



Research Paper

## Assessment of the Implementation of Early Childhood Development Policy of the Year 2006: Provision of Teachers and Teaching & Learning Materials in Siaya County, Kenya

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### ABSTRACT

**Purpose:** The purpose of this study was to assess the implementation of the ECD Policy of the year 2006 with respect to provision of teachers and leaning materials in the ECDE centers in Siaya County, Kenya.

**Objectives:** to investigate amount of funds that reach ECDE centres, find out effect of the received funds on the number of qualified teachers in ECDE centres and to establish effect of received funds on the availability of teaching and learning (T/L) materials and explore the quality of services offered in ECDE centres in the period 2013 to 2015.

**Hypothesis: HO<sub>1</sub>:** Received funds have no significant effect on the number of qualified teachers employed in the ECDE centers in the period 2013 to 2015 in Siaya County.

**HO<sub>2</sub>:** Received funds have no significant effect on the availability of Teaching and learning resources in the ECDE centers in the period 2013 to 2015 in Siaya County.

**Theoretical Framework:** The study was hinged on Human capital theory advance by Psacharopoulos & Woodhall (1985) who argues that identification and measurement of the cost and benefits of education are the corner-stone for the development of educational policies in which the finance of education is the most important.

**Methods:** The preferred research design was descriptive survey. The location of the study was Siaya County while study locale was at the public ECDE centres. The study population was 679 ECD Centres and respondents were Heads of the ECD Centres. Other key informants were drawn from County Director of Education (CDE) and office of County Chief Officer (CCO) for Education Department. Yamane (1967) formula of  $n = N/1+N(e)^2$  was used to arrive at a sample of 252 Head Teachers of ECD Centres. Stratified technique was then applied to proportionately select the sample based on the population distribution in the six sub-counties. Purposive sampling was used to pick one officer from the County Director of Education and office of the County Chief Officer for Education Department. Data was collected from head teachers of ECDE Centres using questionnaires and from County Director and Chief Officer of Education using interview schedules. Test-retest was carried out to ensure reliability of the two data collection instruments. The average reliability Cronbach's alpha was 0.750 for Head teachers' questionnaire which was acceptable. Data from the instruments were analysed using both qualitative and quantitative techniques. Quantitative analysis was by the help of SPSS edition 25. Correlation statistics was used in determining relationships between variables. The data was also presented in tables, pie charts and histograms.

**Results:** It was found that there is significant positive correlation between total funds received and number of teachers employed in ECDE centers in Siaya County in 2013, 2014 and 2015. Thus, with increase of funds being received at the ECDE centres, additional qualified teachers would be engaged. The study also established that each ECDE center had not employed adequate teachers as recommended by ECDE quality standards guide-line 2006. Secondly, notable number of teachers had no relevant qualification to teach at the ECDE centres. It also emerged that there was a significant positive correlation between total funds received and availability of T/L materials in 2013, 2014 and 2015. Thus, acquisition of T/L materials rise with increase of funds in the ECDE centres in Siaya County.

**Unique Contribution to Theory, Practice and Policy:** *The government, parents and other partners should invest more finances in ECDE in order to make it possible to acquire adequate T/L materials and also employ the recommended number of qualified teachers at a ratio of a teacher to pupils at 1:25. The ECDE Managers (county government, Board of Management and proprietors) should therefore employ qualified personnel to teach in their centres and encourage the untrained teachers already in their centres to enroll for training in Teacher Training colleges. More financial resources should be disbursed to ECDE centers for acquisition of more T/L materials.*

**KEY WORDS:** *received funds, sources of funds, qualified teachers, learning materials, early childhood education policy*

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## **I. BACKGROUND TO THE STUDY**

In ensuring that children globally grow and develop effectively, there have been conventions, movements and treaties requiring various Nations to provide quality childcare and education to acceptable standards the world over. These conventions and treaties include; Geneva declaration of the Rights of the Child adopted by the League of Nations in 1924; Universal declaration of Human rights of 1948 in Article 26; declaration of the Rights of the Child proclaimed by General Assembly Resolution of November 1959 under principle number seven; Education for All (EFA)-goal number 1 (United Nations, 2011a); Millennium Development Goals (MDGs) – goal number 2 (United Nations, 2011b); and New Partnership for Africa's Development (NEPAD) (2001) and Sustainable development Goals(SDGs) – goal number 4. All the global conventions and treaties mentioned above had one thing in common, inclusive and equitable quality lifelong education for the subscribing nations.

Consequently, some countries put strategies in place in order to achieve the targets. UNESCO (2013) reports that progress on Early Childhood development and Education (ECDE) has been too slow. The report indicates that even in countries with high ECDE coverage, children in low economic index areas are more likely to lack access to preschools, or they have access to preschools that are under-resourced and of unreliable quality. The report also find that most countries with low pre-primary enrolment, provision is through private preschools that are expensive and unreachable for those who need them most and that little attention has been paid to childcare and development before primary schooling. This in essence would mean that various governments strive to provide early childhood education albeit with varying degree of investments. Kenya being a subscriber to these global conventions and treaties is not an exception.

The earliest preschools in Kenya were started in the 1940s by European and Asian communities for their children only (Sifuna, 2007). It is at the height of colonialism that ECDE centres were started for African children in urban areas and on coffee, tea and sugar cane plantations. Sifuna observes that prior to 1970, preschool education had spread to other parts of the country though it neither had a recognized syllabus nor qualified teachers. In 1980s, the Kenya government, in-conjunction with Bernard van Leer Foundation created the Preschool Education Project, based at the Kenya Institute of Education (KIE) Nairobi (NACECE, 2001). The main aim of this project was development of sustainable training schemes and formation ECDE curriculum and teaching and learning materials for use by teacher training colleges, ECDE teachers and preschool children.

