. This brought about decentralization of some of the functions previously performed by central government to county governments intended to ensure effective and efficient service delivery at county level. This is done through decentralization of operations of these functions. Previously, functions were performed from a centralized focus, with delegation to provincial level as the only way central government ensured services were performed at local levels. Distribution of these functions between the two levels of governments is guaranteed in the Constitution of Kenya 2010 Fourth Schedule (Muriu, et al. 2013).

Decentralization of functions gives the county governments and their agencies the responsibility of performing the operational activities of each function to ensure services are delivered in the areas of their jurisdictions (Lubale, 2012). They have a responsibility to ensure policies formulated by national government are implemented as required, to ensure services are delivered to the benefit of its citizens (Muriu, et al 2013). According to Muriu (2012), Performance of decentralized services by county governments can be measured by indicators of locative efficiency, accountability and reduction of corruption, and equity in service delivery. Allocative efficiency is the extent to which the services delivered match the preferences of the citizens. It is assessed by the extent to which citizen's needs expressed in proposals are reflected in the decisions and final services

provided. Accountability is the practice where service delivery agents make public and are responsible for their actions. In this case it is the extent to which officials of the county government give account to the citizens on the resources at their disposal and how they have been used in service delivery. Reduction of corruption is the extent to which abuse and misuse of public resources for private gain has been controlled and minimized. Equity has to do with geographical and demographic targeting of services especially to most needy groups in the society. This includes targeting the poor and marginalized who have previously been ignored (Muriu, 2012).

Educational decentralization divides school system into smaller units, but the focus of power and authority remains in a single central administration and board of education (Elcock, 2013). In most of the countries where education was decentralized, curriculum and testing remained centralized practically whereas functions such as the selection of teachers, textbooks, and other instructional materials, and facility construction and maintenance, are being left increasingly to school (Bryk, 2018). The success or failure of any form of decentralization in education depends upon its successful implementation (DuFour, & Marzano, 2011).

According to USAID (2006) educational decentralization takes three principle forms. The first is DE concentration in which there is reallocation of decision making within education ministry and bureaucracy. The second one is delegation or school autonomy, which is the administrative or legal transfer of responsibilities to elected or appointed school management committees, and school governing boards. The third, devolution, when there is a permanent transfer of decision making responsibilities in education from

central government to lower level of government: province municipalities or districts. Devolution of authority to local government occurs when a government of central authority hands power to local government to make certain kinds of decisions regarding spending, staffing and education content (curriculum testing) which is being done by the formal agreement in a manner which suggest a measure of irreversibility such as may occur with the change in constitution (DuFour, & Marzano, 2011). It is assumed that education controlled by local governments have better knowledge of the idiosyncratic preferences of the area regarding students, teachers and schools and the decision made as close as possible to the site of their implementation as the best and the most relevant information is brought to bear on them. They are in a better position to allocate funds and watch the production of outcomes more closely.

Many countries in the world including developed and developing countries have devolved educational service by adapting different forms by moving responsibility from the Ministry of Education headquarters to ministry offices at the County levels. In most cases, different forms are used by practicing different aspects in accordance with their objectives. The central Education Ministry retains the responsibilities of policy and curriculum development. However, in most cases, these structures receive grants from state governments thus limiting their autonomy. In some cases, they raise their own resources through various activities to supplement central governments or state grants. This research intends to find out how devolution has contributed to service provision in ECDE centers. This study investigated the challenges influencing the devolution of ECDE programs in Nandi County, Kenya.

As governments grapple with the goal of achieving universal access to ECDE by 2030, parallels to the universal primary education (UPE) movement in the late 1990s are instructive. That movement did not sufficiently engage decentralized governments to devise local solutions that would increase access while also improving quality. Thus, some countries, such as Kenya and Ethiopia, are now combining two efforts concerning ECDE: decentralization of authority and funding to local governments, and the development of guidelines to ensure high-quality implementation.

With the global expansion of ECDE services, researchers who focus on quality improvements have begun to apply approaches from education systems research to preprimary education (Powers, 2016). Rossiter (2016) summarized the consensus of international literature on six elements of high-quality ECDE at the system level. The elements are equitable and inclusive access, curriculum, plus teaching and learning materials, teachers and school leaders, parental and community support and engagement, standards, monitoring, and learning and systems, financing, management, and leadership (Rossiter, 2016).

Countries with scarce education resources and limited capacity struggle to manage all six of these elements of quality and have taken various governance approaches to do so (Rossiter, 2016). More specifically, local education systems often have limited financial resources and lack qualified technical personnel to implement decentralized ECDE. Utilizing the Rossiter (2016) framework allows those interested in the impact of decentralization on education quality to examine it systematically.

2.5.1 Decentralized ECDE in Ethiopia

The Federal Democratic Republic of Ethiopia is a geographically large and populous country of more than 100 million people, governed through a federal system. Ethiopia's federal government develops policies while nine regional governments and two city administrations implement them. Funding for the ECDE subsector is included in a block grant to the regional level, and regional governments decide how to use that funding in the context of scarce resources in other education subsectors. Recent research has examined the implementation of Ethiopia's decentralized ECDE policy (Woodhead, Rossiter, Dawes, & Pankhurst, 2017). The national-level sector plan for education, called the Education Sector Development Program (ESDP) V (Federal Ministry of Education, Ethiopia, 2015) has ambitious objectives for expanding access to preprimary education (called "O class"). The plan calls for ECDE enrollment of 4- to 6-year-olds to increase from 35% of the eligible population in 2015 to 80% by 2020. Given Ethiopia's decentralized governance structure, the ESDP V does not give detailed instructions on how to achieve those objectives to the Regional State Education Bureaus (RSEBs) that implement the policy. The lack of detailed implementation guidance makes sense given the wide range of regional structures in Ethiopia; for example, Oromia region alone is geographically larger than many entire sub-Saharan African countries, while Harare region encompasses not much more than the town of Harare.

Woodhead et al., (2017) concluded that the key factors influencing RSEBs' ability to operationalize the guidance from the national sector plan depended on (a) their preparedness to deliver ECDE (i.e., their skills, training, attitudes, and support from the educational apparatus above); (b) their past, present, and future plans for ECDE; (c) their

training, deployment, remuneration, and supervision processes for ECDE teachers; and (d) the available standards and current resourcing levels available for ECDE classrooms, which in turn depend on the regional allocations of the block grant funding. They also noted that all RSEBs faced the same constraints: no budget initially allocated for ECDE services, shortage of qualified personnel, little federal guidance on implementation standards, modest financial and human resources available for monitoring and supervision of ECDE quality, and a scarcity of trained teachers available to teach O class, particularly in the more remote regions.

2.5.2 Decentralized Management of ECDE in China

China faces challenges in terms of inequitable access to ECDE services and variable ECDE quality throughout the country. In China, local governments are responsible for funding and managing preprimary education. This decentralized system of finance has allocated the heaviest financial burdens to the lowest levels of government, particularly county governments in rural areas, and district government in municipalities (Wu, Young, & Cai, 2012), which have the fewest available resources to pay for quality ECDE (Zhou, Sun, & Lee, 2017).

China’s dependence on local (municipal or provincial) resources for ECDE provision has led to worsening regional disparities in both access and quality. For example, in Shanghai, the municipal government allocated nearly 8% of its education budget to the preprimary level, which reached an enrollment rate of 98% of 3- to 6-year-old children (Feng, 2017). However, poorer and more rural regions and municipalities, such as Zhejiang, devoted much less of their public funds to preprimary education, and, as a result, 80% of services came from private, fee-bearing kindergartens, which placed

lower-income families at a disadvantage (Feng, 2017). Feng (2017) also argued that, in China, with the devolution of responsibility to provincial governments, the central government did not exert sufficient control in terms of regulating the development of preschool education across provinces, among different regions in a province, and between urban and rural areas.

The Chinese and Ethiopian examples show that decentralization can have positive and negative effects. On the one hand, local governments can seize the opportunity to innovate, as some Ethiopian regions have done. However, without sufficient ECDE-related capacity at the local-government level, innovation is unlikely. On the other hand, depending fully on local financing for ECDE provision, as in China, may increase inequality because poorer areas may devote fewer resources to preprimary education, thereby limiting poor households' access to high-quality, low-cost services (Feng, 2017; Zhou et al., 2017).

2.5.3 Decentralized ECDE in South Africa

South Africa formally established a preprimary or "reception year," Grade R, as an integral part of its public primary school system in 2001, and steadily increased ECDE enrollment by 11 percentage points per year from 2001 through 2008 (Biersteker, 2010). By 2013, South Africa's statistics showed that an impressive 94% of Grade 1 learners had attended Grade R (Department of Planning, Monitoring, and Evaluation, Republic of South Africa, 2014).

Unfortunately, this rapid expansion of free grade R in public primary schools severely harmed the community-based providers that charged fees. These community-based

providers were an important option for many families because they provided a full day of care, whereas the public Grade R provided only half a day (Garcia, Pence, & Evans, 2008). Of additional concern was that results from early grade reading assessments in South Africa during this period of expanding ECDE access showed very low basic skills for children entering Grade 1 (Piper, 2009). This suggests that the cost of diminished quality due to the rapid expansion of ECDE might have been similar to the financial cost of the expansion.

2.5.4 Decentralized ECDE in Zimbabwe

Zimbabwe took a different approach to rapidly expanding ECDE services in the country. Before 2003, all ECDE services in Zimbabwe were provided by local authorities, private organizations, nongovernmental organizations (NGOs), and religious organizations rather than by the Ministry of Education. The Ministry's role was setting policy guidelines for the entities that provided ECDE services (Mangwaya, Blignaut, & Pillay, 2016). Those policy guidelines were not accompanied by systems to oversee the quality of the implementation (Mangwaya et al., 2016). Quality of ECDE was therefore variable, and access was limited to wealthier households, primarily in urban areas.

Recognizing the need for more uniformity, oversight, and greater access to ECDE services throughout the country, the Ministry of Education undertook a policy revision in 2004. The government of Zimbabwe issued a new policy that all primary schools should open at least two preprimary ("grade 0") classes in 2004, even though the formal primary education system had previously played no role in ECDE provision. Mangwaya et al.'s (2016) qualitative study examined the implementation of this new policy and the obstacles encountered in the provision of ECDE at the school level. The study concluded

that although classroom teachers were adequately qualified to implement ECDE, school heads were not prepared to support teachers' implementation of ECDE. The researchers also found that insufficient teaching and learning resources and a lack of ongoing teacher support contributed to low-quality ECDE provision (Mangwaya et al., 2016). The Zimbabwe case appears to be one in which the decentralization of ECDE was not sufficiently integrated with the additional financial and technical resources required to provide high-quality ECDE.

2.6 Teachers Perception Devolution of ECDE Programs

Perceptions are mental super positions that express the connections between situations. As defined by Bell (1980) it is a mental and neural state of readiness organized through experience exerting a directive or dynamic influence upon the individual's response to all objects and situations with which is related. Ryan and Cooper (1984) emphasize that there are four major types of the teacher's perception that affect teaching behavior. They are perception towards self, attitude towards children, attitudes towards peer and parents and attitudes towards the subject matter. The belief that teachers' behaviors influence their level of instructions in the classroom is for this reason that Pajares (1992) suggested that teacher beliefs should be the focus of educational inquiry in order to improve the professional preparation of teachers. Because research suggests that devolution should be achieved through teacher-centered approaches and it is important to investigate teachers' perception in the implementation of devolution activities.

What the teacher values students begin to value and on to motivation will have taken root (Eble, 1988). If the teacher therefore feels little enthusiasm or interest, this too shows

through and the students slows down. Positive perception to the teacher towards the devolution plays a positive role in causing the student to learn the system effectively and thus achieve the devolution of the ECDE programs. The teacher's perceptions are believed to be an important factor in determining the teaching and the deployment of the ECDE programs. Hence there is need to investigate the learners' achievement in relation to teachers` perception.

In 1967 Johnson noted that 'successful teacher observations are primarily used as a formative process – framed as a development tool creating perception and self-directed teacher learners as opposed to a high stakes evaluation or appraisal'. This indicates that if a teacher develops a positive perception towards devolution of ECDE programs, then the chances of liking the ECDE programs and performing in it are increased. Asogwa, Onu & Egbo, (2013) studied the relationship between perception and performance and concluded that the relationship between perception and performance is certainly the congruence of reciprocal influence in that, perception affects achievements and in turn affects attitude. Mwangi (1986) had similar findings when he found out that teacher's perception was being reflected in the students' performance.

Perception is another important aspect of devolution of the ECDE programs. Osborne (2003) describes perception toward education programmes as "feelings, beliefs, and values held about an object that may be enterprise of science, school science, the impact of education on society or scientist themselves" (p.1053). According to Ajzen and Fishbein, (1980 cited in Osborne, 2003) perceptions are enduring and they predict people's behavior. Therefore, positive perception towards ECDE programmers by the

teachers is a strong indicator of success to both the government and learners. It is important for teacher to have positive perception toward devolution of ECDE programmers because the teacher variable is the most significant factor in determining learners' attitude toward pursuing the ECDE programmes (Osborne, 2003). Therefore, the study focused on the teacher's perception in relation to the implementation of science activities in preschools.

Research studies indicate that teachers with negative perception toward devolution of ECDE programmes spend less time achieving the devolved activities and also use didactic approach rather than approaches that base on learns` active participation and explorations (Fulpo, 2002; Goodrum, Hackling, and Rennie, 2001; Harlen& Holroyd 1997; Varelas, Plotnick, Wink, Fan, & Harris, 2008; Weiss, 1997). This study investigated teachers' perceptions towards devolution of ECDE programmers. Investigating the perception of these teachers further would provide greater understanding of teachers' perception towards devolution of ECDE programmers. Hence, the focus of this study was to investigate teachers' perception towards devolution of ECDE programs in order to build a more in-depth knowledge. Pleasure in teaching and learning is the common ground necessary to sustain great teaching. If teachers develop similar interests to devolved ECDE programs as the learners, this positive attitude will bear fruits and impact powerful influence on motivation of students.

Owing to the fact that the criteria for advancement are primarily based on qualifications and years of service, both good and bad teachers are promoted together, further undermining motivation (Bennell & Akyeampong, 2007). Teachers often see their work in the classroom as a stepping stone, and desire to move on either to school

administration or another profession entirely. However, the current system provides few opportunities for advancement either within or outside of the classroom (Fanfani, 2004). When teachers do pursue their post-classroom ambitions, their independent study to increase their qualifications can lead to increased absenteeism (Methodological Guide for the Analysis of Teacher Issues, 2010).

2.7 Concept of Devolution of Early Childhood Education Program

According to Teguma, (2012), there are common challenges which developed countries face in enhancing the quality of ECE. These challenges include improving staff qualifications, education and competences, recruitment, professional development, staff evaluation and monitoring and working conditions and retention. Developing nations may have other challenges in addition to the above. These include lack of appropriate infrastructure, inadequate learning and teaching materials, long distances between schools and homes, illiteracy among parents and poor health conditions. Studies in developing countries by Teguma (2012) shows that Early Childhood Education (ECE) programs lead to higher levels of primary school enrolment and educational performance, which in turn positively affect employment opportunities later in life. On the contrary, children who start school late and lack the necessary skills to be able to learn constructively are more likely to fall behind or drop out of school completely, often perpetuating a cycle of poverty. Teguma (2012) argues that ECE lays the foundation for subsequent stages in life, such as better student performance, less poverty, more equitable outcomes, less dropouts and greater labor market success.

Several things have affected the teachers' capacity building in Kenya. Firstly, there is lack of Schemes of Service of ECDE teachers. There has been low and irregular remuneration of pre-school teachers thus adversely affecting the morale of the teachers. Several studies have been carried out and it has been discovered that teachers' motivation is hampered by low pay and benefits as well as lack of professional development avenues. This is according to (Makoti, 2013), (Gumo, 2013), in (Karanja & Githinji, 2011). Secondly, inadequacy of ECDE qualified teachers in Kenya is also to blame for lack of teacher capacity. The number of untrained teachers in ECDCs is still high at 56% in Public ECDE centers. Due to high rate of attrition because of poor pay packages, many pre-school teachers are still untrained and hence lack skills to enhance the holistic development and learning of children in preschool (Karanja & Githinji, 2011).

According to UNESCO (2004), teachers' remuneration is poor for majority of the teachers. The salary ranges between KES 500 and 18,000 per month based on urban-rural divide and who pays salaries. The private owners of ECDCs in major towns like Mombasa, Nairobi, Kisumu and Nakuru pay trained teachers with certificate or diploma an average of 10,000 per month. The municipal council teachers are paid salaries ranging from 13,000- 18000 per month. The teachers who teach in rural and slum-based, public and community get salaries that range from 500 to 3500 per month (Owala, Odongo & Raburu, 2016).

2.7.1 Teacher Adequacy in Pre-Schools

Teacher adequacy can compromise the quality of education (Boyd & Barbarin, 2008). To identify the adequacy of teachers in the learning environment, the student-teacher ratio

(STR) need to be determined. STR will tell whether an institution is having adequate teachers or not. The advantage of having low STR is reducing the number of students to be handled by a teacher in the classroom. This ensures the teacher's attention to the students and thus good academic performance. On the other hand, high STR will mean that a teacher will have to handle a large number of the students in the classroom at the same time. Students' academic performance is affected by the transfer of teachers from schools without replacements leading to lack of enough teachers' thus affecting teacher-student ratio (Wanyama, 2013).

UNESCO (2005) found out that teacher adequacy is a significant factor influencing students' academic performance This implies that when teachers are sufficiently supplied in quantity and quality, academic performance will improve and vice versa. Studies conducted elsewhere also confirm that teacher adequacy is critical in academic performance. Tyke and O'Brien (2002) argue that when schools are plagued by shortage of teachers due to increase in students' enrolment academic performance is normally affected and often poor results are reported. Equally, Klaus and Dolton (2008) observes that teacher inadequacy can affect students' academic performance. The study findings are in line with that of Mosha (2014) found out that most secondary school in Tanzania has inadequate teachers thus leading to their poor academic performance. Similarly, in Kenya, the ratio of children to teachers is also an issue because some programs have a 1 to 100 ratio (Soto & Swadener, 2002).

The effectiveness of teachers and their contribution in producing a high-quality education has been studied by many researchers. In those studies, researchers have focused on

teacher-student interaction as an important aspect of a good education and academic achievement (Graue, Rauscher & Sherfinski, 2009). Among such researchers, Hamre et al. (2007) and La Paro et al. (2004) viewed social and academic interaction between teachers and students as a crucial determinant of the academic success. The interaction between teachers and students is generally believed to be affected by characteristics of teachers and students. However, there are some other aspects that affect this interaction like the number of students per teacher in a school.

Number of students per teacher is generally associated with class size and it is mainly believed that smaller classes provide better teaching and learning environments. This belief has been shared by many countries like the USA, European countries, China, Japan, and many other countries and they made policies to reduce their class sizes (Blatchford & Lai, 2012). The average class size has been decreased in many countries; the decrease between 2000 and 2010 in lower secondary education class size has been quite high for some countries like 33.9% for Portugal, 27% for Spain, 20% for Japan, 17% for Korea, 13.2% for United States. Amongst the OECD countries, the average class size at the lower secondary level is 23. There are countries like Finland, Iceland, the UK with class sizes of 19 and lower and countries like Turkey, Korea and China with class sizes of 28, 34 and even 54 (OECD, 2012).

According to Nizamettin & Bekir (2014), small class size has an influence on academic achievement of children and there are many other studies showing the positive impacts of class size on students. Nevertheless, some researchers concluded that this academic achievement cannot solely be the result of the small class size. They suggest that number

of students in a classroom has an influence on the classroom process, course activities, students' engagement and consequently students' learning. Most of the ECDE centers in Kenya are faced with serious teacher shortages since the county governments have employed only a few teachers while others are still under the BOM of the primary schools.

2.7.2 Supervision of ECDE Programs

Quality control and monitoring is another important component of quality early childhood education provision against which effectiveness can be measured. The study by Matafwali & Munsaka (2011), however, revealed that there were no standard norms of practice for ECCD in Zambia, and that quality control and monitoring was non-existent. This was exacerbated by lack of policy and curriculum framework to guide implementation of Early Childhood Education in Zambia.

The quality of early childhood workforce represents a core issue to service provision in this area, being a core factor in determining children's development. Specific skills and competencies are expected from the ECEC workforce. Many studies in the field indicate that staff qualifications are the key factor in providing high-quality ECEC services (European Commission Working Group, 2014). A large body of research has shown that working conditions and professional development are essential components of ECEC quality (Smith, 2004). These quality components being linked to children's cognitive and non-cognitive outcomes. In many cases, good working conditions can reduce the constant staff turnover in the ECEC system, the retention of childcare staff being a core indicator for ECEC quality programs.

A study by Wandawa (2012) showed that, the management of ECD programs was decentralized. The DICECE and COCECE are responsible for implementing the ECD program, training pre-school teachers, inspecting schools and carrying out parental and community awareness programs as well as management and disbursement of ECD grants to approved ECDE centers.

The function of DICECE is training teachers and other personnel at the district and inspection of district pre-school programs, mobilization of local communities to improve care, health and nutrition and education of young children, development of localized pre-school curricula, evaluation and research related to pre-school children (Evans & Myers, 1994). According to the ECDE service guidelines, only the approved ECDE syllabus shall be used in ECDE center. The CSG are meant to supplement teaching and learning resources since learning in ECDE centers shall be activity based and child centered. Teaching and learning methodically shall be used in these centers. The children shall be given opportunity to manipulate materials and will have opportunities for free choice activities and rest (Republic of Kenya, 2011). To provide quality ECDE, the MOE have provided CSG to selected ECDE centers to purchase relevant and suitable curricula resource. These include curricula support materials such as syllabus, guidelines and books, manipulative materials and visual packages (KIE, 2010).

To ensure effective implementation of any educational enterprise, supervision must be given adequate attention. In regards to ECE, Awino (2014) noted that it is important to supervise in order to gather information from children, caregivers, parents, communities, and general ECE environment. Supervision of ECE can be used to correct errors, modify

practices where necessary and motivate as well as encourage all involved in its implementation (Awino, 2014). Usually, the changes that result from supervision of ECE program can strengthen the implementation of such ECE program. Supervision in ECE leads to the holistic development of children, enables efficient implementation of curriculum, checks whether the objectives of the programs have been achieved, promotes maintenance of basic standards, identifies problems and constraints, motivates, enriches and promote personal as well as professional growth of all those involved (Awino, 2014). Despite the immense benefits that supervision has to offer the ECE, the Nigerian ECE at pre-primary school level is not provided with these benefits as it is usually left unsupervised. This cannot allow effective implementation of ECE programs at pre-primary school level in Nigeria. Researchers have consistently lamented this lack of supervision in ECE (Osakwe, 2011; Nakpodia, 2011; Sooter, 2013).

2.7.3 Funding of Pre-school Education

According to Briggs and Ayot (1988), a cornerstone of improving the socio-economic and welfare of the people and the society at large is through education. Education training investment has assured higher individual earnings than investing in alternative segments of the financial system (Woodhal & Psacharapoulos, 1985 and World Bank, 2008). Furthermore, IBED, (2005) and Maryor et al (2005) stated that schooling is considered as the foundation of Human, Cultural, Social, and Monetary capital and is considered as valid in terms of both character and collective excellent, ensuing into explosive increase each in countrywide and international area. In addition, KIPPRA (2008) found that establishment of first-rate training is crucial in producing the chances and advantages of social and monetary advancement.

The Government of Kenya has confirmed obligation to the wellbeing of pre-school learners by committing itself to different international policy declarations. These declarations include United Nations Conventions on the Rights of the Child (CRC), the African charter on the rights and welfare of the child, Millennium Development Goals (MDGs) and the sustainable development goals (SDGs). Moreover, Kenya has contributed and recognized the deliberations of 1990 Jomtien World Conference on Education for All (EFA), the Dakar World Education Forum. These conferences emphasized on the status of ECDE programs in enhancing an all-inclusive growth of learners. Besides, the government has additionally rendered all these global strategies into country wide goals to be executed at the County including Sub-Counties (RoK, 2006).

Financial support is central for any program to assume shape. ECD investments should be increased to expand service coverage, improve services, and ensure they are sustainable, high in quality and cost-effective. Indicators measuring investments as inputs and their outputs and outcomes should be included, (Vargas-Baron, 2013). Early Childhood Education receives very little funding in Kenya. Manoj, (2011), has observed that funding in Kenya is only through payment of ECDE teachers' trainers. The parents who have been the main sponsors of the program run many ECDCs.

Parents are supposed to pay fees for their children. It is out of these funds that the teachers of ECDE are paid, facilities acquired and any other necessary resources be availed to the teachers. Because of poverty and even negativity of attitude towards the program, many parents do not pay these services and hence making it difficult for the

learners to access quality education, (Manoj, 2011). Manoj associated high costs of ECDE and Primary education in private schools as posing a big challenge to learners in public ECDCs.

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

According to Karanja and Githinji, (2011), ECDE is currently facing challenges related to the funding, policy formulation, low participation rates of target age groups including special learners, lack of curriculum content informed by research-based data, inadequate qualified educators, lack of schemes of service for educators, rising number of orphans, conflict in medium of instruction among others. Further, of importance to note is that lack of the Ministry's funding and implementation initiatives complicates the provision of ECDE. Lack of support for Early Childhood Education (ECD) has led to the transfer of early childhood lessons to the primary section because many parents are not willing to pay any money for ECD while FPE is free, (Kariuki, 2014). He has observed that despite the great essence that ECDE carries, the government has always concentrated to offering FPE. Despite FPE, lack of support for ECDE has led to the transfer of Early Childhood

lessons to the Primary section because many parents are not willing to pay any money for ECD while there is FPE. The current study investigated the challenges facing devolution of early childhood education in Nandi County.

2.7.4 Infrastructure Development in ECDE Centers

Basic amenities such as water and electricity are also very important for teacher job satisfaction and motivation. For example, sanitary facilities are especially important to motivate female teachers to work at a given school (Ramachandran & Pal, 2005). Other problems include slow textbook development; restricted space; nonexistent or under-resourced libraries and laboratories amongst others. However, like pay, learning materials and facilities are merely a necessary but insufficient factor in teacher motivation; and once these needs are met only then can intrinsic factors such as recognition and career development, have a deeper impact on motivating teachers.

Alameno (2008) recommends that pre-school materials should be within needs of children in order to facilitate their learning, to work and help themselves. He suggests that the classroom should be divided into different areas. One area should be for storytelling and resting. The other part of the classroom should be for activities and group work. The story telling area should be equipped with visual aids like flannel graph, sand box and blackboard. The children may sit on mats or cushions. The activity area should be equipped with tables, cupboards for storage, bookshelves and walls for displaying items and children's work. Many activities can be carried out outside the classroom. The classroom should have its own guides as well as outdoor equipment like swings.

The government is already implementing measures that seek to improve the performance of this sub-sector. These measures include establishing guidelines and standards of the management, supervision and curriculum development of ECDE for purposes of in service teachers and training. NACECE is located at KICD and is responsible for developing and disseminating curricula for ECDE research, facilitating interaction between agencies and sponsors, coordinating and liaising with the external partners and informing the public on the needs of development within ECDE programs (Republic of Kenya, 2010).

In early childhood, children make transition into new environments. This is usually a progression from private space in their home to public or collective spaces such as community playgrounds, classrooms and toilets. This transition in life is social and at times biological turning points. Therefore, for academic programs to run smoothly in a school, basic physical facilities should be made available. Physical facilities contribute significantly on learning environment. It is the responsibility of every head teacher to ensure that there are adequate resources to implement the school curriculum.

Moreno (2011) and inter-American Development Bank examined the performance in Latin America and revealed difficulties in infrastructure and basic services establishment in preschools. Some 88% of schools lacked a science laboratory, 73% had no lunchroom, 63% had no meeting facility or staff office, and 40% lacked a library and 30% had no sports facilities. One in five schools did not have sewage system. A half of the schools has telephone and third did not have sufficient number of toilets. A research by Mohammed (2011) indicated that in Punjab province of Pakistan, all schools lacked basic

physical infrastructure, like drinking water, toilets, buildings and classrooms. According to the research a third of pre-school centers had no functional toilets and no clean water. In most elementary schools' pupils do not have adequate access to co-curricular activities because of lack of adequate sporting facilities.

In sub-Sahara Africa, it is estimated that up to 10 million classrooms need to be built at a cost of US$ 72 billion. In sub-Sahara alone, it is estimated that up to US$30 billion will be required to address the short fall in the provision of suitable and safe learning environment. Typically, are inadequate, sites are poorly planned and there is poor maintenance. The situation is not conducive to good teaching and learning (World Bank, 2010) One of the duties to the head teacher in Kenya is to develop the school's physical facilities (Mbwesa, 2008), hence the head teacher has to bear in mind where to house the education program, the population to be served by the facility and ensure financial resources are readily available for the ECDE expansion.

However, there has been a major back log of infrastructure provision and shortage of permanent classrooms, particularly in poor communities, at the same time, existing infrastructure are generally in poor condition due to lack of investment capital, poor construction standards and inadequate maintenance. The survey done by Nganga, (2009) estimated that there was a shortfall of 43000 classrooms in ECDE centers. To address the issue of infrastructure, the Kenya government was to work with communities, parents, ministries and development partners.

According to MoE (2005), through the introduction of Kenya Education Sector Support Program (KESSP, 2005 - 2010), the overriding justification of introducing Community

Support Grant was to enhance access, equity, retention and quality of education for all children aged 4-5years, the most vulnerable especially those living in ASAL, urban slums and pockets of poverty. To mitigate the situation, the government has kept on increasing the CSG and does it in phases.

Mutua (2009) while examining the impact of education subsidy as an intervention strategy to school dropout, argues that there has been worldwide focus on school dropouts and a number of policies have been devised to help reduce school dropouts. Providing free primary education to primary school pupils by the government in 2003 did not cater for ECDE pupils attached to the primary schools. The introduction of CSG to selected ECDE centers in 2007 significantly reduced the cost of education hence increasing retention rates. Republic of Kenya (2010) indicates that the 2009/10 financial year the government allocated 1.3billion shillings towards CSG on ECDE. The government has stated in its policy documents that it introduced the CSG to create equal opportunities and access to ECD Education to increase retention and reduce dropout rates (Republic of Kenya, 2010.)

A child development and experiences during the infant age and pre-school lay critical foundation for later growth and subsequent development. The way a child is nurtured socially, intellectually and physically creates a long learning process (UNESCO, 2010). Therefore, children who are nurtured well and live well create a better society for all. (UNESCO, 2006) notes that investment in ECDE leads to both private and social benefits such as better health conditions, nutrition and social interactions among children. Gwachi (2009) notes that ECDE tends to give children a better start of life.

Murunga (2013) cites that children who participate in ECDE program are likely to start primary education and perform better in school and are unlikely to drop out of school and repeat grades. A survey conducted by UNESCO (2009) in Program for Internal Students Assessment (PISA) showed that a 15year old student who attended at least a year of pre-school out performed students who had no access to this vital education. It is therefore clear that the ECDE is of great importance and should be made accessible to all children.

Infrastructure is the core operation and stand in which any project in the world relies on. In the ancient times, infrastructural facilities like water ways, ships, wind power, HEP and many more were greatly depended on for the development of the wealthiest states in the world like Babylon and the ancient Canaan. In ECD programs, infrastructure involves the latrines for the kids, the classrooms, the sleeping bays, the play grounds and more that are normally suffocated or at a verge of collapsing (UNISDR, 2012). There are factors that contribute to the deterioration of ECD infrastructure (classrooms, the children's play grounds, the pit latrines and the most important dining environments like the kitchen and serving halls). A number of factors have been quoted by scholars like Kamande (2012) who argue that, factors such as reduced funding available to properly build, design and maintain school facilities have significant effects.

In Kenya, major implementation of infrastructure projects in relation of the ECD schools in Busia and Teso was striking between the years 2007-2009 (GOK, 2010b). The study showed that few classrooms for the lower grades had desks, so most pupils sat on the floor, classes were held outside due to a lack of permanent classroom structures. The school headmasters collected most local school funds from parents in the form of annual

school fees, which are set by each school's primary school committee. Local community members who did not have children in the school did not typically participate in the school committee, and they were not expected to pay school fees.

Most recently, education quality in Kenya has received a lot of attention with the introduction of supported county ECD programs (Republic of Kenya, 2014). Successful implementation of this programs has been centralized to the actualization of construction/ renovation of physical facilities/equipment in public ECD learning institutions in disadvantaged areas particularly in Arid and Semi-Arid Lands (ASALs) and urban slums like Kibera slums (MOE, 2011a). There are two school infrastructural programs with components which include; School improvement grants, new school construction, management and capacity building; and Monitoring and Evaluation (UNESCO, 2012).

These two types of funds were found to have increased the ECD infrastructure development in Kibera for example from almost an average of 106 classrooms, 302 pit latrines in 2008 to over 156 and 610 respectively. In this argument therefore, the research intends to find the current situation as per the infrastructural development in the slum in relation to financial resources availability. The current study determined the extent to which devolution has enhanced infrastructure development in ECDE centers in Nandi County.

2.7.5 Teachers' Qualifications and Competencies

It is widely acknowledged that early childhood educators with required professional preparation provide more developmentally appropriate, nurturing, and responsive care and education experiences for young children (National Association for the Education of

Young Children (NAEYC), 2007). This aligns with the submission in an Issue Brief by National Governors Association Centre for Best Practices (2010) that the knowledge and skills of early childhood care providers and teachers are critical factors in their delivery of high-quality developmental and educational experiences to young children. In confirmation of this, Boyd (2013) reported the result of a study conducted in 2002 by National Institute of Child Health & Human Development (NICHHD) and The Early Child Care Research Network (ECCRN) in which it was found that providers with BA degrees in ECE provided higher quality learning experiences for children in their care. This underscores the importance of giving children the opportunity to learn under professionally qualified caregivers/teachers. Unfortunately, the situation is contrary in most pre-primary schools in Kenya. In privately owned pre-primary schools, teachers with no training in ECE are often found in children classrooms while in pre-primary sections of government owned public schools, old female teachers with no qualification in ECE are often seconded to children classrooms. Findings from various studies conducted by researchers in Nigeria have consistently confirmed this same situation (Olaleye & Omotayo, 2009; Amadi, 2013; Okewole, Iluezi- Ogbedu, & Osinowo, 2013; Osho, Aliyu, Okolie, & Onifade; 2014).

A study done in Turkey by İnal, Kandır and Özbey (2009) researched on the difficulties faced by preschool teachers in the planning and implementation of curriculum. It was found that the biggest difficulties teachers faced were in preparing annual plans and choosing objectives, teaching methodologies, and goals for the whole year. Further, Schneider (2013) explored what two Grade R teachers understand literacy to be and how it is implemented in their classrooms in South Africa. It was found that the preschool

teacher views literacy as an act of creative expression and her pedagogy is more implicit, while the teacher in the primary school provides more explicit instruction focusing on how texts and language work. High-functioning classrooms with qualified teachers were also found to prepare children to grow up being literate.

Along with staff working conditions, professional development is also an essential component of ECEC quality, both initial and continuing training enabling staff to fulfill their professional role (Oberhuemer, Schreyer, & Neuman, 2010; Fukkink, & Lont, 2007). Continuing professional training of the ECEC workforce has a major impact on children's outcomes. It is important to develop common education and training programs for all staff working in an ECEC context: for example, preschool teachers, assistants, educators, and family day careers. From this perspective, the on-going professionalization of ECEC must be sustained through coherent policies. Empirical studies demonstrate that stimulating environments and high-quality ECEC activities are fostered by better-qualified staff (Smith, 2004; Elliott, 2006).

Jibril (2007) has submitted that whatever input is made into an educational system in respect of management, resources, facilities and array of instructional materials, will be of little avail if the teacher is unskilled, poorly trained or even ignorant. Goble and Horm (2010) have submitted that whatever a person's profession is, the need for professional development is universal because professionals need to continually enrich their knowledge and increase their sense of professionalism over the course of their careers so as to implement current research-based practice. According to Goble and Horm (2010), early childhood professional development brings to the forefront the significance of the

early years for children's learning and development and highlights the central role early childhood educators play in children's successful outcomes. This lack of professional training for the teachers is likely to worsen the problems of implementing ECDE programs in Kenya.

Implementation of educational programs has been widespread in the professional world and the question of ECDE is no exception (Harcourt, 2008). Moyo, et al., (2010), while investigating factors that affect the implementation of ECD in Zimbabwe, found that qualifications of teachers affected their ability to deliver effective lessons; large classes reduced teacher-pupil interaction; and that children were vulnerable to deprivation of appropriate experiences because ECD centers were not well equipped. Contextual processes like curriculum and teaching as well as learning materials (SACMEQ, 2010) is essential for successful rollout of ECDE programs. Gudo and Olel (2011) described quality of education as fitness for purpose and conformance to standards. Fitness for purpose refers to purpose and utility of the product while conformance to standards is standard based approach aligned to the specified standards given by a regulatory agency.

2.7.6 Learning Resources for Pre-school Learners

In Africa, Michaelowa (2002) found that adequate provision of textbooks could improve teacher job satisfaction and increase student test scores. In fact, she concluded that textbooks are the single most important determinant of whether or not a teacher desired to transfer schools, a proxy for job satisfaction. In Ethiopia, teachers were de-motivated by the fact that the school syllabus assumes that teachers have access to learning materials when in reality such materials are scarce.

When resources are available for ECE programs at pre-primary school level, it helps the caregiver/teacher to nurture and support the development of young children, and to successfully implement curriculum (Amali, Bello, & Okafor, 2012). According to Chukwbikem (2013), the quantity and quality of resources available for any educational program would determine schools' systems capacity for the implementation of the type of educational program. What this implies is that resources are critical to successful implementation of any ECE program. In spite of the fact that resources are critical to successful implementation of ECE programs, they are not found in many pre-primary schools, especially in the pre-primary section of public primary schools that belong to the government (Viatonu, Usman-Abdulqadri, & Dagunduro, 2011). Many researchers in Nigeria who have assessed the resources that are available for ECE at pre-primary school level have confirmed this same situation through the findings of their studies (Okewole, et al., 2013; Osho, et al., 2014).

Odundo (2013), in his paper "Determinants of Effective policy Implementation in Early childhood Development and Education in Nakuru municipality", asserts that limited institutional capacity is a hindrance to proper implementation of Early Childhood Development and Education policy. The quality of instructional material is unreliable, inadequate, and therefore poses as a significant challenge affecting the implementation of ECDE program.

Pre-school children have specific learning and teaching materials. According to the Ministry of Women and Child Development, Government of India (Curriculum Framework, 2012), an effective Early Childhood Education program should exhibit some

essential play and learning materials that include adequate supply of developmentally appropriate materials for play, materials and equipment which are safe, clean and in good conditions, sufficient quantity of materials to enable learners work in small groups and should be easily accessible to the child, materials which promote gross and fine motor development and help the child to discover and explore including constructing and reconstructing.

Instructional resources are said to be objects or things the teacher can use in the classroom while teaching in order to ease off his/her teaching activities. Aibangbe (2008) sees instructional resources as anything that carries information between a source and a receiver. She added that they are information carriers designed specifically to meet objectives in a teaching and learning process within or outside the classroom. According to Adekeye, (2008), instructional resources are made up of four major categories i.e. visual aids, audio –visual aids, auditory aids and printed materials that assist in the successful delivery of lessons. A wide range of resources is used to increase learning, to generate more interest and to create a situation where the learners would fully engage in the classroom.

According to Montessori (1998) use of concrete teaching learning resources assists in the development of five children's senses. This reduces the monotony of the teacher using only one material to enhance learning. According to K.I.E (2008), these are several varieties of teaching learning resources that can be used including audiovisual aids (television, videos) audio aids such as radio, visual aids such as, flash cards, tactile aids like dolls and toys. All these supports of teaching learning resources can assist the child

to learn and acquire new knowledge. Aids such as charts, pictures can enable a child to learn and remember concepts learnt. The classroom should be well organized and be spacious for the free movement of children and teachers to access materials and enable the teacher to pass round assessing children's activities and motivate them. According to K.I.E (2008) this equipment needs to be installed and fixed in stationed place where children can access them. Examples of these include climbing bars where children can use this equipment to play by climbing up and down the bars or ladders. It is fun for children to move upwards and downwards in turns. As children get fun by playing in turns, their tension and other emotions such as fear are reduced and they refresh for the next activity.