Enactment of children Act in 2001 greatly influenced ECDE policies (Republic of Kenya, 2001). The Act addressed critical policy areas that included; (1) meeting children's needs holistically to maximize the realization of their potential (2) safeguarding the rights of the child (3) ensuring programs are child-centered by recognizing that children are active participants who shape events that influence their lives (4) appreciating and recognizing parents and families as primary caregivers (5) supporting and strengthening community based management of early childhood services for sustainable development (Koech and Njenga, 2006). Karanja (2015) reports that introduction of Free Primary Education in 2003 adversely affected ECDE in Kenya as some parents declined to take their ECDE aged children to school because they wanted them to reach the age of joining primary school so that they are taken there directly in order to avoid paying fees.

As to mainstream ECDE into basic education sector for effective management and administration and also to enhance access, equity and quality education at all levels, the Government of Kenya (GoK) developed the Sessional Paper No. 1 of 2005 for Education, Training and Research (Republic of Kenya, 2005). The GoK together with other partners formed Kenya Education Sector Support Programs (KESSP) for 2005-2010 to operationalize sessional paper no. 1 of 2005. KESSP had 23 investment programs which covered the entire education sector from early childhood education to university. The Sessional Paper No. 1 of 2005 for Education, Training and Research provided appropriate platform for formulation of ECD specific policy.

Provision of ECDE took a new dimension in the year 2006 when for the first time the Ministry of Education (MoE) developed a policy that catered for ECDE only. Republic of Kenya (2006a) enlisted many benefits of ECDE to an individual and the society as a whole: Early identification of special needs characteristics hence intervention, Enhanced enrolment in primary schools on equal grounds, Increase productivity, and cost savings, for both families and the nation, reduction of poverty, reduction of social inequalities, improved chances for the girl child, improved moral values in the community, improved family welfare, increased opportunities for parental and community empowerment.

The ECDE policy of the year 2006 framework addressed itself to challenges in funding ECDE programs, provision of human resources, and provision of teaching and learning materials. On quality assurance and standards for ECDE, the policy framework undertook to develop clearly defined standards and quality guidelines that cover all aspects of program for children in different sectors and contexts and serve to advocate for the rights of children. Indeed, this objective was achieved in the year 2006 when the ECDE standards guideline was enacted that spelt out expected standards for provision of services for children in Kenya (Republic of Kenya, 2006b).

The standards and quality guideline came up with categories of teacher education that include ECDE Certificate, ECDE Diploma, Degree in ECDE, and Masters in ECDE and Doctor of Philosophy in ECDE. Trained teachers at each of the above listed levels can get license to teach in any ECDE Centres in Kenya should they apply to the Teachers Service Commission (TSC) as per the requirements of TSC Act 2012. The TSC Act provides that only licensed teachers should be deployed to teach in basic education institutions (Republic of Kenya, 2012). With the promulgation of the Kenya Constitution in 2010, ECDE is a function of the County government. It is not clear whether employment of teachers for ECDE is a function of TSC or the County Government. However, many County Governments have employed teachers at ECDE centres but under different titles such as teacher-assistants, helpers, children-aid among other titles. On teacher-pupil ratio the standard guideline provided that the teacher-child ratio in ECDE Centers/lower primary for children between age of 3-4 years is 1:15, 4-5 years is 1:25, 5-6 years is 1:30 and 6-8 years is 1:40. An assistant teacher shall be required for each of the above groups, that teachers shall possess at least a certificate in ECDE offered by the Government or other institutions authorized by the Government. On challenges affecting provision of equipment, teaching and learning materials the policy framework and standards and quality guideline emphasized on adequacy and appropriateness of the resources to the pre-primary school learner.

Management of ECDE took different turn with the promulgation of Kenya's constitution in 2010. The said constitution created devolved governance system which involves one national government and forty-seven county governments as listed in the first schedule (Republic of Kenya, 2010). The constitution spells out the purpose of devolution as that which is meant to promote social and economic development by improving delivery of proximate services. Part 2, section 9 of the fourth schedule accords the county governments the responsibility of providing pre-primary education and childcare services. However, policy formulation for the ECDE sub-sector is still a function of the national government.

## **II. EMPIRICAL LITERATURE**

### **2.1 Financing ECDE**

Funding of education all over the world has not been up to 17% in any given year despite the UNESCO minimum standard of 26% of national budget (Adeyemi, 2011). Adeyemi observes that in general, countries accord ECDE relatively low priority in their public and private spending. Even within the Organization for Economic Cooperation and Development (OECD), the average ECDE expenditure (public and private combined) for children in the 3–6 age range in 2007 was 0.5 per-cent of GDP. One third of the OECD members invest more, led by Iceland at 0.9 per cent. In contrast, the Russian Federation invests 1.6 per-cent of its national wealth in pre-primary institutions (OECD, 2010). Public expenditure on pre-primary education as a percentage of GDP was averagely 0.4% in the year 2012 in high income countries, 0.2% in upper middle income country, 0.1% in lower middle income countries, and 0.01% in low income countries (R4DI, 2016). India spent only 0.2% of GDP on preschool education, in the period 2012-2013. Similarly, in Colombia, only 0.2% of GDP was spent in 2011 on ECDE services for children 3 to 5 years of age (R4DI, 2016).

### **2.2 Investing on T/L Materials**

Gogoi (2015) in his research carried out in Golaghat District of Assam in India reveals that higher percentage of teachers do not have sufficient amount of teaching learning materials in the classroom for the young children. In the study, 75 per cent said that there is no any expert person for preparation of teaching learning materials in the school, 58 per cent of teachers have not received any training regarding use of teaching learning materials for the early childhood care and education.

The funding and expenditure of various Governmental Departments and programs in South Africa shows that funding for ECDE facilities and T/L materials through the subsidy has increased over the last decade from R335 million in 2003/2004 to more than R1 billion in 2011/2012 (Giese et al., 2011). In Uganda, ECDE program accounts for a small share of the overall provincial education budgets but the share has increased markedly over time, from only 0.7% in 2006/07 to about 2% in 2012/13 (Giese & Budlender, 2011).