According to Holland (2011) children develop their intellect in stages especially in language development. Children are architects of their own understanding. A child is not a passive recipient of adult's instructions but also an active partner in the construction and development of knowledge. From this perspective, children should be allowed to learn through discovery and make their own conclusions; they should be allowed to solve their own problems while in groups' manipulation materials this will boost their self-esteem.

Abdelrahim (2008) revealed that the availability of instructional resources depends on storage and usage habits. The quality of education and training on participation given to pre-school children depends on the availability and adequacy of instructional resources for classroom learning. Pre-school teaching should aim at equipping learners with useful

skills and to improve their knowledge and capabilities in their performance in literacy skills (National Policy of Education, 2004).

Nikky (2010) cited out that the process of teaching and learning depends upon the different types of equipment available in the classroom. There are many aids available these days like concrete, audio, visual and audio-visual aids. They have very much importance in Teaching Learning Process (TLP). Margaret & Anne (2007) supported that providing opportunities and materials for children to classify sort and group objects using various criteria like color, shape, size, texture or use help children to symbolize and use differed imitation and enhance their mental abilities. In relation to this study, this means that through the use of various materials it enables the learners to be able to read details in objects and be able to give their difference.

The utilization of instructional materials in teaching and learning situation involves not only the sense of hearing but also the sense of sight and touch, looking at educational practices (Eneh et al., 2004). Aguokogbuo (2000), explained that instructional materials could be classified into; Visual materials such as pictures, diagrams, building, charts, real objects (realia), books, newspapers; Audio materials like tape recording cassette, radio, teacher's voices and Audio-visual materials like television, video recording and motion pictures. In relation to this study, learners should be provided with materials to enhance the various senses like sight, hearing, taste, smell and touch for them to engage in reading and writing skills.

Teaching and learning materials are crucial to any successful teaching and learning process worldwide. This is because these resources aid the teacher to effectively transfer

the content to the preschool learner (Karaka, 2007). In Kenya preschool centers are the recipient of the innocent innate children as they transit from home to school. As they move to school, they need to adapt to the new environment which they must meet a conducive atmosphere right from home to school. Among the fears which tend to enhance children to like schooling are teaching and learning materials where children learn new experiences from (Rolleston, 2009). These materials tend to assist children to open up in many areas which lead to holistic learning. He noted that when children are exposed to various teaching and learning resources, they tend to be active and involved in the learning process. Therefore, it is worth noting that preschool teachers can testify that teaching becomes easier with such materials (Mwonga & Wanyama, 2012).

Research done by Mwong and Wanyama (2012), revealed that teaching and learning materials not only enhances a Child's acquisition of music and movement skills but also ensures that the transition from pre-primary to primary school is smooth. This therefore means that all the education stakeholders should ensure that the teaching and learning materials are available in pre-school centers. Muilkiungu et al (2003), suggests that teachers should use variety of teaching learning resources easily found within the locality. It is the responsibility of the stakeholders to ensure that the required materials are provided to enhance learning of children in ECDE centers. He notes that the teacher is the main source of teaching learning materials in that he/she initiates their provision in the centers like, involving the children in the material collection. According to Muithungu et al (2003), materials can be made available by parents and the community as a whole for the ECDE centers within the locality. This can be successfully done by

organizing for material making day in school. The community members and parents can collect and others can donate to the school.

Transition in this research was defined contextually as the process of moving from preschool set up to class one by learners. This process however has been seen to face several challenges as noted by Carle and Daiber (2008), Noor (2003) and Ombongi (2008). These challenges can be minimized by use of best practices as discussed by Bohan- Baker and Little (2002). These best practices include but not limited to the school management encouraging parents to visit schools prior to admission, teachers visiting learners at home, the school offering opportunities where parents of other children meet and share, encouraging early enrolment and running a support group for parents. However, it is important to note that because of financial constraints and diversity in Kenya some of these best practices cannot be embraced in most schools. Despite the provision of best practices, it is critical to highlight one fact that teaching and learning resources play a key role in the transition process (Hirst et al., 2011). This is true because Pre School and early childhood where class one falls is dominated by play. It therefore demands that a school with promotion opportunities enhances job satisfaction.

According to Karaka (2007) concrete materials enhances understanding of basic concepts no matter how the teacher plans, it is the child who must learn. The role of the teacher is to facilitate learning through the use of teaching/learning resources. According to him all that the teacher prepares may not be of any importance if they do not enable the child to learn. If the materials are displayed well, they pre-occupy the pupils when the teacher is not in class and this will enhance children's learning in the absence of the teacher. This

can be done by displaying on walls, hangings, mobiles, soft boards using pins, placed on shelves and learning centers like shop corners, curiosity tables among others.

According to ECDE policy framework (2006), it is noted that these should be improved efficiency in resource allocation to enhance quality education provided to young children. To achieve this, efforts should be placed to enrich ECDE centers as they are the focal point where this should start. This will depend on how much the teachers are involved in using the resources which enhances quality education required by the government. A teacher with the above vision at heart can readily use all the available resources at their disposal to improve the quality of education in ECDE centers. The plan outlines the need for ECDE centers as an area where basic knowledge is obtained by the young children. Fisher (2009), states that children like to do one activity for a short time and then change to another. Their concentration span is low, hence need for them to be presented with opportunity to refresh and relax hence develop their muscles. Omwoyo (2003) said that teaching/learning resources enable the teacher to explain concepts easily to learners. A class with these resources, few words is used to present a given concept to the learners. But a class where these resources are missing, the teacher strain in explaining the concept yet in vain.

According to Olawale (2013) instructional materials include materials used to facilitate learning for better results. In the same vein, Uzuegbu, Mbadiwe & Anulobi (2013) refer to instructional materials as any device used to assist the instructor in the preparation of a lesson, teaching of the lesson and facilitate students' learning of the subject matter. Instructional materials are the devices developed or acquired to assist or facilitate

teachers in transmitting, organized knowledge skills and attitudes to the learners within an instructional situation (Nwachukwu, 2006). They include those objects that are commercially acquired or improvised by the teacher to make conceptual abstraction more concrete and practical to the learner (Iwu, Ijioma, Onoja & Nzewuihe, 2011). They are relevant materials utilized by the teacher during instructional proceeds for the purpose of making the contents of the instructions more practical and less vague.

Instructional materials are also described as concrete or physical object which provide sound, visual or both to the sense organs during teaching (Agina-Obu, 2005). Teachers use different instructional materials to motivate learning. Teachers often make use of textbooks, charts, models, graphics, regalia as well as improvised materials (Awotua-Efebo, 2001). The success in the skill and knowledge acquisition in an instructional situation depends on the suitability of the instructional material, adequacy and effective utilization of the available materials (Olaitan & Agusiobo, 1994). Also, the relevance of instructional materials to the objective of the lesson and the ease of use of the instructional materials are serious considerations in instructional materials utilization to better the learner's performance. Thus, instructional materials could be regarded as the information dissemination devices used in the classroom for easy transfer of learning. They provide first-hand experience where possible or of vicarious one where only that is feasible.

Many ECDE centers in Kenya lack adequate teaching and learning resource and facilities suitable for ECDE in their learning environment. These include lack of properly ventilated classrooms, furniture suitable for children, kitchen, safe clean water,

playground, toilets and play material (Government of Kenya, 2006). This implies that teachers do not have adequate teaching and learning resources to enable them to implement ECDE Curriculum effectively. This affects implementation of ECDE Curriculum negatively as creation of a sustainable learning environment helps deprived children to improve their academic performance (MOEST, 2005).

Rotumoi & Too (2012) undertook a study on the influence of instructional resources available on the choice of teaching methodologies by pre-school teachers in Baringo District. The study concluded that there was a direct correlation between the choice of instructional methodology and availability of instructional resources. These findings provide strong evidence that instructional resources are useful as they facilitate learning of young children. Children are fascinated by the objects when used in child-centered approaches, which are recommended by KIE (2011). However instructional resources may not be the only factor that influences the choice of methodology. Further studies suggest that the availability of instructional materials influences teachers‟ choice of instructional practices and learners' success (Yi, 2006).

Sackes, Trundle, Bettand O‟Connell (2010) observed that the availability of science and nature corner was positively related to children's use of science equipment and participation in science related activities. When materials are available in the kindergarten classrooms, children are more likely to be engaged in science activities. This clearly emphasizes that materials and resources are important in every activity area for effective learning in ECE centers. Pence and Schaffer (2006) examined the use of indigenous knowledge in ECE practices and policies. The study established that teaching

using play, song, proverbs and stories created a cultural context which created a stronger link between home and school life.

This is an important aspect of ECE education since children are integrated into their societies even when they are away from them because of migration, urbanization or modernization. They are able to learn their culture and this means the teaching/learning resources used should be able to assist the children trace their cultural roots. However, technology has deeply taken roots and the demands of the society require that all learners at all levels embrace technology rendering cultural and indigenous knowledge redundant and outdated (Pence & Schafer, 2006).

2.7.6.1 Importance of Instructional Materials

The impact of instructional material in teaching/learning needs not be over emphasized. It is through instructional materials that the teacher drives home his or her point during lesson. In the process of using instructional material, students can see, feel and touch the material and this aids retention. According to Mwangi (2010), in the teaching learning process, instructional materials serves functions of enhancing retention which makes learning more permanent. Equally, they stimulate and sustain interest in learning by providing firsthand experience with the realities of the physical and social environment. It is necessary to note that instructional materials are important catalysts of social re-engineering and change in learners. It is obvious that effective instructions cannot be well accomplished without the use of instructional materials.

Phyllis (2011) stated that instructional materials possess some inherent advantages that make them unique in teaching. For one thing, they provide the teacher with interesting

and compelling platforms for conveying information since they motivate learners to want to learn more and more. Also, by providing opportunities for private study and reference, the learner's interest and curiosity are increasingly stimulated. Further, the teacher is assisted in overcoming physical difficulties that could have hindered his effective presentation of a given topic. They generally make teaching and learning easier and less stressful. They are equally indispensable catalysts of social and intellectual development of the learners.

Ibrahim (2000) pinpointed that instructional materials assist teachers in the achievement of stated objectives and also help the teachers to make lesson explicit to the students. According to Agbulu and Wever (2011), instructional materials are important because they are used for the transference of information from one individual to another, help the teacher in extending his learner's horizon of experience, stimulate learners' interest and help both teachers and students to overcome physical limitations during the presentation of subject matter, among others. Fakomogbon (2000) also reported that instructional materials possess the quality of influencing the psychological, motivational and structural position of the learners. It aids the achievement of any one of the following in the teaching learning process: Attention and motivation; orderliness in the classroom; lesson presentation; recall and remembering; guidance, active participation and response; feedback, assessment of performance and evaluation (Mulongo, 2013).

Further, Oladipo (2001) asserted that instructional materials are important tools for enriching, visualizing, simplifying, transmitting and accelerating the teaching and learning processes thus enhance student's academic performance. He further said that,

effective instruction with instructional materials in the classroom requires careful planning by the teacher. This implies that teacher should take time to apply special knowledge and skill with respect to selecting, producing and using different kinds of instructional materials.

Although most governments across the globe recognize the importance of ECDE, the provision of quality ECDE has met several challenges, most of which are contextual. Infrastructure, trained teachers, and teaching and learning resources have been lacking in adequate measures to satisfactorily aid quality of ECDE learning (EI, 2010). In Canada, Bonnechere Union Public Library (BUPL, 2006) reports that ECDE teacher turnover rates rose owing to low remunerations by the municipal government upon which recruitment of the teachers are bestowed. In Hungary, where ECDE is subsidized by the government, enrolment is generally high in ECDE centres far beyond the infrastructural capacities of such centres (OECD, 2006).

Cuyvers, De Weerd, Dupont, Mols, and Nuytten (2011) investigated the importance of instructional materials to the well-being of learners and consequently to positive educational outcome in Antwerp, (Belgium). They found that differences in students' well-being can be linked to the quality of the instructional materials of the schools they attend. Equally, De Paola, Ponzo, and Scoppa (2009) examined the effects of class size on students' achievement using data from a project offering special remedial courses in Mathematics and Language skills to freshmen enrolled at an Italian medium sized public University in Italy. It was found that larger classes determine a significant and sizeable negative effect on student performance in Mathematics. The two studies (Cuyvers, et al.,

2011 and De Paola, et al., 2009) however, need to motivate researchers to investigate instructional materials capacities and class sizes with intention to determine quality of education offered among devolved systems across the globe, including Kenya.

Another study by Holland (2011) investigated young children's perception of melodic construction aimed at finding clues about their children's broader cognitive development in non-musical domains in Winconsin, USA. The analysed data revealed common themes with varied results of eagerness or hesitancy to participate, whether bells were moved or played, exploration of bells, internalization of rhythm, cognitive readiness for melodic construction, and role of visual representation. Equally, Kim, Wigram and Gold (2008) investigated the effects of improvisational music therapy on joint attention behaviours in pre-school children with autism in selected Asian countries using 25 ECDE learners (aged 1 to 5 years old) selected from different learning centres. The findings were that joint attention skills and pro-social behaviours were found to be improving through the improvisational therapy.

2.8 Motivation of Teachers for Improved Service Delivery in ECDE Centres

Maslow's (1943) hierarchy of needs proposes that individuals must fulfill their lower-order needs (basic needs such as water and housing, safety, belonging, and esteem) before being motivated to fulfill the higher-order need for self-actualization. In the context of teaching, self-actualization can be understood as personal achievement, a key component of teacher motivation. As basic needs often go neglected in the developing world, Maslow's theory is pertinent to an investigation of teacher motivation in developing countries.

While the fulfillment of basic needs is important to lay the foundation for teachers to desire to improve their professional behavior and personal achievement, other theories indicate that satisfaction of basic needs in and of itself functions as a mere *extrinsic*, or external, incentive. According to Benabou and Tirole (2000), extrinsic incentives are only weak rein forcers of motivation in the short run and negative rein forcers in the long run. In terms of work motivation, Herzberg (1966) finds that achievement, recognition, the work itself, responsibility and advancement are more effective long-run motivators than interpersonal relations, working conditions and pay.

For teachers, Popa and Acedo (2006) note that incentives are related to teacher job satisfaction, but not to teacher classroom practices. Thus, it appears that while teachers need housing, food, safety and belonging. In order to be professionally motivated, the provision of these needs past a baseline requirement is not a sustainable driver of teacher motivation. Instead, teachers need supports that encourage their *intrinsic*, or internal, motivation; such as achievement, recognition, and career development. The relationship between, and relative effectiveness of, extrinsic versus intrinsic incentives is an important issue for teacher motivation in the developing world, where material resources to motivate teachers through extrinsic means are often very scarce to begin with.

Other studies address the motivation of teachers in developing countries to incorporate new teaching methods into their strategies to help students learn. In Egypt, for example, Howard and Johnson (2000) documents the demoralization of Egyptian teachers struggling to apply new active learning techniques in the context of an unsupportive school administration, lack of resources, and mechanical curriculum. Indeed, Johnson et.

al. draw from Beebe's (1966) hierarchy of teacher development to suggest that unless the teacher's environment is supportive of more advanced teaching styles, teachers will be frustrated and disheartened in applying new techniques in the classroom. Furthermore, teachers at different levels of professional development may also need different levels of support. Therefore, it appears that teachers‟ self-efficacy and personal achievement can languish without training appropriate to their ability and the constraints of their school environment. A review of empirical studies on teacher motivation in developing countries indicates widespread low or decreasing levels of motivation, resulting in lower quality of education. For example, Bennell and Akyeampong (2007) find that sizeable percentages of primary school teachers are poorly motivated in Sub-Saharan Africa and South Asia.

Teachers facing heavy workloads need sufficient motivational supports in order to sustain their effort and professional conduct on the job. If teachers' workload is greater than teachers' motivational supports, teacher motivation is threatened. On the other hand, if teachers' workload is reasonable and motivational supports match or exceed this workload, teacher motivation is supported rather than threatened. Expanding access to education for all, as many countries are attempting, increases the workload and challenges faced by teachers. Education for all, combined with population growth, often requires remote deployment of teachers, large class sizes, multiple teaching shifts, or multiple grade levels within a single class. Michaelowa (2002) finds that these challenges are negatively correlated with teacher job satisfaction and positively correlated to absenteeism in Africa. Furthermore, due to political influence and irrational policies, it is the least qualified teachers who are most often sent to the most challenging and neediest schools – frequently those located in rural areas (Bennell & Akyeampong, 2007).

In addition, safety and cultural traditions can severely undermine the motivation of female teachers to work on rural or remote areas. Living far from school can also contribute to absenteeism (Methodological Guide for the Analysis of Teacher Issues 2010). As schools expand to rural areas, teachers are beginning to instruct minorities speaking different languages. Many teachers are unfamiliar with these new languages, and unused to the challenges of teaching those with a different native tongue. Alternatively, national curriculum may dictate that teachers teach a secondary language, such as English, in which teachers are less competent and confident. In many developing countries, teachers are increasingly asked to perform a greater range of duties, including health education, distributing food, giving immunizations, taking census data, and organizing community development activities. If not properly compensated, these sorts of demands on teachers can decrease their motivation (Ramachandran & Pal, 2005).

Other de-motivating challenges include teaching students of a lower social class and recent regulations banning student corporal punishment (Ramachandran & Pal, 2005). Finally, not only does a heavy workload negatively impact teachers' effort, it also makes teachers resistant to applying new teaching methods (Bennell & Akyeampong, 2007). In certain countries, in particular Latin American countries, teacher pay may reach the UNESCO-recommended threshold of 3.5 times GDP per capita (Teacher Compensation, Motivation, and working Conditions 2006). However, teacher salaries are generally low, especially in Africa. Corresponding to Maslow's hierarchy of needs, lack of a living wage can undermine the foundation of basic need fulfillment teachers require before they can focus on improving their work. When teachers do not have enough money to live, they often resort to secondary employment activities, which can undermine their

motivation to perform in their primary job and lead to increased absenteeism (Methodological Guide for the Analysis of Teacher Issues, 2010). One such secondary employment activity, private tutoring, can be especially harmful to student achievement, or at least the distribution of student achievement, when teachers cut back on teaching part of the curriculum in school in order to generate demand for their tutoring services out of school (Bennell & Akyeampong, 2007).

Besides resorting to secondary employment, teachers who earn poverty wages are often unable to eat properly before coming to school (Bennell & Akyeampong, 2007). Furthermore, it is difficult to motivate qualified teachers to work in the neediest schools and in rural areas without sufficient material incentives. Low pay also alters the profile of those who are most motivated to become teachers, as the opportunity cost of joining the poorly-paid teaching force is lowest for the unskilled, inexperienced, women, and those from rural areas (Umansky & Vegas, 2007).

However, beyond a reasonable salary, there is little evidence that further pay increases motivate teachers. Michaelowa (2002) does not find a salary structure to be an obvious determinant of teacher job satisfaction. Delannoy and Sedlacek (2000) note that across-the-board salary increases in Brazil were ineffective in increasing teacher performance.

If teachers are able to support themselves and their families, *how* teachers are paid may be more important than *how much* they are paid. Teachers are more motivated when they are paid on time, when retrieving their pay is easy, and sometimes through performance bonus-pay schemes. For example, in India irregularly paid salaries are a major source of low motivation (Ramachandran & Pal 2005). In terms of bonus pay, Muralidharan and

Sundararaman (2009) find that individual and group performance pay schemes significantly increased test scores in India through encouraging greater effort among teachers.

Low salaries play a role, but so does the assignment of administrative or menial tasks; lower standards of teaching; increasing demands on schools from communities; and the creation of large groups of unqualified or even female teachers (Bennell & Akyeampong 2007). On the other side, the status of volunteer or community teachers appears to motivate those types of teachers to perform more so than formal or civil-servant teachers (Michaelowa, 2002). In addition, sometimes teachers may simply not have a good relationship with the community surrounding their school, and this can be especially true in hierarchical societies with large gaps between teachers and the students and community (Ramachandran and Pal 2005).

2.9 Participation of Parents and Guardians in Implementation of Quality ECD Programmes

School and community involvement, through school management committees, parent teacher associations or similar bodies has an important role in any ECE programs. The achievements made in the early education sector are largely attributed to the close partnership that exists between the government, parents, donors and communities. So, whereas the government provides a co-ordination role, the parents and communities are left to make decisions on the kind of programs they want. And the donors only come in to provide funds and logistical support (Wambua, 2011).