In other regions in Kenya, a study by Kombo & Gogo (2012) in Nairobi County observed that the quality and relevance of ECDE was further affected by inadequate state of equipment, learning materials and supervision, poor terms and conditions of service and motivation of pre-school teachers and lack of co-ordination and linkage between ECE provision partners. Nyawinda (2015), in Kisumu West sub-county, found that ECDE children sourced the learning material from parents (40%) while 30% of the head teachers stated that they sourced the ECDE books from donors and 90% of them said sponsors. In his view, the finding implies that most of the ECDE centres depend on the sponsors for book donations. Were (2014) found that most of the materials available in pre-schools in Rachuonyo South sub-county are indoor play materials which represent 50% as compared to 10% of outdoor fixed materials.

In Siaya County, according to the Ministry of Devolution (2013), the population of children less than 5 years was estimated at 149,566, who needed to be provided with ECDE. Currently the spaces available for them in the 1015 (696 public and 319 private) ECDE centres in the county is 137,025 in both public and private ECDE centres. According to the Report on the Status of Basic Education in Siaya County for the Year 2013/2014 (CEB –Siaya, 2014), the County Government of Siaya invested in construction of new centres, as well as, improving infrastructure of the existing ones but partnered with various NGOs in providing T/L materials.

Wanyande (2015) found amount of funds ECDE centres in Ugunja sub-county in Siaya County spent on T/L materials as follows: Many (88.9%) ECDE centres spent between Kshs. 5,000 – 20,000, a paltry 11.1% centres spent between Kshs. 20,001 – 50,000 and no center spent above Kshs. 50,000. Nyakina (2015) in his study in Siaya sub-county observed that about 80% of the ECDE centres that received funds under community support grant project increased their stock of T/L materials. Nyakina asserts that availability of funds in the centres would cause procurement of more T/L materials. Nevertheless, there was a disparity in the funds appropriated towards T/L materials and the actual funds disbursed to acquire the same in a comparative study of Homabay, Kisumu, Migori and Siaya (Abuom, 2019).

### **2.3 Investment on Qualified Teachers**

Shortage of trained teachers compromised quality of Education in ECDE and was a challenge in implementation of various ECDE policies in Uganda and Kenya (Ejuu, 2012). In his research to review ECD policy framework of 2006 in Uganda, Ejuu revealed that before the policy, only 23% of caregivers in different ECDE centres had some form of training in ECDE. The rest were untrained and lacked the required competence to enable them work with the children adequately (MoES, 2007). In Bondo sub-county in Siaya County, most pre-primary schools suffered from shortage of trained teachers (Abiero, 2013). This shortage of teachers was supported by a study carried in Bungoma County by Wangila (2017) revealing high teacher-pupil ratio in pre-schools. Similarly it was corroborated by Abuom's (2019) findings in Homabay, Kisumu, Migori and Siaya who reported the ratio as follows: 1:78 in county -1, 1:50 in county-2, 1:64 in county-3 and 1:35 in county-4.

On teacher qualification in Kisumu East sub County, Nyawinda (2015) shows that 20% of teachers have certificate level of education. In addition, 30% of head teachers and 30% of teachers have attained diploma level of training. Moreover, 70% of head teachers and 50% of teachers have degrees. The study findings further show that 20% of head teachers and 60% of teachers have 2-4 years' work experience. On the other hand, 50% of head teachers and 30% of teachers have 5-8 years' work experience. In addition, 30% of head teachers and 10% of teachers have 9 years and above work experience. The findings indicated that majority (85%) of the entire teaching fraternity had less than 9 years' work experience.

Research results show 93.3% of ECDE centers in Ugunja sub-county in Siaya County spent between Kshs. 50,001-100,000 on teachers' payment per year (Wanyande, 2015). Wanyande also reported that 33.49% of centers paid each teacher between Kshs. 3,000 -5,000 and 38.49% paid between Kshs. 5001 -9000 per month. However, in Siaya sub-county in 2015, each teacher received a lower monthly pay of between Ksh. 1,001 – 2,000 supported by 48.3% of respondents (Nyakina, 2015). In fact Nyakina reports that community abdicated its role of paying teachers when centers received community support grants. Effectively, causing the objective of the CSG of augmenting teachers' pay failed. Abuom (2019) observed that the four counties under his study; Homa-bay, Kisumu, Migori and Siaya had a disparity between the amount of money in the budget estimates and the actual funds spent on teacher remuneration. Abuom notes that funds spent on teacher salary are much lower than funds in the budget estimates

It is clear that despite various interventions by different organizations and governments both globally and locally, the challenge of financing early childhood education is still persistent (Odhiambo, Amuka & Maneno, 2020). Odhiambo et al (2020) further asserts that inadequate funds appropriated for ECDE adversely

affect the quality of services offered in the ECDE centers in the long run. Quality services in ECD are dependent on availability of learning resources that include qualified teachers, learning Aids, and T/L materials. .

## **2.4 Study theory**

The study is anchored on Human capital theory. Psacharopoulos & Woodhall (1985), opines that identification and measurement of the cost and benefits of education are key for the development of educational policies in which the finance of education is the most important. They argue that public and private rates of return to investment in education have been used by individuals, governments, and national and international organizations as main indicators to the process of allocating financial resources to education. It is fool-hardy to talk about cost of education without mentioning the requisite benefits of that education.

The most popular examples of these benefits are the consumption values of education and the externality and spillover benefits that accrue to individuals and societies in the short and long-terms (Carnoy & Marenbach, 1975, Williams & Gordon, 1981). It is worth noting that benefits of pre-primary education are also realized in the long run and no necessarily immediate.

With regard to the human capital theory, this study was interested in the funds that are received by the ECDE Centers and its impact on provision of T/L materials and qualified teachers. The variables tested therefore were; received funds at the ECDE centers, qualified teachers and T/L materials.

## **III. RESEARCH METHODOLOGY**

**3.1 Area of the study:** The study was carried out in Siaya County which is one of the six counties in the former Nyanza region. The surface area of Siaya County is 2,530 km<sup>2</sup> (Ministry of Devolution and Planning, 2013). It is bordered by Busia County to the North, Vihiga and Kakamega Counties to the North East, Kisumu County to the South East and Homa Bay County across the Winam Gulf to the South. It lies between latitude 0° 26' South to 0° 18' North and longitude 33° 58' and 34° 33' East.