Fagbeminiyi (2011) used survey approach through self-administered questionnaires to also explore the role of parents in early childhood education in Ikeja, Lagos State, Nigeria. It was revealed that parental involvement, that is emotional care and support has a very big influence on early childhood education, particularly the academic performance of the child and the age which the child is being sent to school. Chikutuma and Mawere (2013) also conducted a research on the quality of administration, teaching and learning of Early Childhood Development B learners (5-6 year olds) of Grade Zero in Zimbabwe. They found that the Early Childhood Development B inclusion in primary schools was not quite viable as it failed to cater for the all-round development of learners. For instance, age appropriate equipment were not available and appropriate activities were not being administered and thus the environment itself was not conducive to the age group's needs of learning through play.

Researches support the notion that parental involvement in children's education has positive outcomes as the parents gain knowledge about school activities and would render valuable guidance to their children (Holloway, Yamamoto, Suzuki & Mindnich, 2008). The parents in most circumstances are the primary caregivers and the central figures in the heart of children's universe (Mukuna & Indoshi, 2012). Hence, their involvement in early childhood education serves as a motivator that bridges the gap between two contexts, the home and school (Nokali, Bachman, Votrba-Drzal, 2010). Parent participation ranges from being recipients of services through to being instigators and controllers of programs from passive to very active roles (Evans, 2006).

The participation of parents in their children's education is highlighted in the South African Children's Act (2006), wherein it is stated as one of the four main principals. The act states that first and foremost it is a parental responsibility to meet the needs of the child and thus advocates for partnerships between parents and other careers in the best interest of the child and to the success of the ECD programs. Parent participation includes the quality and frequency of communication with teachers as well as participation in school functions and activities (Nokali, et al, 2010). Mukuna & Indoshi (2012) bring in another version of parental participation whereby it is organized into two, school-centered parent involvement and home-centered parent involvement. School- centered parent involvement. These includes activities such as participation in classroom, social and service events, attending PTA meetings and attending and participating in school board meetings.

2.10 Summary of the Literature Review

The reviewed literature has shown that Community Support Grants play a crucial role in ECDE education. The state of infrastructure in terms of physical facilities in Kenya ECDE centers has been poor and inadequate. It revealed that a lot of capital investments is required to improve infrastructure, sanitation, furniture provision and sourcing and storage of water to enhance safety, regular participation of pupils in ECDE centers. It is evident that learning resources have a lot of influence on learning in developing countries especially sub-Saharan Africa.

In Africa, Michaelowa (2002) found that adequate provision of textbooks can improve teacher job satisfaction and increase student test scores. In fact, she concluded that

textbooks are the single most important determinant of whether or not a teacher desired to transfer schools, a proxy for job satisfaction. In Ethiopia, teachers are de-motivated by the fact that the school syllabus assumes that teachers have access to learning materials when in reality such materials are scarce.

Basic amenities such as water and electricity are also very important for teacher job satisfaction and motivation. For example, sanitary facilities are especially important to motivate female teachers to work at a given school (Ramachandran & Pal, 2005). Other problems include slow textbook development; restricted space; nonexistent or under-resourced libraries and labs. However, like pay, learning materials and facilities are merely a necessary but insufficient factor in teacher motivation; and once these needs are met only then can intrinsic factors such as recognition, career development, and voice have a deeper impact on motivating teachers.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents a discussion of the research design; the blue print for the entire study; study population along with the sample size and sampling procedures; instrumentation; a description of the type of tools that were used along with the requisite validity and reliability considerations; data collection procedures including setting the boundaries for the study; instruments used to collect data as well as the data analysis rationalization in view of the design of the study. Considering the confidentiality of information given of the subject under study, due attention was paid to ethical issues and confidentiality aspects in relation to the respondents.

3.2 Research Design

Creswell (2014) defines research designs as plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. This study adopted descriptive survey design. This design enabled the researcher to describe the state of affairs as they are and report the findings (Kombo & Tromp, 2009). According to Kothari (2009), such design is efficient method of collecting descriptive data regarding the characteristics of populations to justify current conditions and practices. Moreover, descriptive survey design allow rapid collection of data from a large sample within the shortest time possible by use of questionnaires, interview schedules and document analysis.

3.3 Research Methodology

Rajasekar et al. (2013, p. 5) describe research methodology as "…the procedures by which researchers go about their work of describing, explaining and predicting phenomena". This study adopted the use of mixed methodology where both quantitative and qualitative data collection and analysis approaches were used.

3.3.1 Quantitative Approach

Quantitative research is regarded as a deductive approach towards research (Almalki, 2016). Quantitative researchers regard the world as being outside of themselves and that there is "… an objective reality independent of any observations" (Rovai et al., 2014). They contend that by subdividing this reality into smaller, manageable pieces, for the purposes of study, that this reality can be understood. It is within these smaller subdivisions that observations can be made and that hypotheses can be tested and reproduced with regard to the relationships among variables. This approach is typified by the researcher putting forward a theory that is exemplified within a specific hypothesis, which is then put to the test; conclusions can then be drawn with regard to this hypothesis, following a series of observations and an analysis of data (Rovai et al., 2014). In this study quantitative data was obtained through the use of questionnaires and analyzed by use of frequencies, percentages.

3.3.2 Qualitative Approach

Qualitative research places emphasis upon exploring and understanding "… the meaning of individuals or groups ascribe to a social or human problem" (Creswell, 2014). Denzin and Lincoln (2005) describes this approach as gaining a perspective of issues from investigating them in their own specific context and the meaning that individuals bring to them. It focuses upon drawing meaning from the experiences and opinions of

participants—it pinpoints "… meaning, purpose or reality" (Cohen et al., 2011; Merriam, 2009). Qualitative methods are usually described as inductive, with the underlying assumptions being that reality is a social construct, that variables are difficult to measure, complex and interwoven, that there is a primacy of subject matter and that the data collected will consist of an insider's viewpoint (Rovai et al., 2014). Rovai et al. (2014) make the point that this approach towards research "… values individuality, culture, and social justice" which provides a content and context rich breadth of information which, although subjective in nature, is current (Tracy, 2013). Having said that, the employment of qualitative approach methods does not prevent the administration of a critical, disciplined and balanced study into any educational issue (Thomas et al., 2011; Silverman, 2009; Bell, 2010).

3.3.3 Mixed Methods Approach

The study adopted mixed methods which involve integration of philosophical assumptions where there is use of both quantitative and qualitative approaches. In this study, both quantitative and qualitative data were collected thus making the study a mixed method research. It is thus more than simply collecting and analyzing both kinds of data; it also involves the use of both approaches in tandem so that the overall strength of a study is greater than either one of the two approaches (Creswell, 2009). According to Creswell and Plano Clark, (2007) the mixing of quantitative and qualitative approaches provides a better understanding of research problems than either approach alone. Mixed methodology is the corner stone of research within social science that is experienced within everyday life" (Creswell & Plano Clark, 2011; Johnson & Onwuegbuzie, 2004). Mixed methodology is described as being "the third paradigm" (Johnson & Onwuegbuzie, 2004); a "third methodological movement (Teddlie &Tashakkori, 2009)

and includes two (or more, or both) quantitative and/or qualitative approaches (Morse & Niehaus, 2016). It no longer restricts the researcher to particular paradigms that have been traditionally the case and is considered a legitimate means of undertaking research in social and human science (Creswell & Plano Clark, 2011).

Space

Using mixed methodology can help blend different approaches allowing the researcher to design research questions within the context and parameters of their study (Johnson & Onwuegbuzie, 2004). Bernard (2014) adds that mixed methodology has led to an explosion of collaborative and creative research across disciplines. It helps to address broader questions providing a more expansive and creative approach to research (Johnson & Onwuegbuzie, 2004). The mixed methods approach includes a multiple level strategy incorporating a two-phase approach where (for example) quantitative research is undertaken first, followed by qualitative research; a systematic and planned approach to research (Flick, 2011). Each phase can then be triangulated into a third phase where quantitative data can provide general patterns and width and, qualitative data reflects upon experience and depth (Newby, 2014). The findings from the qualitative data can also help contextualises and enrich findings (Bryman, 2004, Mason 2006), increase validity when interpreting the data (Orgard, 2005), and generate new knowledge (Stange, 2006). Using mixed methodology can help understand the topic area in greater depth (Hoover & Krishnamurti, 2010). It can help increase confidence in findings, providing more evidence while offsetting possible shortcomings from using a single approach (Caruth, 2013; Creswell & Plano Clark, 2011; Tashakkori &Creswell, 2008).

Space

3.4 Research Paradigm

The research paradigm is a philosophy about the way in which data about a phenomenon should be gathered, analyzed and used (Morgan, 2007). In addition, Teddlie and Tashakkori (2009) and Likewise Creswell & Plano Clark (2007) define a paradigm as "a worldview, together with the various philosophical assumptions associated with that point of view". According to these authors a worldview consists of stances adopted on each of the elements (Cresswell & Plano Clark, 2007) or dimensions of contrast (Teddlie & Tashakkori, 2009) comprising ontology, epistemology, axiology and methodology.

This study adopted pragmatism worldview paradigm. The pragmatist researchers look to the "*what"* and "*how"* to research, based on the intended consequences where they want to go with it. Pragmatism has gained considerable support as a stance for mixed methods researchers (Feilzer, 2010; Johnson & Onwuegbuzie, 2004; Maxcy, 2003; Morgan, 2007). It is oriented towards solving practical problems in the "real world" (Feilzer, 2010) rather than on assumptions about the nature of knowledge. It is derived from the writings of Peirce, Dewey and James in the 19th and early 20th centuries and Rorty in the late 20th century. In this study, the challenges facing devolution of early childhood education programmes In Nandi County could be reduced and therefore solving real world problems.

3.5 Study Area

This study was conducted in pre-schools in Nandi County (Appendix vi). The county has 797 public ECDE centers spread across the six sub-counties; Mosop, Chesumei, Emgwen, Aldai, Nandi Hills and Tinderet. It borders Uasin-Gishu County to the North

and East, Kericho County to the South East, Kisumu County to the South and Vihiga and Kakamega Counties to the West.

3.6 Target Population

A study population is a group of individuals, objects or items from which a sample or study subjects are drawn. The subjects or objects forming a sample have at least one thing in common. For the purpose of this study, the target population was ECDE teachers of Baby class, Middle and Top Class. The county has a total of 797 public ECDE centers with 1387 teachers comprising of 70 male and 1317 female teachers. In addition, the study targeted 1 county Director of ECDE, 6 sub-county ECDE officers and 552 primary school head teachers. It should be noted that most ECDE centers are found within the precincts of individual primary schools and church compounds making the number of head teachers to be less. The target population is presented in Table 3.1.

Table 3.1: Target Population

Sub-County	Number of Schools	Number of Teachers	Sub-county ECDE officers	Primary school head teachers	Total target population
Mosop	121	176	1	121	298
Chesumei	67	203	1	67	271
Emgwen	83	257	1	83	341
Aldai	141	336	1	141	478

Nandi Hills	64	259	1	64	324
Tinderet	76	156	1	76	233
Total	**552**	**1387**	**6**	**552**	**1945**

Source: Nandi County ECDE Office, 2016

3.7 Sample Size and Sampling Procedure

Maree (2007) defines sampling as the process used to select a portion of the population for study. This implies the selection by the researcher, of participants for a particular study he/she deems in the best position to provide the relevant information needed for such a study. This section provides the sampling process adopted for this study.

3.7.1 Sample Size

Patton (2002) argue that the sample size depends on what one wants to know, the purpose of the inquiry, what is at stake, what is useful, what will have credibility and what can be done with available time and resource. The sample size formula for this study is Krejcie and Morgan (1970) as quoted by Kasomo (2001). The formula is given as:

$$\text{n} = \frac{X^2 * N * P(1-P)}{\left(ME^2 * (N-1)\right) + (X^2 * P * (1-P))}$$

Where

n=Sample size

X^2=Chi Square for the specified confidence level at 1 degree of freedom= (3.841) from tables

N=Population size

P=Population proportion (.50 in the table)

ME=Desired margin of error (expressed as a proportion=0.05)

For Teachers, the sample size was;

$$\text{n} = \frac{3.841 * 1387 * .5(1-.5)}{\left(.0025 * (1387-1)\right) + (3.841 * .5 * (1-.5))}$$

= 1331.86675/4.42525

=301

For Head Teachers

$$\text{n} = \frac{3.841 * 552 * .5(1-.5)}{\left(.0025 * (552-1)\right) + (3.841 * .5 * (1-.5))} = 227$$

Table 3.2 presents the sample size of the study

Table 3.2 Sample Size

Category	Target population	Sample Size
Director of ECDE	1	1
Sub county ECDE Officers	6	6
Head teachers	552	226
ECDE Teachers	1387	301
Total	**1946**	**534**

3.7.2 Sampling Procedures

The researcher stratified the ECDE centers into the six sub-counties; Mosop, Chesumei, Emgwen, Aldai, Nandi Hills and Tinderet. Thereafter, simple random sampling was used to select teachers and who were involved in the study from each of the six sub-counties. Simple random sampling allows for equal probability of the population being selected. The researcher made a list of all teachers of the target population and then assign a number to each. The researcher then used the random numbers generated from computer to pick the samples. According to Creswell (2014) randomly selected samples yield research data that can be generalized to a larger population within margins or error that can be determined by statistical formula. Random sampling also involves a pure chance selection and assignment of subject hence eliminating systematic bias and minimizing the effects of extraneous variable. In addition, Head teachers in every selected school were

selected purposively to take part in the study. Moreover, the county director of ECDE and the 6 sub-County ECDE officers were purposively selected to participate in the study.

3.8 Research Instruments

According to Kombo and Tromp (2006), social science commonly uses questionnaires, interview schedules, observational forms and standardized test as research instruments. This study used both quantitative and qualitative data collection techniques. The following methods were therefore employed during data collection:

3.8.1 Teachers' Questionnaire

Questionnaires were used to obtain information from ECDE teachers and primary school head teachers. Questionnaires are preferred because they are considered convenient to be used when handling large group of data. According to Kothari, (2008), the questionnaire generates data that are quantitative in nature and hence this tool is deemed appropriate since it collects such data in line with the design of the study. The questionnaire had six questions with section one covering the demographic information of the respondents, section two had items on the status of teacher adequacy in public ECDE centers, section three had information on the kind of support accorded to ECDE teachers by Ministry of Education, section four had information on the extent to which devolution has enhanced infrastructure development in ECDE centers and section five had items related to the extent of availability of instructional materials while the last section contained items on the strategies put in place by the county government to motivate teachers in order to improve service delivery in ECDE centers in Nandi County. The questionnaires provided quantitative aspects of data from both the pre-school teachers and the primary school head teachers.

3.8.2 Interview Schedule

Orodho (2009) postulate that many people are willing to communicate orally than in writing and they would provide data more readily and fully than on a questionnaire. An investigator is able to encourage subjects and probe them deeply into a problem. In this study interviews were used to collect data from the director of ECDE and the Sub-County ECDE officers. The interviews cover information concerning measures the county had put in place to motivate teachers in order to improve service delivery in ECDE centers. How the County Government facilitated infrastructural development to improve service delivery in ECDE centres. How do ECDE teachers perceive devolution of ECDE programs. How has devolution enhanced availability of instructional materials in ECDE centres in Nandi county in order to improve service delivery and teacher: pupil ratio in the county/Sub-county. Interviews, compared to questionnaires- are more powerful in eliciting narrative data that allows researchers to investigate people's views in greater depth (Kvale, & Brinkmann, 2009).

3.9 Piloting

Piloting is important to establish both the reliability and content validity of the instrument and to improve questions, formats and scales (Ross, 2005). A pilot study was carried out in a neighboring Uasin-Gishu County which has similar characteristics as Nandi County. The researcher selected a total of 30 teachers from Uasin-Gishu County. The results from the piloting was incorporated in the final instruments' revisions and improve its content validity as well as questions, format and scales reliability (Ross, 2005).

3.10 Validity and Reliability of the Research Instruments

This section presents how validity and reliability of the research instruments were obtained.

3.10.1 Validity of the Research Instruments

Validity refers to degree to which evidence supports any inferences a researcher makes based on the data collected using particular instrument (Fraenkel & Wallen 2006). According to Kothari (2008) validity is quality attributed to proposition or measures of the degree to which they conform to establish knowledge or truth. An attitude scale is considered valid, for example, to the degree to which its results conform to other measures of possession of the attitude. For this situation, the validity of the instrument was tested by consulting supervisors from University of Eldoret and thereafter incorporating their positive inputs in the refining the final data collection instruments (Foxcroft, wood, Kew, Herrington & Segal, 2004).

3.10.2 Reliability of the Research Instruments

Reliability refers to the constituency that an instrument demonstrates when applied repeatedly under similar conditions (Orodho, 2009). It is therefore, the degree of constancy or whether it can be relied upon to produce the same results when used in two of more attempts to measure theoretical concepts. To determine the reliability of the instrument, questionnaires was piloted on small sample teachers in the neighbouring Uasin-Gishu County. Cronbach Alpha Coefficient was used to test on the reliability of the instruments. A correlation coefficient of equal or more than 0.70 was considered adequate to allow the researcher proceed with the study. In this study a reliability coefficient of 0.78 was obtained on teachers' questionnaire showing that the instrument was reliable for data collection.

3.11 Data Collection Procedures

The researcher obtained a research permit from the National Commission for Science, Technology and Innovations (NACOSTI). After receiving written consent, the researcher proceeded to the County Education Office Nandi County to inform the office about the research to be carried out in ECDE centers. Upon acceptance of the request, the researcher presented the permit to the head teachers who introduced the researcher to the ECDE teachers. The researcher then presented the questionnaires to ECDE teachers for them to fill then collected them on the same day. In case of delays follow ups was done through phone calls and personal visits. In addition, a 30-minute interview was administered to the head teachers and the ECDE supervisors.

3.12 Data Analysis Techniques

Analysis of data involves interpretation, organization and presentation of collected information so as to decrease the information collected from the field to be practical (Onen & Oso, 2005). The study employed descriptive survey design. Questionnaires collected from the field were checked to confirm if all questions had been answered and data was coded. Quantitative data were first organized into themes, and then descriptive statistical method was used to explain the frequencies and percentages calculated from the data obtained in the field. This information was presented in tabular form to make interpretation clearer. Content analysis was used in order to determine the frequency and trends in the variables under the study. qualitative data from interview schedule were analyzed using thematic method. This involved identifying, examining, and interpreting the patterns and themes in textual data with aim of answering the research questions of

the study. This then be interpreted as a measure of direction regarding the objectives. The findings of the quantitative and qualitative study helped to detail, elaborating the challenges facing the devolution of early childhood education programs in Kenya: a study of Nandi county public ECDE centers. this was because by only relying on quantitative finding the study could not understand in-depth scenario. Suggestion which was asked in qualitative component was very useful which couldn't be found out in close ended questions from questionnaires.

3.13 Ethical Considerations

Ethics in research are the standards of behavior that differentiates between satisfactory and unsatisfactory behavior (Luey, 2005). A number of ethical matters can arise during an academic research study including writing, and also the publishing process. These involve plagiarism, falsification of information, confidentiality, conflicts of interest, treatment of both human and animal subjects in research and authorship issues. In this study, high levels of confidentiality were maintained and respondents clearly informed about the purpose of the study they were about to participate in. Necessary permission was obtained from the relevant authorities and principles of anonymity upheld. These processes boosted the confidence of the respondents so that they provide adequate and accurate information concerning challenges facing devolution of early childhood education programs in Nandi County, Kenya.

3.14 Chapter summary

This chapter has presented the research design, research methodology, research paradigm, study area, research population including the target population, sample size and sampling procedures, research instruments, piloting, validity and reliability of

research instruments, data collection procedures, the analysis procedures that were used to analyses the collected information and the ethical considerations that were adhered to during the research process.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTEPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the results of data analysis on challenges facing devolution of early childhood education programs in Nandi County, Kenya. The chapter opens with the responses rate and demographic description of the participants who were involved in the study followed by the status of teacher adequacy in public ECDE centers, kind of support accorded to ECDE teachers by Ministry of Education, the extent to which devolution has enhanced infrastructure development in ECDE centers, the extent of availability of instructional materials in public ECDE centers and the strategies the county government has put in place to motivate teachers in order to improve service delivery in ECDE centers. The chapter also has the interpretations and discussions of the findings based on the reviewed literature.