**3.2 Research Design:** This study adopted a descriptive research design as it allows researchers to gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2009). Burns (2000) argues that descriptive research design allows the researcher to make comprehensive interference about the investigated variables. Kothari (2004) holds that descriptive research design was adopted because through it, the researcher assessed the situation within the study area at the time.

**3.3 Target Population:** The target population of this study was head teachers of 679 ECDE Centers, the office of the County Director of Education office for National Government and the office of County Chief Officer in charge of Education for County Government.

Head teachers of ECDE centers were important for this study because they are the custodians of the financial records on appropriation, financial management and audit reports in their respective ECD Centers.

The office of Education for the county government was important because it is the custodian of information about amount of funds appropriated and expensed by the County Government for ECD, adequacy or otherwise of the available funds, provision of facilities for ECDE and accountability mechanisms for funds disbursed for use in provision of ECDE.

The County Director of Education (CDE) office was also an important target for this study because it is believed that the CDE office kept information about the funding strategy by the National Government, available data on enrolment of pupils in ECDE, resources in the centers and the status of provision of ECDE services as at the time devolution took effect.

## **3.4 Sampling Techniques and Sample size**

Yamane T. (1967) formula of  $n = N/1+N(e)^2$  was used to arrive at a sample of 252 Head Teachers of ECD Centers. Stratified technique was then applied to proportionately select the sample based on the population distribution in the six sub-counties. Purposive sampling was used to pick an officer in the office of County Director of Education and another one in the office of County Chief Officer for Education Department.

## **3.5 Instrumentation**

The researcher developed a questionnaire to collect data from head teachers of ECD Centers. Questionnaires were used because all the respondents were literate and could respond to the questions at their convenience within the time frame of the research, Orodho (2008).

Interview schedule was used to collect data from education officers in the County Director of education office and office of department of education in county government. The advantage of the interview schedule is that all the questions are answered, and in case of any difficulty it allows for interactive sessions where probing is done for the important reason of seeking clarification and qualifying the responses given by the subject (Orodho, 2009).

### 3.6 Reliability of the Research Instruments

The Cronbach's alpha for study variables measured as follows: Sources of funds = 0.603, Funds for physical facilities = 0.869 Number of teachers = 0.853, Teaching and learning materials = 0.736 which were used to test the reliability of the instruments. The average reliability Cronbach's alpha was 0.750 which is acceptable.

### 3.7 Data Collection Procedures

The researcher got a research permit from National Commission for Science, Technology and Innovation (NACOSTI). The researcher also attained letters of authority to carry out research in ECD centers in Siaya County from the County Commissioner and County Director of Education. Another document was a letter of introduction from Pwani University. Copies of these documents were attached to the questionnaire to enhance confidence of the respondent in participating in providing required information. The researcher kept the respondents company as they filled in the questionnaire and provided clarification in cases where respondents wanted guidance on clear understanding of some items in the questionnaire.

The researcher had in-depth interview with officers in the office of the county director of education and chief officer of education's office. At the start of the interview the officers were separately provided with interview guidelines which enabled the understanding of the nature and the purpose of the interview. The interview guideline enabled the officers to look for some data from the files and records in their respective offices beforehand in order to provide accurate information to the researcher. The researcher recorded responses on his field notebook for reference and in some instances took photos of information presented from the office files.

The researcher assured the respondents on his commitment to ethical norms and the keeping of confidentiality, privacy, anonymity, mutual respect, trust, fairness and accountability.

### 3.8 Data Analysis Methods

Data from the three instruments were analysed using both quantitative and qualitative techniques. Quantitative analysis was done by the help of SPSS edition 25. Correlation and regression statistics were used in determining relationships between variables and also predicting influencers of the dependent variable. The data was also presented in tables, pie charts and histograms.

## IV. PRESENTATION OF FINDINGS UNDER OBJECTIVES

### 4.1 Funds Received by ECDE Centers

Figure 4.1 shows that slightly more than half of the ECDE centers received below Kshs. 100,000 per year, it also shows that 35.8% of the centres received between kshs. 100,000 – 200,000, 7.9% and 4.6% received between kshs. 2001 – 300,000 and above kshs. 300,000 respectively.

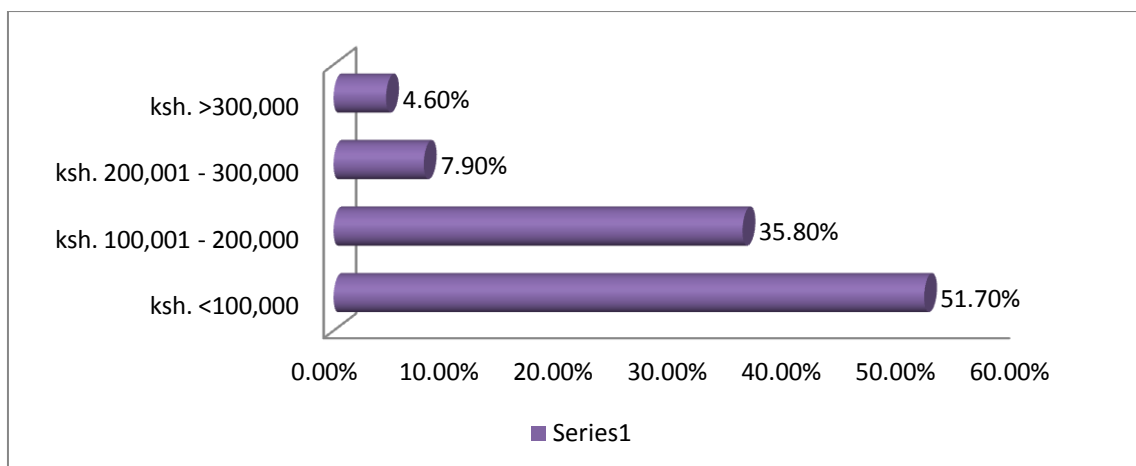


Figure 4.1: Total Money Received by ECDE Centers

This revelation where most centers received very low funding would imply that the received funds would probably have little effect on availability of T/L materials and provision of qualified teachers. The finding in this study that there was low revenue in ECD Centers was similar to the finding by Adeyemi (2011) that observed that in general, countries accord Early Child Development and Education (ECDE) relatively low priority in their public and private spending.

#### 4.2 Effect of the Received Revenue on the Teaching and Learning Materials Available in ECDE Centers in the Period 2013 to 2015

The respondents were presented with a Likert scale with ratings; [*Adequate*], where one pupil ought to have his/her own T/L material or share it with only one other pupil; [*Fairly Adequate*], where three or four pupils share a T/L material, [*Inadequate*], where five or more share a T/L material; [*None*] where there was absolute absence of T/L materials.

Another variable that was tested is the amount of funds that the ECDE centers invested in the acquisition of T/L materials in the period 2013 to 2015. The respondents were given a range of items to choose from namely; expenditure of [below Kshs. 10,000], [10,001 – 50,000], [50,001 – 100,000] [>100,000].

Results from the 240 respondents are presented in Figure 4.2 showing the level of adequacy of the T/L materials and Table 4.19 that show the funds spent on the purchase of T/L materials.

In order to test relationship between *total funds received in ECDE centers and availability of T/L materials*, a correlation coefficient was run using SPSS and results are presented in table 4.1.

Figure 4.2 reveals that it was only in the year 2013 when more than three fifths (65.4%) of the ECDE centers had inadequate T/L materials. The scenario changed in the subsequent years, where there were fairly inadequate T/L materials as indicated by over half (58.3%) and over three fifths (60.8% ) in 2014 and 2015 respectively. Figure 4.2 also shows that ECDE centers progressively attained level of adequacy of the T/L materials with passage of the years; from 35 out of 240 in 2013 to 48 out of 240 in 2014 and 51 out of 240 in 2015.

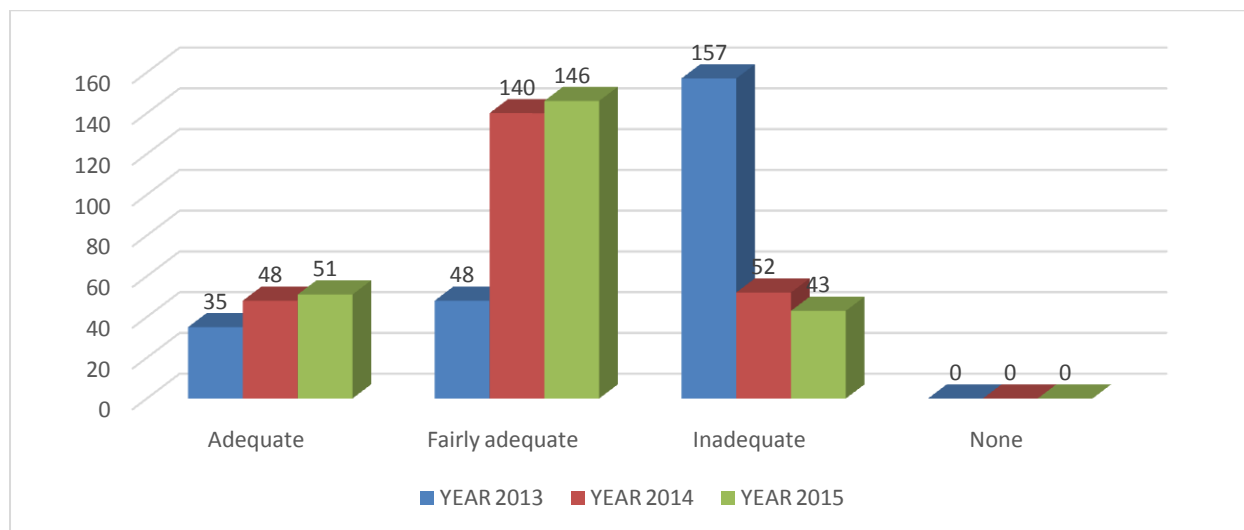


Figure. 4. 2. Level of adequacy of T/L materials in public ECDE centres

Key informants interview revealed that the County Government of Siaya started putting in place strategies on ECDE management in the year 2014 when its first undertaking was to supply T/L materials in public ECDE centers. The County Government in the same year partnered with other non-governmental organizations and trained teachers on material development. This training and supply of T/L materials to ECDE centers explains the sudden change from status of inadequate to fairly adequate in a span of a year. However, compared to the Standard guideline, the availability of the T/L materials was still below expectation as the ECD policy anticipated the ratio of one pupil to one T/L material.

Table 4.1 presents a correlation between *total funds received and availability of T/L materials* in ECDE centers in Siaya County, Kenya. The outcome ( $r = .217, p = .001, \alpha = 0.01, p < 0.01$ ) in 2013, ( $r = .486, p = .004, \alpha = 0.01, p < 0.01$ ) in 2014 and ( $r = .535, p = .007, \alpha = 0.01, p < 0.01$ ) showed significant positive correlation in 2013, 2014 and 2015. Thus the hypothesis:

$H_{02}$ : Received funds have no significant effect on the availability of Teaching and learning resources in the ECDE centers in the years 2013 to 2015 in Siaya County is therefore rejected.

**Table 4.1: Correlation of Total Funds Received by the ECDE Centers and the Availability of T/L Materials in 2013, 2014 & 2015**

		Correlations			
		Received funds	T/L Materials in 2013	T/L Materials in 2014	T/L Materials in 2015
<b>TFR<sub>α1</sub></b>	Pearson Correlation	1	.217**	.486**	.535*
	Sig. (2-tailed)		.001	.004	.007
	N	240	240	240	240

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

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

The significant positive correlation between *Total Funds Received by the ECDE Centers* and the *Availability of T/L Materials* presupposes that most funds were channeled towards acquisition of Teaching and Learning materials. Interview with key informants revealed that the county government in collaboration with other Non-governmental organizations invested more resources in capacity building teachers and parents on material development. Nyawinda (2015) also found that apart from the T/L materials done by teachers and parents, other partners invested in acquisition of T/L materials in Kisumu East Sub-county.