4.2 Response Rate

A total of 454 (88.0%) out of 516 respondents fully filled and returned the research questionnaire. Therefore, the return rate of questionnaire used in data analysis was 88.0% which was considered adequate to provide sufficient information on the challenges facing devolution of early childhood education programs in Nandi County. The high response rate in this study supports the argument by Peytchev (2013) that the best way to obtain unbiased estimates is to achieve a high response rate. Further, Massey and Tourangeau (2013) suggest that a high rate of non-response increases the potential for biased estimates but does not necessarily bias an estimate. In this study therefore, the researcher considered high response rate to be adequate for the study.

4.3 Demographic Information of the Respondents

In this study, the demographic information that was sought from the respondents was category of the respondents, gender, age, level of education and teaching experience. According to Wyse (2012), when designing a survey, the research needs to assess who to survey and how-to breakdown overall survey response data into meaningful groups of respondents. Therefore, demographic information helps researchers in understanding the respondents of the study.

4.3.1 Category of Respondents

The researcher sought to find out the position of respondents who participated in the study. The results of the analyzed data are presented in Figure 4.1.

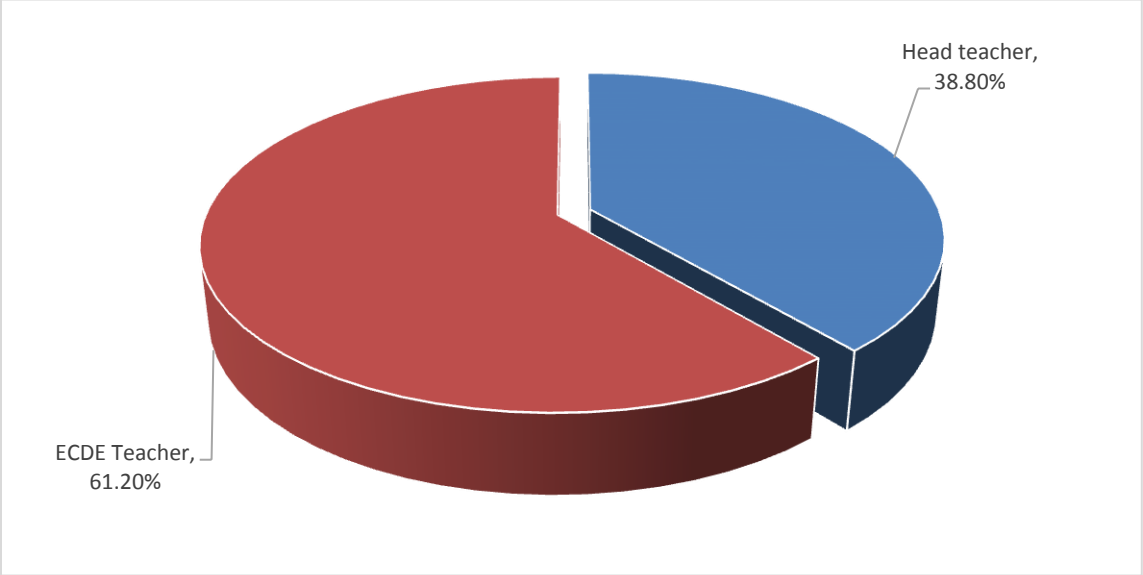


Figure 4.1: Category of the Respondents

Source: Field Data (2018)

Figure 4.1 shows that 278(61.2%) respondents were ECDE teachers while 176(38.8%) respondents were Head teachers. From the responses, majority (61.2%) of the participants were ECDE teachers. However, head teachers were sampled in this study since they are

the curriculum supervisors and therefore are in a position to understand the challenges facing ECDE programs.

4.3.2 Gender of the Respondents

The participants were further requested to indicate their gender. Their responses were tabulated and the results are presented in Table 4.1.

Table 4.1: Gender of the Respondents

Category	**Gender**				
	Male		Female		Total
	Frequency	Percentages	Frequency	Percentages	
Head teachers	122	69.3%	54	30.7	100%
ECDE Teachers	18	6.5	260	93.5	100%
Total	**140**		**314**		

Source: Field Data (2018)

Table 4.1 shows that 122(69.3%) head teachers and 18(6.5%) teachers were male while 260(93.5%) teachers and 54(30.7%) head teacher were female. The study findings showed that majority (69.3%) of the primary school head teachers were male while on the other hand majority (93.5%) of the ECDE teachers were female. This shows that the primary school leadership in Nandi county is inclined towards the male teachers while the teaching of pre-primary school pupils is mostly in the hands of female teachers. This implies that male view teaching in ECDE as female oriented. This is in cognizant with Sayılan (2012) who noted that gender inequality starting from preschool continues in all stages and at all levels of education in the Turkish education system. Likewise, Unhalter (2005) argued that gender inequality is profoundly inseminated in the norms, decision-making processes, power embodiment manners, rules, unwritten cultures, and resource allocations of institutions. Moreover, teaching is one of the bodies where these

inequalities are observed in the most concrete way. According to the 2013/2014-year data of the General Directorate of the Status of Women (GDSW, 2014), 94.6% of teachers in preschool education are women; this ratio is 58.16% at primary level; 53.16% at the secondary school level; 45.58% at high school level. In the present study, the ratio of female to male teachers in ECDE stood at 62.80% to 37.20% which shows some female dominance at ECDE.

4.3.3 Age of the Respondents

Further, the respondents were requested to indicate their age bracket in the questionnaire provided. Their responses were tabulated and the results are presented in Table 4.2.

Table 4.2: Age of the Respondents

Age Bracket	Category			
	Head teachers		ECDE Teachers	
	Frequency	Percentages	Frequency	Percentages
Less Than 30 years	0	0.0	53	19.1
31-40 years	34	19.4	61	21.9
41 -50 years	98	55.6	105	37.8
Over 50 years	44	25.0	59	21.2

Source: Field Data (2018)

From the Table 4.2, the results pointed out 98(55.6%) headteachers and 105(37.8%) ECDE teachers were aged 41-50 years, 44(25.0%) head teachers and 59(21.2%) teachers were aged 46-50 years, 34(19.4%) headteachers and 61(21.9%) teachers were aged 31-40 years while 53(19.1%) teachers were aged less than 30 years old. From the responses, it emerged that majority (55.6%) of the head teachers and most (37.8%) of the pre-school teachers were aged 41-50 years. This implies that most teachers were within the productive age of the teaching force. However, a significant number of below 30 years is an indicator that there are few teachers had venture into teaching at that early age. This implies that they are in a position to effectively provide the requisite pedagogies required for this level. This concurs with studies done by Weston, (2015) and Eiserman et al., (1995) which showed that teachers' age played a significant role in accommodating and enduring leaners in early childhood settings. They noted that younger teachers and older ones are more accommodating and tolerating than the middle-aged teachers who could be undergoing stressful situations at their homes. On the contrary Eiserman, Shilsler & Healey (1995) still argue that teachers across the age groups held moderately positive perception of including children with special needs into regular classrooms. From these arguments, it can be shown that age of pre-school teachers influences the teaching and learning effectiveness of pre-school learners. Similarly, Sandberg & Samuelsson, (2003) noted that age of preschool teachers determined the kind of classroom climate they would create for the children to engage in during learning process.

4.3.4 Highest Professional Qualification

In addition, the respondents were asked to indicate their highest level of professional qualifications. Their responses were tabulated and the results are presented in Figure 4.2.

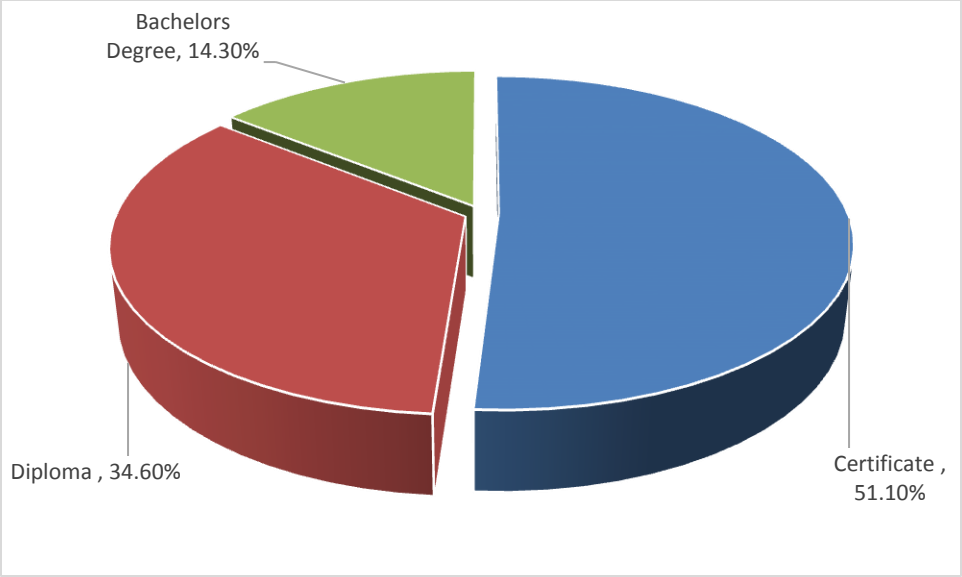


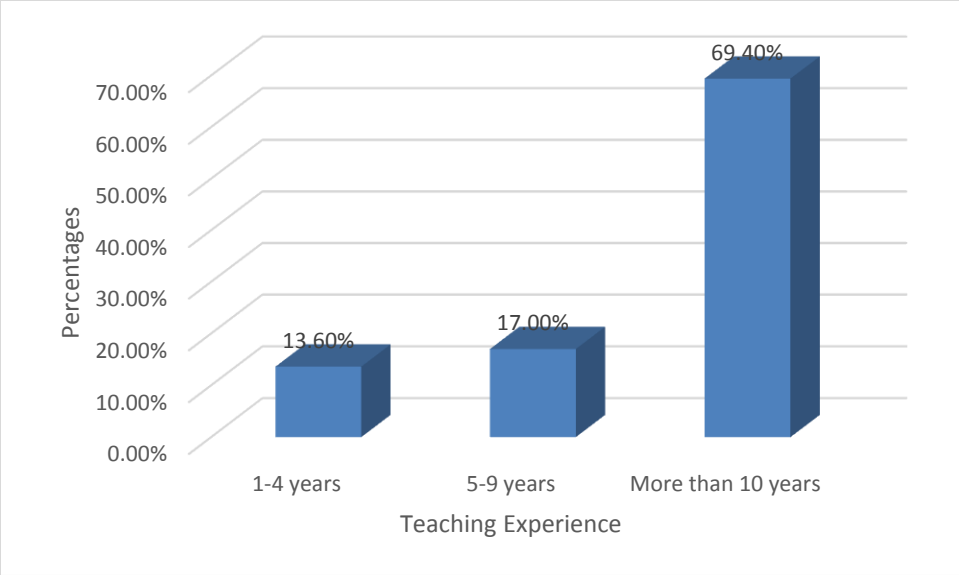
Figure 4.2: Highest professional qualifications

Source: Field Data (2018)

Figure 4.2 shows that 232(51.1%) of the respondents were certificate holders and 157(34.6%) teachers were diploma holders while 65(14.3%) of the teachers had bachelors' degree. From the findings, it seems that majority of the respondents (51.1%) were certificate holders. This can be attributed to the minimum required grade for pre-school teachers. However, a significant number of teachers had bachelors and diploma. This makes teachers to provide higher quality staff-learner interactions (Carr & Mitchel, 2009). Furthermore, World Bank report (2008), had the same sentiments regarding teacher preparation that, teacher training is considered as one of the important elements in shaping the learning process. In a staff evaluation report, it indicated that practical and pedagogical skills in pre-school education are significant for enhancing efficacies among pre-school teachers. This therefore points out that pre-school teachers in the study area were trained to teach pre-school learners.

4.3.5 Teaching Experience

Additionally, the study participants were asked to indicate their teaching experience in the questionnaires provided. The results of the analyzed information are presented in Figure 4.3.



Source: Field Data (2018)

Figure 4.3: Respondents' Teaching Experience

Figure 4.3 shows that 315(69.4%) respondents had a teaching experience of more than 10 years and 77(17.0%) teachers had a teaching experience of 5-9 years while 62(13.7%) teachers had a teaching experience of less than 4 years. The study findings showed that majority (69.4%) of the pre-school teachers and headteachers in the study area had a teaching experience of over 10 years. This shows that they have been in the teaching service for a long period of time even before the coming into effect of the devolution of pre-schools and therefore understand the challenges that face the devolved pre-school system. This supports an earlier finding of Lieber et al., (2009) who acknowledged that pre- school teachers' biographic information such as teaching experience have an impact

on the ECDE programme implementation. Moreover, Saide (2009) in his study argued that, the implementation of pre-school programmes was influenced by teachers' experience, gender and age. Those with higher experience had a positive implementation of pre-school programmes. Bother gender had a better hand in implementation of pre-school programmes. Those who were elderly had a better way of implementing of pre-school programmes because of long time experience.

4.4 Status of Teacher Adequacy in Public ECDE Centres

The first objective of this study was to assess the status of teacher adequacy in public ECDE centres in Nandi County. To achieve this objective, respondents were asked to indicate in the questionnaire whether or not their schools had adequate number of teachers. Their responses were tabulated and the results are presented in Figure 4.4.

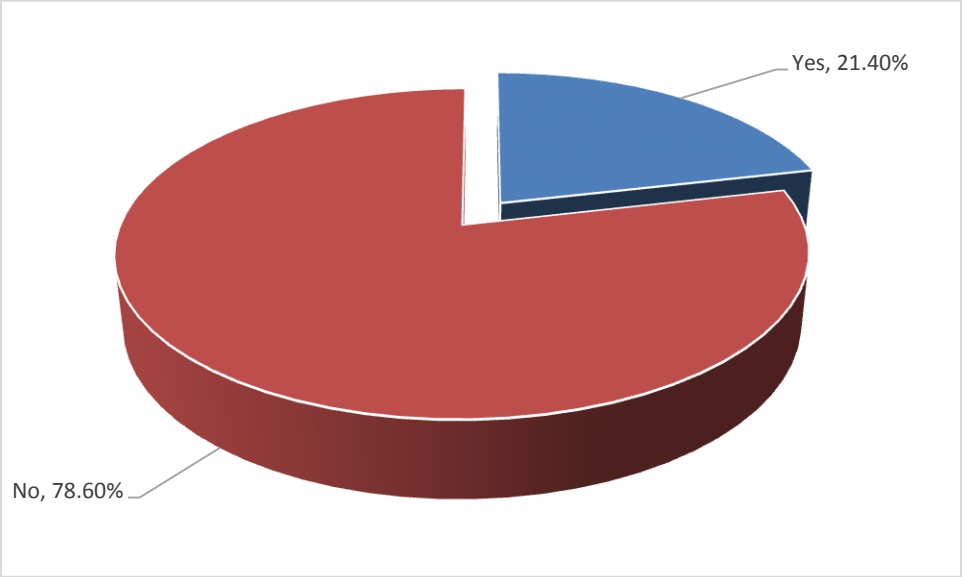


Figure 4.4: Adequacy of Teachers in Public ECDE Centres

Source: Field Data (2018)

Figure 4.4 shows that 357(78.6%) teachers acknowledged that their pre-schools were having inadequate number of teachers while 97(21.4%) respondents reported that their schools had adequate pre-school teachers. From the responses, it can be shown that majority (78.6%) of the teachers in pre-schools in Nandi county revealed that their schools lacked adequate number teachers. This therefore shows that pre-schools in Nandi County lack adequate number of teachers hindering the implementation of ECDE programmes.

Additionally, teachers were asked to rate their level of agreement on a five-point likert scale items in the questionnaire on teacher adequacy. The results of the analyzed information are presented in Table 4.3.

Table 4.3: Teachers' Responses on Adequacy of Pre-School Teachers

Statement	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
Devolution and decentralization of education has contributed to manageable pupil- teacher ratio in my school	208	45.8	109	24.0	26	5.7	61	13.4	50	11.0
There are enough ECDE teachers to teach children in my school	87	19.2	191	42.1	0	0.0	89	19.6	87	19.2
Deployment of teachers to county schools has enabled my school to reduce the teaching burden that teachers face on daily basis	169	37.2	136	30.0	15	3.3	64	14.1	70	15.4
Teachers benchmarking in various Counties has facilitated improvement in learners' academic performance in ECDE	86	18.9	152	33.5	43	9.5	84	18.5	89	19.6

centers

Parents have employed extra teachers in our pre-schools for efficiency in curriculum implementation	26	5.7	76	16.7	47	10.4	164	36.1	141	31.1
All teachers in our pre-schools have undergone pre-school teacher training	60	13.2	29	6.4	38	8.4	199	43.8	128	28.2
Majority of the pre-school teachers have been employed by the county government	132	29.1	140	30.8	68	15.0	67	14.8	47	10.4
Teachers in our school have adequate teaching experience and thus able to handle pre-school learners according to their needs	92	20.3	41	9.0	48	10.6	151	33.3	122	26.9
Teachers in my school have current pedagogical skills to	42	9.3	71	15.6	67	14.8	140	30.8	134	29.5

handle pre-school learners

Source: Field Data (2018)

Table 4.3 shows that 208(45.8%) teachers strongly disagreed with the statement that devolution and decentralization of education had contributed to manageable pupil-teacher ratio in their schools, 109(24.0%) teachers disagreed with the statement, 61(13.4%) teachers agreed with the statement and 50(11.0%) teachers strongly agreed with the statement. The study findings showed that majority (69.8%) of the teachers in pre-schools in Nandi County reported that devolution and decentralization of education had not contributed to manageable pupil- teacher ratio in their schools. This implies that the pupil to teacher ratio was still high in most pre-schools in the region. This situation may bear negatively on implementation of the ECDE programs. The is a pointer that despite devolution of ECDE, most of the pre-schools are still faced with the challenge of teacher adequacy.

Further, 191(42.1%) teachers disagreed with the statement that there were enough ECDE teachers to teach children in their schools, 89(19.6%) teachers agreed with the statement and 87(19.2%) respondents strongly disagreed with the statement while another 87(19.2%) teachers strongly agreed with the statement. From the responses, it emerged that majority (61.3%) of the pre-school teachers in Nandi County believed that their schools had inadequate teachers. This therefore can compromise the quality of education being offered at ECDE centers in the region. This is consistent with the findings of Boyd & Barbarin, (2008) who noted that teacher adequacy can compromise the quality of education. Similarly, Tyke and O'Brien (2002) noted that the shortage of teachers has forced many education systems to lower education standards through the employment of unqualified teachers to fill the gap, thus lowering the school's academic performance.

Additionally, Okongo, Ngao, Rop & Nyongesa, (2015), argued in their study that learners will be considered passive in the class due to their large number as a result of the teaching methods that will be employed by the teacher in taking care of the big population as a result of teacher inadequacies.

In addition, 169(37.2%) teachers strongly disagreed with the statement that deployment of teachers to county schools had enabled their schools to reduce the teaching burden that teachers face on daily basis, 136(30.0%) teachers disagreed with the statement, 70(15.4%) teachers strongly agreed with the statement and 64(14.1%) teachers agreed with the statement while 15(3.3%) teachers were undecided on the statement. From the responses, it emerged that majority (67.2%) of the ECDE teachers in Nandi County reported that the county had not deployed adequate teachers in their schools thus there is increased workload among the existing teachers. This therefore shows that more teachers need to be deployed by the county government to reduce the existing workload. This finding corroborates with those of Bennell and Akyeampong (2007) who pointed out that teachers' heavy workload negatively impacts on teachers' effort and at the same time makes teachers to be resistant to applying new teaching methods.

Similarly, 152(33.5%) teachers were in disagreement with the statement that with the teachers benchmarking in various Counties had facilitated improvement in learners' academic performance in ECDE centers, 89(19.6%) teachers were strongly in agreement with the statement, 86(18.9%) teachers were strongly in disagreement with the statement and 84(18.5%) teachers agreed with the statement while 43(9.5%) teachers were neutral on the statement. As shown by the responses, it can be argued that most (52.4%) of the

pre-school teachers in Nandi County perceived that teachers' benchmarking in various counties did not facilitate improvement in learners' academic performance in ECDE centers. This was attributed to the fact that most ECDE teachers had not been given opportunities of benchmarking in other counties and therefore did not understand the benefits associated with benchmarking. As put by Magutu et al, (2011) benchmarking is one of the methods that schools can use to help them achieve the objective of efficiency and cost- effectiveness in optimizing the resources available to support learning. It is an accepted norm that benchmarking processes focuses on standards of learning that are directed towards the intended outcomes, what the learners are expected to know and be able to do. It is therefore necessary for schools to create objective benchmarks in order to know where they stand currently in satisfying the learners and other stakeholder's expectations. Benchmarks can also be used to compare the performance of various schools (Kanishka & Sharma, 2006). This therefore points out that pre-schools in Nandi County need to embrace the idea of benchmarking from other counties so as to allow them to think outside their classrooms and enable learners to achieve better academically.

In addition, 164(36.1%) teachers agreed with the statement that parents have employed extra teachers in their pre-schools for efficiency in curriculum implementation, 141(31.1%) teachers strongly agreed with the statement, 76(16.7%) teachers disagreed and 47(10.4%) teachers were neutral on the statement while 26(5.7%) teachers were strongly in disagreement with the statement. The study finding shows that majority (67.2%) of the pre-school teachers in the study area acknowledged that parents had employed extra teachers in their pre-schools for efficiency in curriculum implementation in the centers. This points out that parents come in handy to assist pre-schools in getting

extra teachers since the county government has only managed to employ one teacher per center where three pre-school teachers are needed. This therefore points out that the extra two teachers are employed by the parents. This shows that the adequacy of teachers as employed by the parents enables pre-schools to effectively handle the pre-school curriculum. This is in cognizance with the findings of Onyara (2013) who noted that school-based factors including teacher adequacy can affect learners' academic performance through the effectiveness of curriculum delivery. Furthermore, Boyd & Barbarin, (2008) have also pointed out that teacher adequacy can compromise the quality of education. They noted that where there are inadequate teachers, curriculum implementation is compromised because of high teacher workload thus negatively affecting the quality of education. This therefore shows that since the pre-schools is a devolved function, the county governments need to employ adequate pre-school teachers so as to enhance quality education for the learners throughout the education system.

Further, 199(43.8%) teachers agreed with the statement that all teachers in pre-schools had undergone pre-school teacher training, 128(28.2%) teachers strongly agreed with the statement, 128(28.2%) teachers strongly agreed with the statement, 60(13.2%) teachers were strongly in disagreement with the statement and 38(8.4%) teachers were neutral on the statement while 29(6.4%) teachers disagreed with the statement. As shown by the responses, it can be reported that majority (72.0%) of the pre-school teachers believed that all teachers in pre-schools in the study area had undergone pre-school teacher training courses. However, some teachers had just completed form four and are employed by parents to teach in pre-schools. In this study, teachers who have undergone training are employed mostly through the county government thus motivating those who have not

undergone any form of training to join pre-school teacher training colleges. This study finding supports those of Musyoka, Cheloti and Maithya (2018) who noted in the study that a trained teacher would guide curriculum planning sessions and guide conversations toward what is best for learners within the school context. This implies that training enables teachers to effectively implement the pre-school curriculum in turn enabling the wholistic development of pre-school learners.

Moreover, 140(30.8%) teachers were in disagreement with the statement that majority of the pre-school teachers have been employed by the county government, 132(29.1%) teachers strongly agreed with the statement, 68(15.0%) teachers were neutral and 67(14.8%) teachers were in agreement with the statement while 47(10.4%) teachers strongly agreed with the statement. From the responses, it emerged that most (59.9%) of the pre-school teachers were of the view that majority of the pre-school teachers were not employees of the county government. This is despite the fact that early childhood education programme is a devolved function. However, it was noted that the county government employs only one teacher per school leaving out two or more teachers to be employed by the parents. This shows that majority of the pre-school teachers are employed by the parents.

Similarly, 151(33.3%) teachers agreed with the statement that teachers in their schools had adequate teaching experience and thus able to handle pre-school learners according to their needs, 122(26.9%) teachers strongly agreed with the statement, 92(20.35) teachers were strongly in disagreement with the statement and 48(10.6%) teachers were undecided on the statement while 41(9.0%) teachers were in disagreement with the

statement. From the responses, it emerged that majority (60.9%) of the pre-school teachers in the study area believed that teachers had adequate teaching experience and thus able to handle pre-school learners according to their needs. This agrees with the findings of Saide (2009) who argued in his research that, the implementation of pre-school programmes is affected by teachers' experience, gender and age. Teachers with low teaching experience may not adequately address learners' needs while those with high teaching experience have gained adequate knowledge on management of learners with diverse needs.

On the statement that teachers in pre-schools have current pedagogical skills to handle pre-school learners, 140(30.8%) teachers were in disagreement with the statement, 134(29.5%) teachers strongly agreed with the statement, 71(15.6%) teachers disagreed with the statement and 67(14.85) teachers were neutral on the statement while 42(9.3%) teachers were strongly in disagreement. As pointed by the responses, it can be shown that majority (60.3%) of the pre-school teachers in the study area acknowledged that they had adequate and current pedagogical skills which allowed them to effectively handle pre-school leaners. The pedagogical skills for teaching of pre-school learners can only be achieved through in-service or pre-service training. This therefore shows that majority of the pre-school teachers in the study area have undergone pre—school teacher training programme. This agrees with the findings of Amadalo (2010) who noted that teachers who keep on learning improves their pedagogical skills which translate to high academic achievement amongst learners. In the current study, teachers who have undergone training are deemed to have better pedagogical skills thus enabling holistic development of pre-school learners.

Interviews with the primary school head teachers pointed out that teachers recruited by the county government were inadequate since only one teacher per school had been recruited in some schools. However, not all schools had a pre-school teacher recruited by the county government. One head teacher said that;

> *"In my school, there is only one teacher who was recruited by the county government. While other four teachers are under parents."*

This therefore points out that teachers recruited under the county government programme are inadequate forcing parents to still pay more teachers. In some schools it emerged that one teacher was handling a population of over 65 learners since parents were reluctant to employ an extra teacher owing to the fact that parents believe that it's the prerogative of the county government to employ pre-school teachers. This compromises on the quality of learners' education at pre-school level and even to the higher levels of learning since learners will lack a good foundation of education.

The teacher-pupil ratio in the county schools is still far below average. As stipulated by Otunga, Serem & Kindiki (2008) for effective curriculum delivery, the teacher pupil ratio should be 1:25. Today, all our ECD schools have a high enrollment as it is a must for all children to go through pre-School before joining primary. The county government of Nandi has managed to employ one teacher per public primary school. This is not enough to cater for learner's performance in all three levels; baby class, middle class and top class. All other teachers are supported by the parents even from those other feeder schools. There is urgent need for the atleast two more teachers to handle other levels of learners.

4.5 Support accorded to ECDE Teachers

The second objective of this study was to establish the kind of support accorded to ECDE teachers by Ministry of Education in Nandi County. In order to achieve this objective, pre-school teachers were asked to rate their degree of agreement in a five-point Likert scale items in the questionnaire on support accorded to them by both the parents and the Ministry of Education. Their responses were tabulated and the outcome of the analyzed information is presented in Table 4.4.

Table 4.4: Pre-school teachers' responses on Support Accorded to Them

Statement	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
ECDE teachers are fully provided with teaching materials by the parents and county government	132	29.1	162	35.7	23	5.1	67	14.8	70	15.4
Pre-school teachers improvise teaching and learning materials	90	19.8	97	21.4	12	2.6	107	23.6	148	32.6
Parents have provided feeding programme for	33	7.3	89	19.6	31	6.8	157	34.6	144	31.7

ECDE learners to enhance pre-school learner achievement										
Play materials are usually provided by the parents	70	15.4	76	16.7	41	9.0	114	25.1	153	33.7
Teachers in our school have undergone in-service training courtesy of the parents	92	20.3	232	51.1	48	10.6	57	12.6	25	5.5
At the end of every term, parents provide teachers with incentives for performance	127	28.0	132	29.1	72	15.9	70	15.4	53	11.7
Pre-school parents usually fund extra-curricular activities in our school	15	3.3	76	16.7	39	8.6	126	27.8	198	43.6

Source: Field Data (2018)

Table 4.4 shows that 162(35.7%) teachers disagreed with the statement that ECDE teachers are fully provided with teaching materials by the parents and county government, 132(29.1%) teachers were strongly in disagreement with the statement,

70(15.4%) teachers strongly agreed with the statement and 67(14.85) teachers agreed with the statement while 23(5.15) teachers were neutral on the statement. The study found out that majority (64.8%) of the pre-school teachers in Nandi County reported that they were not adequately provided with teaching and learning materials by both the parents and the county government. This shows that most of the pre-schools lacked adequate teaching and learning materials thus hampering the pre-school curriculum implementation. This is in line with the findings of Abayomi and Olukayode (2006) who pointed out that educational resources are important for effective curriculum implementation.

Similarly, 148(32.8%) teachers were strongly in agreement with the statement that Pre-school teachers improvise teaching and learning materials, 107(23.6%) teachers agreed with the statement, 97(21.4%) respondents disagreed with the statement and 90(19.8%) teachers strongly disagreed with the statement while 12(2.6%) teachers were undecided on the statement. The study showed that majority (59.6%) of the pre-school teachers reported that they were improvising teaching and learning materials. Due to the inadequacy of teaching and learning materials in pre-schools, teachers are forced to use the locally available materials. This agrees with the findings of Bruce (2011) who pointed out that available resources can be made or improvised to become teaching and learning materials. The improvisation of locally available materials requires skilled teachers who understand the level of conceptual development of the children in ECDE centres. Thus, by improvising the teaching and learning materials, interests and concerns by teaching in the learning process increases, thus the scarcity of teaching and learning materials will be very minimal. However, this finding was found to contradict those of Ezeasor (2012)

who revealed that most science teachers did not improvise science materials nor use improvised materials in teaching sciences in schools. This was attributed to poor funding, lack of time on the part of the teacher, lack of creativity and poor improvisation skills.

In addition, 157(34.6%) teachers agreed with the statement that Parents have provided feeding programme for ECDE learners to enhance pre-school learner achievement, 144(31.7%) teachers strongly agreed with the statement, 89(19.6%) teachers disagreed with the statement and 33(7.3%) teachers strongly disagreed with the statement while 31(6.8%) teachers were neutral on the statement. It seems therefore that majority (66.3%) of the pre-school teachers in the study area reported that parents provided feeding programme for ECDE learners to enhance pre-school learner achievement. It has been noted that a well implemented school feeding increases enrolment and attendance rates of pre-school learners (Akanbi, 2013). Moreover, Alabi, (2003) pointed out that undernutrition in children stunts their growth and mental development, hence, leading to a negative relationship between nutrition and academic performance. This points out that parental involvement in the provision of feeding programs had enabled learners to be retained in school thus improving on their performance.

Additionally, 153(33.7%) teachers strongly agreed with the statement that play materials were usually provided by the parents, 114(25.1%) teachers were in agreement with the statement, 76(16.7%) teachers disagreed with the statement and 70(15.4%) teachers were strongly in disagreement with the statement while 41(9.0%) teachers were neutral on the statement. The responses pointed out that majority (58.8%) of the pre-school teachers acknowledged that play materials in ECDE centers were provided by parents. This

implies that it is through the parents that pre-schools are able to utilize various play materials.

Moreover, 232(51.1%) teachers disagreed with the statement that pre-school teachers had undergone in-service training courtesy of the parents, 92(20.3%) teachers were strongly in disagreement with the statement, 57(12.6%) teachers agreed with the statement and 48(10.6%) teachers agreed with the statement while 25(5.5%) teachers strongly agreed with the statement. As shown by the responses, it emerged that majority (71.4%) of the teachers reported that pre-school teachers had not undergone training through parental financial support. This implies that most teachers sponsor themselves for the in-service training courses. This training attendance depends largely on one's capacity to sponsor himself/herself.

Notwithstanding, 132(29.1%) pre-school teachers disagreed with the statement that at the end of every term, parents provide teachers with incentives for performance, 127(28.0%) teachers were strongly in disagreement with the statement, 72(15.9%) teachers were neutral on the statement and 70(15.4%) agreed while 53(11.7%) teachers strongly agreed with the statement. From the responses, it emerged that majority (57.1%) of the pre-school teachers in Nandi County reported that they were not rewarded by parents for their performance. This therefore shows that pre-school teachers are not motivated well despite their outstanding performance in laying the educational foundation of the learners. Mustapha and Ghee (2013) pointed out in their studies that motivation plays an important role in the organization because it increases productivity and goals can be achieved in an efficient way and also take part in the vital role for teachers since it helps to achieve

target goals in an efficient way. In addition, teacher motivation is very important since it improves the skills and knowledge of teachers seeing as it directly influences the learners' achievement.

Furthermore, 198(43.6%) teachers were strongly in agreement with the statement that Pre-school parents fund extra-curricular activities in their schools, 126(27.8%) teachers disagreed with the statement, 76(16.7%) teachers disagreed with the statement and 39(8.6%) teachers were neutral on the statement. It seems therefore that majority (71.4%) of the teachers acknowledged that parents participated in funding of extra-curricular activities in pre-schools in the study area.

Interviews conducted from director of ECDE and sub county ECDE officers revealed that teachers expected good employment thus better remuneration on permanent and pensionable terms.

> "*Teachers expect to get support from ministry of education on employment terms in service training which can enhance their promotions and delivery of services. However, majority of teachers are still on contract basis. Those who got trained and expect promotion had not been promoted*."

Further, results from interviews revealed that teachers expected to have their own union to advocate for their issues in terms of employment and promotion. This is because majority were still on contract basis and those trained had not been promoted. Teachers expected the union to also advocate for their issues in terms of employment and curriculum delivery. For instance, medical scheme, commuter allowance and Job group, House allowance, leave allowance amongst others.

4.6 Infrastructural Development in Pre-schools

The third objective of this study was to find out the extent to which devolution had enhanced infrastructure development in ECDE centers in Nandi county. To achieve this, the respondents were asked to specify the types of infrastructural development projects that have been initiated by county government so as to improve teacher's service delivery in pre-schools in the study area. The study allowed the respondents to specify more than one choice (multiple responses). The results of the analyzed information is provided in Table 4.5

Table 4.5: Pre-school Teachers' Responses on Types of Infrastructural Projects Undertaken by County Governments

Infrastructure	Frequencies	Percentages
Classroom construction	418	47.1
Construction of storage facilities	54	6.1
Provision of play fields and materials for learners	39	4.4
Provision of Tables and chairs	67	7.5
Construction of toilets	310	35.0
Total	**888**	**100.00**

Source: Field Data (2018)

Table 4.5 shows that 418(47.1%) respondents acknowledged that the county government had embarked on the construction of classrooms, 310(35.0%) pre-school teachers noted that the county government had constructed toilets in their schools, 67(7.5%) teachers reported that the county government had provided tables and chairs for learners and 54(6.1%) teachers noted that the county government had constructed storage facilities while 39(4.4%) teachers agreed that the county government had provided play materials

for pre-school learners. The study findings showed that (47.1%) of the pre-school teachers reported that the county government had constructed classrooms in the public primary schools thus supporting ECDE programs. However, it further emerged that only one classroom out of the needed three was constructed by the county government in approximately sixty schools per year in the county. The rest of the classrooms were provided by the parents and the host primary school.

Interviews with the Director of ECE at the county noted that through the county, there had been funding of three classrooms per ward, constructed to cater for enrollment of pre-school learners.

> "*The county government had promised to construct three classrooms in every ward for ECDE in order to accommodate the growing number of pupils enrolling to the ECDE centers. However, this has not been achieved because the there is no disbursement of funds to implement these projects."*

They further revealed that the classrooms constructed for ECDE have not followed ECDE guideline policy of 2006 where all the constructed classroom should be spacious, well ventilated, have good lighting and be conducive for learning.

> "*On infrastructural development the county government needs to do more by increasing by increasing number classrooms from one to at least three in every school not as one classroom per ward. This will cater for ever increasing enrolment in or schools. The classroom built must be well equipped with chairs*

and tables, shelves, cupboards, good blackboard, lockable doors and windows."

4.7 Availability of Instructional Materials

The fourth objective of this study was to establish the extent of availability of instructional materials in public ECDE centers in Nandi County. To achieve this objective, the study participants were requested to rate their level of agreement on a five-point Likert scale items in the questionnaire on whether devolution of pre-schools has enhanced availability of instructional materials in ECDE Centers. The responses of the study participants were tabulated and the outcome of the analyzed information is presented in Table 4.6.

Table 4.6: Pre-school Teachers' Responses on Availability of Instructional Materials

Statement	SD		D		UD		A		SA	
	F	%	F	%	F	%	F	%	F	%
County Government provides funds for text books to ECDE centers	198	43.6	126	27.8	39	8.6	76	16.7	15	3.3
The County Government allocates funds for purchase of Outdoor play	192	42.3	156	34.4	33	7.3	47	10.4	26	5.7

materials										
County Government monitors and evaluates the resource availability in ECDE centers through education coordinator	148	32.6	107	23.6	12	2.6	97	21.4	90	19.8
Pre-school teachers improvise learning materials in our school	63	13.9	84	18.5	10	2.2	121	26.7	176	38.8

Source: Field Data (2018)

Table 4.6 shows that 198(43.6%) were strongly in disagreement with the statement that county government provides funds for textbooks for ECDE centers, 126(27.8%) teachers disagreed with the statement, 76(16.7%) teachers agreed with the statement and 39(8.6%) teachers were neutral on the statement while 15(3.3%) teachers strongly agreed with the statement. The study finding showed that majority (71.4%) of the pre-school teachers in Nandi County acknowledged that the county government had not provided any textbooks in ECDE centers in the region. This therefore points out that text-books used in most ECDE centers in the region are either provided by the parents or the host primary school.

This implies that there is inadequacy of textbooks in pre-schools in the study area thus hindering pre-school curriculum implementation. This therefore shows that the county government needs to strengthen pre-schools through provision of funds for the purchase of textbooks or directly purchase textbooks for pre-school centers since early childhood education is a devolved function. Most researchers including Yara & Otieno, (2010) and Moochi, (2012) have argued that quality education hinges on physical facilities that are the ultimate predictors of learners' academic achievements. Furthermore, several studies show that inadequacy of facilities and equipment affects curriculum implementation in learning institutions (Hooker et. al., 2011; Indoshi, Wagah, & Agak, 2010; Ayuba & Gatabazi, 2010). This therefore points out that since pre-schools lay the foundation of learning, they need to be provided with adequate learning materials including textbooks since inadequacy of teaching and learning resources is a constraint to curriculum implementation in learning institutions (Hailu, 2011).

In addition, 192(42.3%) pre-school teachers strongly disagreed with the statement that the County Government allocates funds for purchase of outdoor play materials, 156(34.4%) teachers were in disagreement with the statement, 47(10.4%) respondents were in agreement with the statement and 33(7.3%) teachers were undecided on the statement while 26(5.7%) teachers were strongly in agreement with the statement. From the responses, it emerged that majority (76.7%) of the pre-school teachers in the study area reported that the county government had not allocated funds for promotion of preschool teachers. This shows that pre-school teachers motivation since they are not promoted thus affecting their teaching process. The study findings concur with Cheptoech (2000), who noted that job satisfaction of teachers recommends that salaries

of workers should be paid promptly and that promotion of workers should be accompanied by a corresponding increase in the salary they earn. Further, Olando (2005) noted that promotion among teachers is expected to be followed by a higher package but teachers stay in one job group for a long time which affects their working attitude. Majority of teachers retire without having risen to higher grade. Employees would want pay system and promotions policies that are just and in line with the expectations.

In addition, 148(32.6%) pre-school teachers strongly disagreed with the statement that County Government monitors and evaluates the resource availability in ECDE centers through education coordinators, 107(23.6%) teachers were in disagreement with the statement, 97(21.4%) teachers were in agreement with the statement and 90(19.8%) teachers were strongly in disagreement with the statement while 12(2.6%) teachers were undecided on the statement. It seems therefore that majority (56.2%) of the study participants acknowledged that the county government neither monitored nor evaluated the resource availability in ECDE centers through education coordinators. This shows that despite the devolution of early childhood development programs, the county government had not taken up its role of monitoring and evaluating resource availability at early childhood development centers. This is contrary to the finding of Martinez, et al., (2012) who noted that government partners participated in training and joint monitoring visits to provide mentoring and coaching in pre-schools in Mozambique.