ECDE centres (see Table 4.2) used less than Kshs. 10,000 to acquire T/L materials as indicated by 72.1% (173), 49.2% (118) and another 43.3% (104) in the years 2013, 2014 and 2015 respectively.

Results also show that public ECDE centres invested between Kshs. 10,001 and 50,000 to buy T/L materials as shown by 20.0% (48), 30.8% (74) and 34.2% (82) in the years 2013, 2014 and 2015 respectively.

Very few ECD centres invested between Kshs. 50,001 and 100,000 in T/L materials; this was indicated by 7.9% (19), 20.0% (48) and 22.5% (54) in the years 2013, 2014 and 2015 respectively. However, none of the public ECDE centres allocated more than Kshs. 100,000 towards purchase of T/L materials.

**Table 4.2**  
**Investment in Teaching and Learning Materials in the ECDE Centres**

		YEAR 2013			YEAR 2014			YEAR 2015		
		n	%	C P	n	%	C P	n	%	C P
<b>Valid</b>	Ksh <10,000	173	72.1	72.1	118	49.2	49.2	104	43.3	43.3
	Ksh 10,001-50,000	48	20.0	92.1	74	30.8	80.0	82	34.2	77.5
	Ksh 50,001-100,000	19	7.9	100.0	48	20.0	100.0	54	22.5	100.0
	Total	240	100.0		240	100.0		240	100.0	

Key: n = Frequency; % = Percent; C P = Cumulative Percent;

Generally, the study revealed a low investment in acquisition of T/ L materials in ECDE centres in Siaya County. This low investment could be attributed to low revenue received by the centres in each of the three years under study as is demonstrated in Table 4.1. These findings were in agreement with Gogoi (2015) in his research carried out in Golaghat District of Assam in India reveals that higher percentage of teachers don't have sufficient amount of teaching learning materials in the classroom for the young children.

However, Table 4.2 shows improvement in the investment of T/L materials with each passing year; ECDE centres which invested Kshs 10,001 – 50,000 increased from 48 in 2013, to 74 in 2014 and 82 in 2015. Similar situation was noted among centres that invested Kshs. 50,001 – 100,000, where it was 19 in 2013 then improved to 48 in 2014 and finally 54 in 2015. The improvement in investment in T/L materials was attributed to the intervention by the County Government in the year 2014 and 2015 when teachers were trained on material development. This training may have created awareness among teachers which might have driven them to spend more funds on production of T/L materials.

#### 4.3 Effect of the Received Revenue on the Number of Qualified Teachers Employed in ECDE Centers in the Years 2013 to 2015

Objective three aimed to test the effect of received funds by ECDE centres on number of qualified teachers. Respondents were asked to reveal the number of teachers who were in their centres in the years 2013, 2014 and 2015.

The respondents were also to indicate professional qualifications of their teachers and also to show the amount of money that was paid as salary to teachers per month in the period 2013-2015.

Figure 4.3 shows that most public ECDE centers had employed three teachers over the three-year period as was indicated by 54.17% (130) in 2013, 64.17% (154) in 2014 and 60.8% (146) in 2015 of the



respondents. The findings also showed that there were some schools that had employed only two teachers as revealed by 29.17% (70) in 2013, 29.17% (70) in 2014 and a drastic drop in 2015 denoted by 20.4% (49). Although a few centers employed either one or four teachers, none had employed five or more than five teachers.

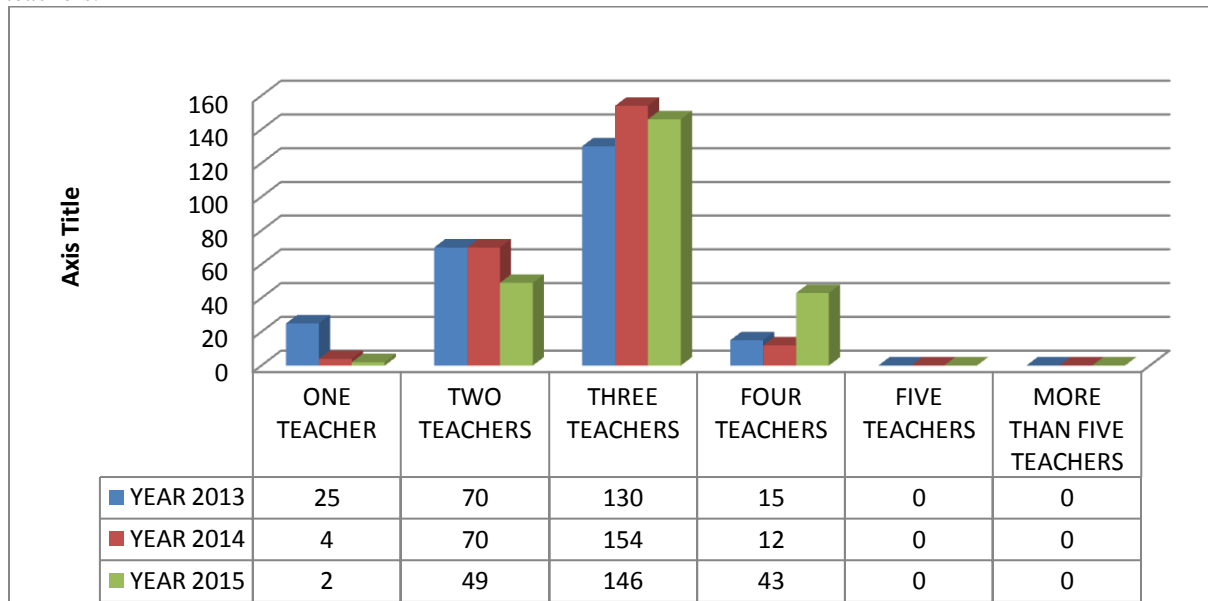


Figure 4.4: Number of Teachers per ECDE Centre

Each teacher was responsible for a class. It was observed that in most (54.16% in 2013, 64.16% in 2014 and 60.83% in 2015) ECDE centers, there were three classes namely, Baby Class which consisted of very young children who were 0-3 years; Middle class (pre-primary one - PP1) consisted of children mostly 4 years of age and Final class (pre-primary two - PP2), consisting of children mostly of 5 years and above. Discussion with the key informants revealed that most ECDE centers in Siaya county had a teacher – pupil ratio of 1:45 which effectively went against the expected ratio of 1:25 as per the standards guideline and ECDE policy of 2006 ( Republic of Kenya 2006a, Republic of Kenya 2006b).