Further, 176(38.8%) teachers strongly agreed with the statement that pre-school teachers improvised teaching and learning materials in their schools, 121(26.7%) teachers agreed with the statement, 84(18.5%) teachers disagreed with the statement and 63(13.9%)

teachers were strongly in disagreement with the statement while 10(2.2%) teachers were neutral on the statement. The study finding suggested that majority (65.5%) of the pre-school teachers in Nandi County acknowledged that they were improvising teaching and learning materials in their schools. Improvising of teaching and learning resources is attributed to inadequacies of the materials thus forcing teachers to improvise what they are lacking. Improvised instructional materials (IIM) are acquired from the local environment, either within or outside the school environment. They are sourced by teachers, parents, learners, community members and other charity organizations. Improvisation involves the process of selection and creation of relevant instructional elements for teaching and learning process to achieve the educational goals and objectives (Eshiet, 1996). This finding was found to be contrary to the findings of Ezeasor (2012) who revealed that most science teachers did not improvise science materials nor use IIM in teaching sciences in schools.

The study findings from director of ECDE and sub county ECDE officers' interviews revealed that plans were underway to ensure that all the ECDE centers in the county can access adequate instructional materials in order to improve service delivery by increasing county budgetary allocation to ECDE sector. The county director of ECDE noted that:

> "*As we are still waiting for funds each teacher is encouraged to develop instructional materials for use in their centers through purchasing, donations and utilizing the locally available materials, borrowing and using parent's children to collect some of the materials. To ensure that teachers develop the materials, we organize for material displays where the best teachers are*

rewarded and appraised. This helps teacher to improve their skill of development according to the needs of the learners"

4.8 Strategies Put in Place to Motivate Teachers and Improve Service Delivery

The fifth objective of this study was to identify the strategies put in place by the County Government to motivate teachers in order to improve service delivery in ECDE centres in Nandi County. To achieve this objective, the pre-school teachers were asked to rate the level of agreement on a five-point Likert scale items in the questionnaire on strategies that need to be put in place by the county government so as to motivate them and enhance service delivery. Their responses were tabulated and the results are presented in Table 4.7.

Table 4.7: Pre-school Teachers' Responses on Strategies Put in Place to Motivate Teachers and Improve Service Delivery

Statement	SD		D		UD		A		SA	
	F	%	F	%	F	%	F	%	F	%
Provision of good remunerations	59	13.0	79	17.4	10	2.2	179	39.4	127	28.0
Provision of Medical allowance for pre-school teachers	47	10.4	31	6.8	48	10.6	205	45.2	123	27.1
Provision of proper working environment	89	19.6	31	6.8	33	7.3	157	34.6	144	31.7
Provision of house allowance	40	8.8	22	4.8	20	4.4	226	49.8	146	32.2
Provision of in-service courses for skills development	11	2.4	21	4.6	26	5.7	224	49.3	172	37.9
Provision of commuter allowance	40	8.8	42	9.3	37	8.1	137	30.2	198	43.6
Provision of promotion opportunities	48	10.6	45	9.9	25	5.5	172	37.9	164	36.1

Source: Field Data (2018)

Table 4.7 shows that 179(39.4%) pre-school teachers agreed with the statement that Provision of good remunerations to pre-schools motivates teachers to improve service delivery, 127(28.0%) teachers strongly agreed with the statement, 79(17.4%) teachers disagreed with the statement and 59(13.0%) teachers were strongly in disagreement with the statement while 10(2.2%) teachers were undecided on the statement. The study

finding showed that majority (67.4%) of the pre-school teachers in Nandi county reported that there was need for the provision of good remunerations to pre-schools so as to motivate teachers and improve service delivery. good remuneration enhance teaching and learning process as pointed by KIE (2009) recommendations which observes that teacher remuneration can motivate a teacher to work extra to ensure good learner performance. This therefore shows that the county government needs to budget for pre-school teacher remuneration for effective service delivery.

Further, 205(45.2%) teachers were in agreement that there is need for provision of medical allowance for pre-school teachers to motivate them and improve service delivery, 123(27.1%) teachers strongly agreed with the statement, 48(10.6%) teachers were neutral on the statement and 47(10.4%) teachers were strongly in disagreement with the statement while 31(6.8%) teachers disagreed with the statement. From the responses, it emerged that majority (72.3%) of the pre-school teachers noted that there was need for the county government to provide them with medical allowances so as to motivate them and enhance improved service delivery. This is attributed to the fact that the pre-school teachers both employed by the government and those employed by the parents lack medical schemes thus are forced to pay out of their pockets whenever they or their family members fall sick. Provision of medical allowances enhances employee satisfaction which is considered to be one of the major criteria for establishing a healthy organizational environment in an organization (Jung, & Yoon, 2015). In addition, Zhang, (2014) noted that employee social benefits as compensation enables employees to improve on organizational productivity.

In addition, 157(34.6%) pre-school teachers agreed with the statement that there was need for provision of proper working environment by the county government, 144(31.7%) teachers strongly agreed with the statement, 89(19.6%) teachers strongly disagreed with the statement and 33(7.3%) teachers were undecided on the statement while 31(6.8%) teachers disagreed with the statement. As shown by the teachers' responses, it emerged that majority (66.3%) of the pre-school teachers in the study area believed that there was need for the county government to provide proper and conducive working environment. The conducive environment in this case include adequate classrooms, play materials and remuneration of teachers amongst others.

Similarly, 226(49.8%) teachers agreed with the statement that there was need for the county government to employ more ECDE teachers, 146(32.2%) teachers strongly agreed with the statement, 40(8.8%) teachers were strongly in disagreement with the statement and 22(4.8%) teachers disagreed with the statement while 20(4.4%) teachers were undecided on the statement. The finding showed that majority (82.0%) of the pre-school teachers believed that there was need for provision of house allowance to the preschool teachers. This is attributed to the fact that most teachers had a salary but not house allowance included. This could compromise the quality of education since most of preschool teachers travel from their homes (Boyd & Barbarin, 2008).

Moreover, 224(49.3%) teachers agreed with the statement that there was need for the county government to provide in-service courses for skills development amongst teachers, 172(37.9%) teachers strongly agreed with the statement, 26(5.7%) teachers were undecided on the statement and 21(4.6%) teachers disagreed with the statement

while 11(2.4%) teachers were strongly in disagreement with the statement. As shown by the responses, it can be argued that majority (87.2%) of the pre-school teachers in the study area acknowledged that there was need for the county government to provide teachers with in-service training courses so as to ensure that pre-school teachers have the necessary skills for teaching of pre-school learners. Teachers' education is one of the most important indicators of high quality in early childhood education. Several research studies documented the role of teachers in developing the whole child in the early years (Cuenca, 2010; Heisner & Sandvik, 2011) setting the environment (Kim, 2011) developing appropriate ways of teaching children that match their developmental stage (Akin, 2013) and provide learning experiences that are meaningful, relevant, and respectful for each child (Copple & Bredekamp, 2009) that promote children in all developmental domains in early childhood settings. This therefore points out that teachers need to undergo regular in-service training courses which will enable them to become quality teachers.

Additionally, 198(43.6%) pre-school teachers strongly agreed with the statement that the county government needs to provide commuter allowance for preschool teachers, 137(30.2%) pre-school teachers were in agreement with the statement, 42(9.3%) pre-school teachers were in disagreement with the statement and 40(8.8%) pre-school teachers strongly disagreed with the statement while 37(8.1%) teachers were neutral on the statement. It seems therefore that majority (73.8%) of the pre-school teachers in the study area reported that there was need for teachers to be provided with commuter allowance. The essence of commuter allowance is to enable the teacher not to experience transportation challenges like having to incur transportation costs. It is therefore

necessary for county Government to create a budget to cater for preschool teacher transport allowance.

Similarly, 172(37.9%) pre-school teachers agreed with the statement that the county government needs to provide promotion opportunities, 164(36.1%) teachers strongly agreed with the statement, 48(10.6%) teachers strongly disagreed with the statement and 45(9.9%) pre-school teachers disagreed with the statement and 25(5.5%) teachers were undecided on the statement. The study finding showed that majority (74.0%) of the pre-school teachers noted that the county government needs to provide promotion opportunities. This is due to the fact that promotion is key in professional development.

Since devolution was initiated in 2010, major services had been taken closer to the people thus a positive change in the society. As the central government devolved other sectors, the county government much has been attained. However, there is still much more to be done by the county government for each sector to realize its full potential and objectives laid down. ECD centers are the core foundation of education and later life. Through ECD, children attain good morals and realize full potential in life. The county government should enhance mechanisms that enable learners to achieve high performance. Good and adequate classrooms should be a priority. Construction of storage facilities should be availed to enhance learning.

Equitable distribution of materials should be realized in all regions irrespective of their political background. Employment of more ECD teachers should be enhanced and good terms of service should be provided. There should be a clear structure of management and supervision of ECDE program in the region. Leaders should embrace good political

will to enable all learners' access good education. Trainings and induction courses should be done at least termly in order to improve teacher's skills on service delivery. This will enable stakeholders to embrace a positive attitude towards devolution.

In addition, there is need for clear policies and core values to be well articulated for better outcomes in learning institutions. Furthermore, one of the head teachers pointed out during the interviews conducted that there was need to increase budgetary allocation in education for easy supervision and management of ECDE programs in Nandi County. Similarly, the head teachers pointed out that there was need for the county government to provide funding for co-curricular activities to enable children realize holistic development. The county should organize forums for competitions in music, drama and games amongst others.

In a similar enjoinder, it was observed that pre-schools needed to establish collaboration with private schools, carry out advocacy programs on the importance of investing in early years, mobilize stakeholders to support devolution of education and establish good relationship with primary school management to allow expansion of ECD classrooms and playfield. This can be done through Land Purchasing and feeding programs for learner retention and nutritional improvement. Furthermore, the interviewed head teachers noted that there was need to identify placement systems to cater for children with special needs through the establishment of special units and mechanisms of handling these learners.

Interviews with the Director of Early Childhood Education in the county posited that county Government had taken up ECDE programs since it was not managed by the ministry of Education fully but by the Ministry of Culture and Social Services. This

ministry was also developed and thus ECDE programs fitted for devolution for easy management and supervision. The county government through Transition authority developed structure for running of ECDE programs. Furthermore, ECDE teachers have been motivated through employment and remuneration. Moreover, there is a clear structure of payment on temporary terms at the moment. There are also induction and in-service training/workshops terms in order to improve service delivery.

CHAPTER FIVE

SUMMARYOF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter has a summary of the research findings, conclusions, recommendations and suggestions for further research based on the analysis of information that was collected.

5.2 Summary of the Findings

The purpose of this study was to examine challenges facing devolution of early childhood education programs in Nandi County, Kenya. The study specifically addressed the status of teacher adequacy in public ECDE centers, the kind of support accorded to ECDE teachers by Ministry of Education, the extent to which devolution has enhanced infrastructure development, extent of availability of instructional materials and the strategies put in place by the county government to motivate teachers in order to improve service delivery. Data were collected using questionnaires and interviews yielding both quantitative and qualitative data which were analyzed using descriptive statistics. The analyzed data revealed the following:

5.2.1 Demographic Information of the Respondents

In this study, the demographic information that was sought from the respondents were category of the respondents, gender, age, level of education and teaching experience. The study found out that majority (61.2%) of the participants were ECDE teachers. However, Head teachers were sampled in this study since they are the curriculum supervisors and therefore are in a position to understand the challenges facing ECDE programs. In addition, it emerged that majority (69.3%) of the primary school head teachers were male while on the other hand majority (93.5%) of the ECDE teachers were female. This shows

that the primary school leadership in Nandi county is inclined towards the male teachers while the teaching of pre-primary school pupils is mostly in the hands of female teachers.

This is in cognizant with Sayılan (2012) who noted that gender inequality starting from preschool continues in all stages and at all levels of education in the Turkish education system. Likewise, Unhalter (2005) argued that gender inequality is profoundly inseminated in the norms, decision-making processes, power embodiment manners, rules, unwritten cultures, and resource allocations of institutions. Moreover, teaching is one of the bodies where these inequalities are observed in the most concrete way.

Further, majority (55.6%) of the head teachers and most (37.8%) of the pre-school teachers were aged 41-50 years. This implies that most teachers within the productive age of the teaching force. However, a significant number of below 30 years is an indicator that teachers venture into teaching as untrained teachers or proceeding with training. This implies that they are in a position to effectively provide the requisite pedagogies required for this level. This concurs with studies done by Weston, (2015) and Eiserman et al., (1995) which showed that teachers' age played a significant role in accommodating and enduring leaners in early childhood settings. They noted that younger teachers and older ones are more accommodating and tolerating than the middle-aged teachers who could be undergoing stressful situations at their homes. On the contrary Eiserman, Shilsler & Healey (1995) still argue that teachers across the age groups held moderately positive perception of including children with special needs into regular classrooms. From these arguments, it can be shown that age of pre-school teachers influences the teaching and learning effectiveness of pre-school learners. Similarly, Sandberg & Samuelsson, (2003)

age of preschool teachers determined the kind of classroom climate they would create for the children to engage in during learning process.

Similarly, majority of the respondents (51.1%) were diploma holders. This can be attributed to the minimum required grade for pre-school teachers. However, a significant number of teachers had bachelors and diploma. This makes teachers be able to provide higher quality staff-learner interactions (Carr & Mitchel, 2009). Furthermore, World Bank report (2008), had the same sentiments regarding teacher preparation that, teacher training is considered as one of the important elements in shaping the learning process. In a staff evaluation report, it indicated that practical and pedagogical skills in pre-school education are significant for enhancing efficacies among pre-school teachers. This therefore points out that pre-school teachers in the study area were trained to teach pre-school learners.

Additionally, majority (69.4%) of the pre-school teachers and head teachers in the study area had a teaching experience of over 10 years. This shows that they have been in the teaching service for a long period of time even before the coming into effect of the devolution of pre-schools and therefore understand the challenges that face the devolved pre-school system. This supports an earlier finding of Butera, Czaja, Daniels, Goodman, Hanson, Lieberal and Plamer (2009) who acknowledged that pre- school teachers' biographic information such as teaching experience have an impact on the ECDE programmer implementation. Moreover, Saide (2009) in his study argued that, the implementation of pre-school programs was influenced by teachers' experience, gender and age.

5.2.2 Teacher Adequacy in Public ECDE Centers

The first objective of this study was to assess the status of teacher adequacy in public ECDE centers in Nandi County. The study found out that most of the pre-schools lacked adequate teachers. This therefore shows that pre-schools in Nandi County lack adequate teachers hindering the implementation of ECDE programs. In addition, majority (69.8%) of the teachers in pre-schools in Nandi County reported that devolution and decentralization of education had not contributed to manageable pupil- teacher ratio in their schools. This implies that the pupil to teacher ratio was still high in most pre-schools in the region thus hampering the implementation of ECDE programs. The is a pointer that despite devolution of ECDE, most of the pre-schools are still faced with the challenge of teacher adequacy. Additionally, Okongo, Ngao, Rop & Nyongesa, (2015), argued in their study that learners will be considered passive in the class due to their large number as a result of the teaching methods that will be employed by the teacher in taking care of the big population as a result of teacher inadequacies. Bennell and Akyeampong (2007) further noted that teachers' heavy workload as a result of inadequate teaching staff negatively impacts on teachers' effort and at the same time makes teachers to be resistant to applying new teaching methods.

Similarly, most (52.4%) of the pre-school teachers perceived that teachers' benchmarking in various counties did not facilitate improvement in learners' academic performance in ECDE centers. This was attributed to the fact that most ECDE teachers had not been given opportunities of benchmarking in other counties and therefore did not understand the benefits associated with benchmarking. As put by Magutu et al, (2011) benchmarking is one of the methods that schools can use to help them achieve the objective of

efficiency and cost- effectiveness in optimizing the resources available to support learning. It is an accepted norm that benchmarking processes focuses on standards of learning that are directed towards the intended outcomes, what the learners are expected to know and be able to do. It is therefore necessary for schools to create objective benchmarks in order to know where they stand currently in satisfying the learners and other stakeholder's expectations. Benchmarks can also be used to compare the performance of various schools (Kanishka & Sharma, 2006). This therefore points out that pre-schools in Nandi County need to embrace the idea of benchmarking in other counties so as to allow them to think outside their classrooms and enable learners to achieve better results academically.

In addition, majority of the pre-school teachers in the study area reported that parents had employed extra teachers in their pre-schools so as to improve efficiency in curriculum delivery in the pre-schools. This points out that parents come in handy to assist pre-schools in getting extra teachers since the county government has only managed to employ one teacher per center where three pre-school teachers were needed. This shows that the inadequacy of teachers forces parents to support the pre-schools through PTA recruitment of teachers. This is in cognizance with the findings of Onyara (2013) who noted that school-based factors including teacher inadequacies can affect learners' academic performance through the ineffectiveness in curriculum delivery. Furthermore, Boyd & Barbarin, (2008) have also pointed out that teacher adequacy can compromise the quality of education. They noted that where there are inadequate teachers, curriculum implementation is compromised because of high teacher workload thus negatively affecting the quality of education. This therefore shows that since the pre-schools is a

devolved function, the county governments need to employ adequate pre-school teachers so as to enhance quality education for the learners throughout the education system.

Further, majority (72.0%) of the pre-school teachers believed that all teachers in pre-schools in the study area had undergone pre-school teacher training courses. However, some teachers had just completed form four and are employed by parents to teach in pre-schools. In this study, teachers who have undergone training are employed mostly through the county government thus motivating those who have not undergone any form of training to join pre-school teacher training colleges. This study finding supports those of Musyoka, Cheloti and Maithya (2018) who noted in the study that a trained teacher would guide curriculum planning sessions and guide conversations toward what is best for learners within the school context. This implies that training enables teachers to effectively implement the pre-school curriculum in turn enabling the holistic development of pre-school learners.

Moreover, most (59.9%) of the pre-school teachers were of the view that majority of the pre-school teachers were not employees of the county government. This is despite the fact that early childhood education programmer is a devolved function. However, it was noted that the county government employs only one teacher per school leaving out two or more teachers to be employed by the parents. This shows that majority of the pre-school teachers are employed by the parents. Similarly, majority (60.9%) of the pre-school teachers in the study area believed that teachers had adequate teaching experience and thus able to handle pre-school learners according to their needs. This agrees with the findings of Saide (2009) who argued in his research that, the implementation of pre-

school programmes is affected by teachers' experience, gender and age. Teachers with low teaching experience may not adequately address learners' needs while those with high teaching experience have gained adequate knowledge on management of learners with diverse needs.

Further, majority (60.3%) of the pre-school teachers in the study area acknowledged that they had adequate and current pedagogical skills which allowed them to effectively handle pre-school leaners. The pedagogical skills for teaching of pre-school learners can only be achieved through in-service or pre-service training. This therefore shows that majority of the pre-school teachers in the study area have undergone pre—school teacher training program. This agrees with the findings of Amadalo (2010) who noted that teachers who keep on learning improves their pedagogical skills which translate to high academic achievement amongst learners. In the current study, teachers who have undergone training are deemed to have better pedagogical skills thus enabling holistic development of pre-school learners.

Interviews with the primary school head teachers pointed out that teachers recruited by the county government were inadequate since only one teacher per school had been recruited in some schools. However, not all schools had a pre-school teacher recruited by the county government. This therefore points out that teachers recruited under the county government programs are inadequate forcing parents to still pay more teachers. In some schools it emerged that one teacher was handling a population of over 65 learners since parents were reluctant to employ an extra teacher owing to the fact that parents believe that it's the prerogative of the county government to employ pre-school teachers.

5.2.3 Support accorded to ECDE Teachers

The second objective of this study was to establish the kind of support accorded to ECDE teachers by Ministry of Education in Nandi County. The study found out that majority of the pre-school teachers in Nandi County reported that they were not adequately provided with teaching and learning materials by both the parents and the county government. This shows that most of the pre-schools lacked adequate teaching and learning materials thus hampering the pre-school curriculum implementation. Similarly, majority of the pre-school teachers reported that they were improvising teaching and learning materials. Due to the inadequacy of teaching and learning materials in pre-schools, teachers are forced to use the locally available materials. This agrees with the findings of Bruce (2011) who pointed out that available resources can be made or improvised to become teaching and learning materials. The improvisation of locally available materials requires skilled teachers who understand the level of conceptual development of the children in ECDE centers. Thus, by improvising the teaching and learning materials, interests and concerns by teaching in the learning process increases, thus the scarcity of teaching and learning materials will be very minimal. However, this finding was found to contradict those of Ezeasor (2012) who revealed that most science teachers did not improvise science materials nor use improvised materials in teaching sciences in schools. This was attributed to poor funding, lack of time on the part of the teacher, lack of creativity and poor improvisation skills.

In addition, majority (66.3%) of the pre-school teachers in the study area reported that parents provided feeding programs for ECDE learners to enhance pre-school learner

achievement. It has been noted that a well implemented school feeding increases enrolment and attendance rates of pre-school learners (Akanbi, 2013). Moreover, Alabi, (2003) pointed out that under nutrition in children stunts their growth and mental development, hence, leading to a negative relationship between nutrition and academic performance. These points out that parental involvement in the provision of feeding programs had enabled learners to be retained in school thus improving on their performance. Further, majority (58.8%) of the pre-school teachers acknowledged that play materials in ECDE centers were provided by parents. This implies that it is through the parents that pre-schools are able to utilize various play materials. Moreover, majority (71.4%) of the teachers reported that pre-school teachers had not undergone training through parental financial support. This implies that most teachers sponsor themselves for the in-service training courses. This training attendance depends largely on one's capacity to sponsor himself/herself.

Notwithstanding, majority (57.1%) of the pre-school teachers reported that they were not rewarded by parents for their performance. This therefore points that pre-school teachers are not motivated well despite their outstanding performance in laying the educational foundation of the learners. Mustapha and Ghee (2013) pointed out in their studies that motivation plays an important role in the organization because it increases the productivity and goals can be achieved in an efficient way and also it takes part in the vital role for teachers since it helps to achieve target goals in an efficient way. In addition, teacher motivation is very important since it improves the skills and knowledge of teachers seeing as it directly influences the learners' achievement. Furthermore,

majority (71.4%) of the teachers acknowledged that parents participated in funding of extra-curricular activities in pre-schools in the study area.

5.2.4 Infrastructural Development in Pre-schools

The third objective of this study was to find out the extent to which devolution has enhanced infrastructure development in ECDE centers in Nandi County. The study findings showed that (47.1%) of the pre-school teachers reported that the county government had constructed classrooms in the public primary schools thus supporting ECDE programs. However, it further emerged that only one classroom out of the needed three are constructed by the county government in approximately sixty schools per year in the county.

5.2.5 Availability of Instructional Materials

The fourth objective of this study was to establish the extent of availability of instructional materials in public ECDE centers in Nandi County. The study finding showed that majority (71.4%) of the pre-school teachers in Nandi County acknowledged that the county government had not provided any funds meant for textbooks in ECDE centers in the region. This therefore points out that text-books used in most ECDE centers in the region are either provided by the parents or the host primary school. This implies that there is inadequacy of textbooks in pre-schools in the study area thus hindering pre-school curriculum implementation. This therefore shows that the county government needs to strengthen pre-schools through provision of funds for the purchase of textbooks or directly purchase textbooks for pre-school centers since early childhood education is a devolved function.

Most researchers including Yara & Otieno, (2010) and Moochi, (2012) have argued that quality education hinges on physical facilities that are the ultimate predictors of learners' academic achievements. Furthermore, several studies show that inadequacy of facilities and equipment affects curriculum implementation in learning institutions (Hooker et. al., 2011; Indoshi, Wagah, & Agak, 2010; Ayuba & Gatabazi, 2010). This therefore points out that since pre-schools lay the foundation for learning, they need to be provided with adequate learning materials including textbooks since inadequacy of teaching and learning resources is a constraint to curriculum implementation in learning institutions (Hailu, 2011).

In addition, majority (76.7%) of the pre-school teachers in the study area reported that the county government had not allocated funds for the purchase of outdoor play materials. This shows that there is inadequacy of outdoor play materials in pre-schools in the county. This shows that pre-school teachers lacked promotion opportunities thus affecting their motivation to teach.

Similarly, majority (56.2%) of the study participants reported that the county government neither monitored nor evaluated the resource availability in ECDE centers through education coordinators. This shows that despite the devolution of early childhood development programs, the county government has not taken up its role of monitoring and evaluating resource availability at early childhood development centers. This is contrary to the finding of Martinez, et al., (2012) who noted that government partners participated in training and joint monitoring visits to provide mentoring and coaching in pre-schools in Mozambique.

Further, majority (65.5%) of the pre-school teachers in Nandi County acknowledged that they were improvising teaching and learning materials in their schools. Improvisation of teaching and learning resources is attributed to inadequacies of the materials thus forcing teachers to improvise what they are lacking. Improvised instructional materials (IIM) are acquired from the local environment, either within or outside the school environment. They are sourced by teachers, parents, learners, community members and other charity organizations. Improvisation involves the process of selection and creation of relevant instructional elements for teaching and learning process to achieve the educational goals and objectives (Eshiet, 1996). This finding was found to be contrary to the findings of Ezeasor (2012) who revealed that most science teachers did not improvise science materials nor use IIM in teaching sciences in schools.

5.2.6 Strategies Put in Place to Motivate Teachers and Improve Service Delivery

The fifth objective of this study was to identify the strategies put in place by the county government to motivate teachers in order to improve service delivery in ECDE centers in Nandi County. The study finding showed that majority (67.4%) of the pre-school teachers in Nandi county reported that there was need for the provision of good remunerations to pre-schools so as to motivate teachers and improve service delivery.

Further, majority (72.3%) of the pre-school teachers noted that there was need for the county government to provide them with medical allowances so as to motivate them and enhance improved service delivery. This is attributed to the fact that the pre-school teachers both employed by the government and those employed by the parents lack medical schemes thus are forced to pay out of their pockets whenever they or their family members fall sick. Provision of medical allowances enhances employee satisfaction

which is considered to be one of the major criteria for establishing a healthy organizational environment in an organization (Jung, & Yoon, 2015). In addition, Zhang, (2014) noted that employee social benefits as compensation enables employees to improve on organizational productivity.

In addition, majority (66.3%) of the pre-school teachers in the study area believed that there was need for the county government to provide proper and conducive working environment. The conducive environment in this case include adequate classrooms, play materials and remuneration of teachers amongst others. Similarly, majority (82.0%) of the pre-school teachers believed that there was need for provision of house allowance in the region.

Moreover, majority (87.2%) of the pre-school teachers in the study area acknowledged that there was need for the county government to provide teachers with in-service training courses so as to ensure that pre-school teachers have the necessary skills for teaching of pre-school learners. Teachers' education is one of the most important indicators of high quality in early childhood education. Several research studies documented the role of teachers in developing the whole child in the early years (Cuenca, 2010; Heisner & Sandvik, 2011) setting the environment (Kim, 2011) developing appropriate ways of teaching children that match their developmental stage (Akin, 2013) and provide learning experiences that are meaningful, relevant, and respectful for each child (Copple & Bredekamp, 2009) that promote children in all developmental domains in early childhood settings. This therefore points out that teachers need to undergo regular in-service training courses which will enable them to be quality teachers.

Additionally, majority (73.8%) of the pre-school teachers in the study area reported that there was need for teachers to be provided with commuter allowance.

5.3 Conclusions of the Study

The following are the conclusions of this study based on the findings of the study;

Devolution of early childhood education programs has gone through a lot of changes since its inception in 2010. However, implementing ECDE programs in Nandi county has not been fully achieved. Most Pre-schools were highly populated thus, pupil teacher ratio was still high affecting curriculum implementation. This therefore compromised the quality of education being offered at ECDE centers in the region. Further, the county government had not fully provided adequate, relevant teaching and learning materials which has hindered full implementation.

The study also concluded that the county government had constructed a few classrooms in the public primary schools thus supporting ECDE programs. However, it further emerged that only one classroom out of the needed three were constructed in approximately sixty schools per year in the county. The rest of the classrooms were provided by the parents and the host primary school.

5.4 Recommendations of the Study

The following are the recommendations of this study:

i. There is need for the county government to employ more ECDE teachers in order to reduce high pupil's teacher ratio in the region. Further, they should sponsor teachers with in-service training courses so as to ensure that they have the necessary skills for teaching of pre-school learners. Teachers' education is one of the most important indicators of high quality in early childhood education.

ii. There is need for the county government, parents and other education stakeholders to team up in the construction of more child friendly classrooms and provide teaching and learning materials for quality outcomes in the pre-schools.

5.5 Suggestions for Further Research

i. There is need for a similar study to be undertaken in different counties in Kenya to allow for the generalization of the study findings.

ii. There is need for a study on factors influencing service delivery in pre-schools in Kenya.

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APPENDICES

APPENDIX I: CONSENT LETTER

LYDIA KOGO

P.O BOX 3900-30100

ELDORET

RE: PARTICIPATION IN AN EDUCATIONAL RESEARCH

I am a postgraduate student at the University of Eldora, carrying out a research as part of my academic requirement. The research topic focuses on **Challenges Influencing Devolution of Early Childhood Education Programs in Nandi County, Kenya.** The study involves administration of questionnaires to ECDE teachers in the selected schools and interview schedule to head teachers and County Directors. I request you and your teaching staff to kindly fill the attached questionnaires as sincerely as possible. Your kind facilitation towards the success of this noble exercise will be highly appreciated. All the information given will be treated with utmost confidence.

Thank you very much for your cooperation

Yours sincerely,

LYDIA KOGO

APPENDIX II: QUESTIONNAIRE FOR ECDE TEACHERS

Dear teacher,

I am **Lydia Kogo** a Doctorate student at University of Eldoret undertaking a research on "**Challenges facing Devolution of Early Childhood Education Programs in Nandi County, Kenya".** I kindly request you to participate in the study and your responses to the items in the questionnaire will be treated with utmost confidentiality, and will not be used for any other purposes except for this study.

1. What is your gender?

(a) Male ☐

(b) Female ☐

2. What is your age Bracket?

(a) Less than 30 years ☐

(b) 31-40 years ☐

(c) 41-50 years ☐

(d) Over 50 years ☐

3. What is your highest professional qualification?

(a) Certificate in ECDE ☐

(b) Diploma in ECDE ☐

(c) Bachelor's degree in ECDE ☐

(d) Masters in ECDE ☐

(e) Others Specify

……

4. How many years of teaching experience do you have?

i) 1-4 years ☐

ii) 5-9 years ☐

iii) More than 10 years ☐

Section B: Teachers' Perception towards Devolution of ECDE Programs

Using the Likert scale provided below rate the following statements on a scale of 1 – 5 where 1- strongly Disagree,2- Disagree, 3-Not Sure,4- Agree and 5 – Strongly Agree

Statement	**SD**	**D**	**U**	**A**	**SA**
Teachers in my school embrace devolution since they hope to get employed.					
With the coming into effect of devolution of ECDE programs, pre-school teachers have received better salaries.					
Pre-school teachers have gone through induction course on devolution of ECDE programs.					
Pre-school teachers have undergone training courtesy of county governments thus are efficient in classroom management.					
Adequate teaching resources have been provided by the county government thus motivating pre-school teachers to effectively teach ECDE learners.					
Devolution of ECDE programs has given teachers better terms of service thus most would want to remain teaching in pre-schools.					
ECDE teachers have better support by county government on curriculum implementation.					
Curriculum supervision is adequately done by department of education in the county.					

Section C: Teacher Adequacy

Statement	**1**	**2**	**3**	**4**	**5**
Devolution and decentralization of education has contributed to manageable pupil- teacher ratio in my school.					
There are enough ECDE teachers to teach children in my school.					
Deployment of teachers to pre-schools by the county government has enabled my school to reduce the teaching burden that teachers face on daily basis.					
Parents have employed extra teachers in our pre-schools for efficiency in curriculum implementation.					
All teachers in our pre-schools have undergone pre-school teacher training.					
Majority of the pre-school teachers have been employed by the county government.					
Teachers in our school have adequate teaching experience and thus able to handle pre-school learners according to their needs.					
Teachers in my school have current pedagogical skills to handle pre-school learners.					

Section D: Support accorded to ECDE teachers by County Government

Statement	**SD**	**D**	**UD**	**A**	**SA**
ECDE teachers are fully provided with teaching materials by the parents and county government.					
Pre-school teachers improvise teaching and learning materials.					

The parents employ extra teachers to ease on the number of weekly lessons.					
Parents have provided feeding programme for ECDE learners to enhance pre-school learner achievement.					
Play materials are usually provided by the parents.					
Teachers in our school have undergone in-service training courtesy of the parents.					
At the end of every term, parents provide teachers with incentives for performance.					
Pre-school parents usually participate in all extra-curricular activities in our school.					

SECTION E: TYPES INFRASTRUCTURAL DEVELOPMENT BY COUNTY GOVERNMENT

In your opinion what types of infrastructural development have been initiated by county government to improve teacher's service delivery

a) Classroom construction [ ]

b) Construction of storage facilities [ ]

c) Library development [ ]

d) Increase in learning materials to learners [ ]

e) Any other

……..……

SECTION F: AVAILABILITY OF INSTRUCTIONAL MATERIALS

State the extent to which you agree with the following whether devolution has enhanced availability of instructional materials in ECDE Centers on a scale of 1 – 5 where 1- strongly agree,2- agree, 3-disagree,4- strongly disagree and 5 – Not sure

	1	**2**	**3**	**4**	**5**
County Government provides funds for text books to ECDE centers.					
The County Government allocates funds for purchase of Outdoor play materials.					
County Government monitors and evaluates the resource availability in ECDE centers through education coordinator.					
Pre-school teachers improvise learning materials in our school.					

Any other specify……

Section G: Challenges facing pre-schools

Challenge	**SD**	**D**	**UD**	**A**	**SA**
The number of teachers employed by the county government is adequate.					
The pre-school has adequate play materials.					
The pre-school has adequate textbooks for all learning activities.					
Infrastructure development particularly classrooms are adequate for all learners.					
All learners have enough desks and tables for use during					

learning activities.					
The school has put in place sustainable feeding programme.					
All teachers in our school are well trained on issues of curriculum implementation.					
Pre-school teachers often undergo supervision procedures.					

Strategies to Motivate Teachers for Improved Service Delivery

Strategy	**1**	**2**	**3**	**4**	**5**
Provision of good remunerations.					
Provision of medical allowance for pre-school teachers.					
Provision of proper working environment.					
Provision of house allowance.					
Provision of in-service courses for skills development.					
Provision of commuter allowance.					
Provision of promotion opportunities.					

APPENDIX III: INTERVIEW SCHEDULE FOR ECDE SUPERVISORS

As a supervisor, what measures has the county has put in place to motivate teachers in order to improve service delivery in ECDE centers?

……

……

How has the County Government facilitated infrastructural development to improve service delivery in ECDE centers?

……

……

In your opinion, how do ECDE teachers perceive devolution of ECDE programs?

……

……

How has devolution enhanced availability of instructional materials in ECDE centers in Nandi County in order to improve service delivery?

……

……

……

What is the teacher: pupil ratio in the county/Sub-county?

……

……

From the ratio, how has it improved service delivery in the ECDE centers?

……

……

APPENDIX IV: RESEARCH AUTHORIZATION LETTERS

NATIONAL COMMISSION FORSCIENCE, TECHNOLOGY ANDINNOVATION

Telephone:+254-20-2213471, 2241349,3310571,2219420
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

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

Ref: No. **NACOSTI/P/17/87175/19038**

Date: **12th September, 2017**

Lydiah Jepchirchir Kogo
University of Eldoret
P.O. Box 1125-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Challenges facing devolution of early childhood education programs in Nandi County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Nandi County** for the period ending **12th September, 2018.**

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

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nandi County.

The County Director of Education
Nandi County.

APPENDIX V: RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MS. LYDIAH JEPCHIRCHIR KOGO
of UNIVERSITY OF ELDORET, 1125-30100
Eldoret,has been permitted to conduct
research in *Nandi County*

on the topic: *CHALLENGES FACING DEVOLUTION OF EARLY CHILDHOOD EDUCATION PROGRAMMES IN NANDI COUNTY, KENYA*

for the period ending:
12th September,2018

Permit No : NACOSTI/P/17/87175/19038
Date Of Issue : 12th September,2017
Fee Recieved :Ksh 2000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

CONDITIONS

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No.A 15737

CONDITIONS: see back page

APPENDIX VI: MAP OF THE STUDY AREA

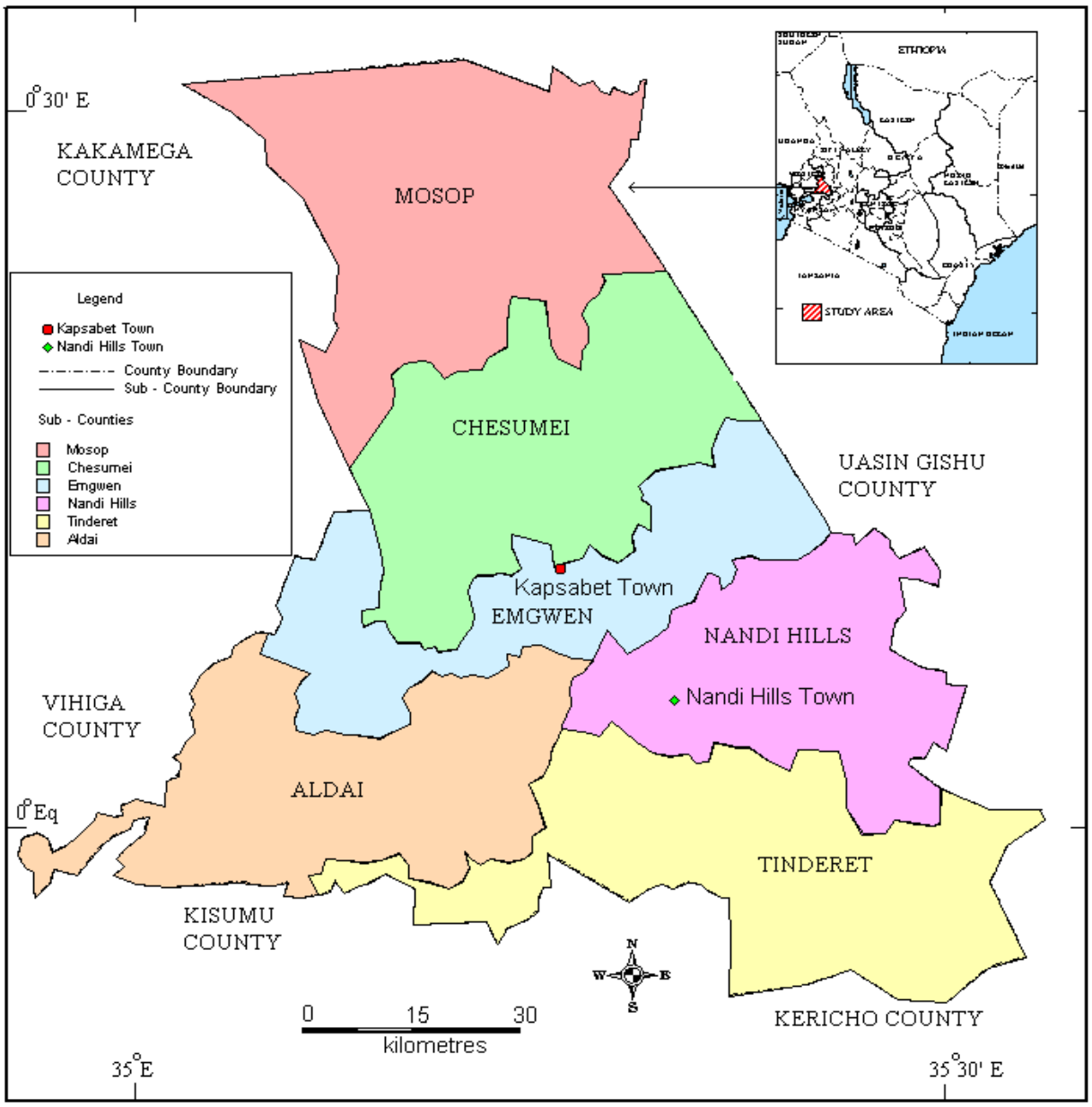

Figure 1: Map of Nandi County showing the sub – counties as the study area.

Source: Moi University Geography Department GIS Lab 2018.