However, the findings show that ECDE centers did not meet the threshold of two teachers per class as envisaged in the ECD Standard Guide of 2006. The ECD standard guide provides that each class should have one teacher and one assistant teacher (Republic of Kenya, 2006b).

Table 4.3 presents a correlation between *Total Funds Received* and *Number of Qualified Teachers* in Siaya County, Kenya. The outcome ( $r = .302, p = 0.05, \alpha = 0.05, p < 0.01$ ) in 2013, ( $r = .283, p = .050, \alpha = 0.05, p < 0.05$ ) in 2014 and ( $r = 0.428, p = 0.051, \alpha = 0.05, p < 0.05$ ) showed significant positive correlation in 2013, 2014 and 2015. Thus the hypothesis;

Ho2: Received funds have no significant effect on the number of qualified teachers employed in the ECDE centers in the years 2013 to 2015 in Siaya County was therefore rejected.

**Table 4.3**  
*Correlation on Total Funds Received by the ECDE Centers and the Number of qualified Teachers in 2013, 2014 & 2015*

Correlations				
	<i>Funds Received</i>	<i>Qualified Teachers in 2013</i>	<i>Qualified Teachers in 2014</i>	<i>Qualified Teachers in 2015</i>
<b>Pearson Correlation</b>	1	.302	.283	.428
<i>Funds Received</i>				
<b>Sig. (2-tailed)</b>		.055	.050	.051
<b>N</b>		240	240	240

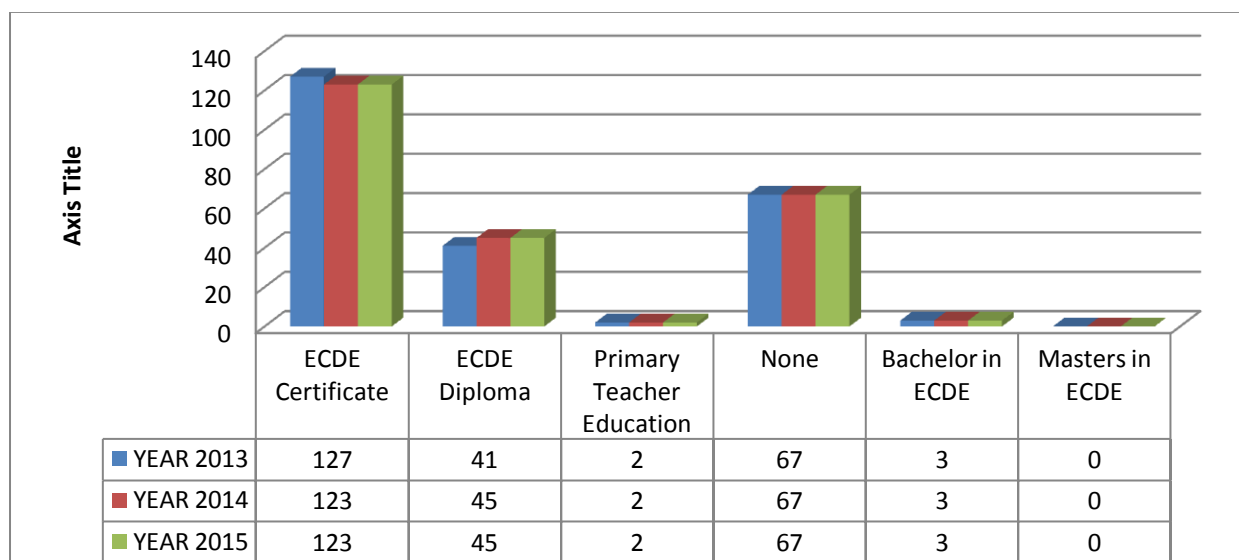
\*\* . Correlation is significant at the 0.05 level (2-tailed).

From the findings it could be inferred that ECDE centers spent some money on employment of qualified teachers. The researcher actually found that little money was spent towards payment of teachers in a month. Over three fifths of ECDE Centers (see Figure 4.6) paid their teachers below Kshs. 3000 per month.

Key informant reported that even the little money that teachers were supposed to be paid delayed. Delay in payment was occasioned by poor collection of funds from parents. However, it was also reported that the county government of Siaya had employed approximately 445 teachers who were deployed in various ECDE centers within the county. This number of deployed teachers was said not to be adequate for the existing ECDE centers but the county government plans to progressively employ teachers every year till all centers receive at least two. The key informants continued to reveal that the county government paid each teacher with a certificate in ECDE Kshs. 12,000; teachers with diploma in ECDE were paid Kshs. 15,000, while untrained teachers were paid Kshs. 10,000.

Over half of teachers (see Figure 4.10) in ECDE Centers had ECDE certificates as indicated by 52.92% (127) of the respondents in 2013, 51.25% (123) in 2014 and 2015 alike.

Findings also reveal that a considerable number of teachers had no professional qualification to teach in ECDE centers as represented by 27.9% (67) across the three years. Some teachers had ECDE diploma as indicated by 17.08% (41) in 2013 and 18.75% (45) in 2014 and 2015 apart. None of the teachers in the ECDE centers under the study had studied up to the level of masters in ECDE as presented in Figure 4.5.



**Figure. 4.5: Professional qualifications of teachers in public ECDE centers.**

Engagement with key informants revealed that a section of teachers who did not have any professional qualification was because they were engaged in teaching of ECDE Classes way back before training in ECDE Certificate and Diploma had commenced. It was noted that these untrained teachers had vast experience in handling children hence parents and the management retained them even when there were many trained teachers that could replace them. Key informants also reported that parents preferred to employ unqualified teachers because they would not ask for high pay as compared with their counterparts with professional qualification. Shortage of trained teachers compromised quality of education in ECDE centres and is a challenge in implementation of various ECDE policies in Uganda and Kenya (Ejuu, 2012). It is unfortunate that Ejuu's observation is still a reality eight years later.

The revelation that some untrained teachers had been engaged in ECDE teaching goes against the provision of the standard guide that spelt out ECDE certificate as the least qualification for teachers at the ECDE level (Republic of Kenya, 2006b).

Results (see Figure 4.6) show that most ECDE Centres spent between Kshs. 1000 and 3000 on teacher remuneration per month per teacher as indicated by 75% (180), 66.6% (160) and 64.6% (155) of respondents in the years 2013, 2014 and 2015 respectively.

The study also revealed that a considerable number of public ECDE centres paid their teachers a salary of between Kshs. 3,001 and 9,000 per month per teacher as shown by 22.0% (53), 30.4% (73) and 24.6% (59) of respondents in the years 2013, 2014 and 2015 respectively.

A small number of public ECDE centres offered their teachers above Ksh. 9000 as monthly salary shown by 1.3% (3), 1.3% (3), and 9.7% (22) in 2013, 2014 and 2015 respectively.

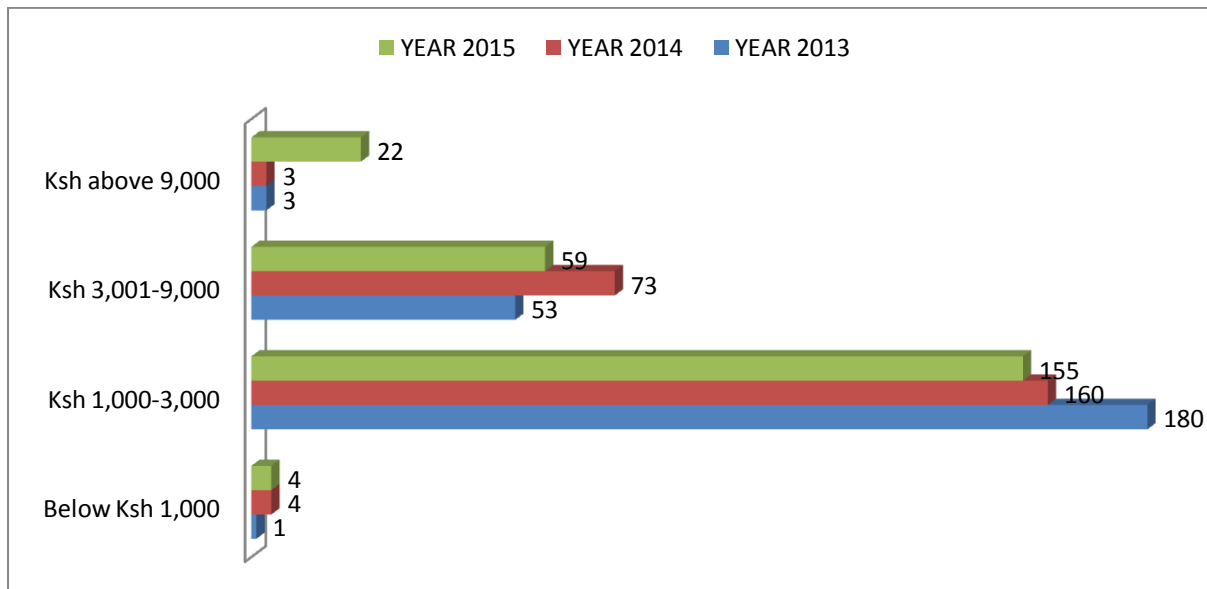


Figure. 4.6: Remuneration of teachers in ECDE centres.

The low expenditure on teacher salary may be attributed to insufficient amount of funds received by the ECDE centres. Parents that were found to be a major source of income for ECDE centres were of low economic status hence could not afford to pay better than amount of money centres have been paying over the years. It is worth noting that 9.16% of the ECDE centres in 2015, paid their teachers Kshs above 9,000 (see Figure 4.6). This can probably be attributed to the role the county government had started to play in employment of teachers who were then deployed in some ECDE centres. According to the key informants, teachers deployed by the county government were paid amount between Kshs. 10,000 – 15,000 depending on their level of professional qualification.

## V. CONCLUSION

Based on the findings of the study the following conclusions were made;

### 5.1.1 Amount of Funds Received by the ECDE Centers in Siaya County

Most ECDE centers received very low funding with slightly over half receiving below kshs. 100,000 and more than one quarter receiving between kshs. 101,000 – 200,000.

### 5.1.2 The effect of the received revenue on available teaching and learning materials in ECDE Centers in Siaya County

There was a significant positive correlation between total funds received and availability of T/L materials in 2013, 2014 and 2015. Thus, acquisition of T/L materials rise with increase of funds in the ECDE centres in Siaya County.

### 5.1.3 The effect of the received revenue on number of qualified teachers employed in ECDE Centers Siaya County

There was significant positive correlation between total funds received and number of teachers employed in ECDE centers in Siaya County in 2013, 2014 and 2015. Thus, with increase of funds being received at the ECDE centres, additional qualified teachers would be engaged. The study also concluded that each ECDE center had not employed adequate teachers as recommended by ECDE quality standards guide-line 2006. Secondly, notable number of teachers had no relevant qualification to teach at the ECDE centres.

## 5.2 Recommendation for Practice

The government, parents and other partners should invest more finances in ECDE in order to make it possible to acquire adequate T/L materials and also employ the recommended number of qualified teachers at a ratio of a teacher to pupils at 1:25.

The ECDE Managers (county government, Board of Management and proprietors) should at all time employ qualified personnel to teach in their centres and encourage the untrained teachers already in their centres to enroll for training in Teacher Training colleges.

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