

## Impact of Teaching and Learning Facilities on Pupils' Achievement in Public and Private ECDE Centres in Kenya in the context of Devolved System of Management

BY

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### Abstract

The Kenya 2010 Constitution placed management and financing of Early Years' Education (EYE) under custody of County Governments. In essence, management of ECDE centres is expected to be more effective as a result of improved teaching and learning facilities in the counties than it was before devolution. This study emerges from the theoretical perspective that increased inputs should lead to increased outputs. Consequently, the Education Production Function (EPF) theory was employed. The objective of this comparative study was to explore the available teaching and learning facilities and how they could influence achievement of pupils in Public and Private ECDE centres in the context of increased funding to Public ECDE centres. Kericho County with a target population of 1,066 teachers and 18,405 pupils in Public ECDE Centres as well as all the 628 teachers and 4,180 pupils drawn from 750 Public and 258 Private ECDE centres was selected for the study. Pupils in Pre-Primary 2 were used in the study. Sampling was done through stratified, purposive and simple random sampling methods. The sample size was determined by adopting the Krejcie and Morgan formula. Cross-sectional correlation survey was used to compare the impact of selected independent variable of teaching and learning facilities on academic achievement of ECDE learners. Data collection was done using questionnaires, observation schedules, and interview guides. The instruments were validated by experts and piloted to determine their reliability in neighbouring Bomet County which did not part of the study. The data collected was analyzed using respective techniques. The quantitative techniques involved descriptive and inferential statistics in order to answer the questions posed for study. Qualitative techniques involved descriptive statistics. Two hypotheses were formulated and tested at 0.05 level of significance using t-test. The results obtained showed that despite the increased funding hence better facilities to Public ECDE Centres, learners in Private ECDE centres performed better in their achievement test compared to their counterparts in Public ECDE centres. The study provides useful information for education policy makers in both levels of government for decision making with regard to devolution of management of ECDE centres, funding and academic performance. Proposed guidelines are intended to deliver, accountability for Early Years Education (EYE) funding, service delivery and increased quality service. The major findings of this study show that in spite of improved teaching learning facilities as a result of increased funding by the County Government, learners in Private ECDE centres continue to outshine their counterparts in the Public ECDE centres. This implies that there could be other underlying factors that affect performance at this level other than better teaching learning facilities as a result of funding.

**Keywords:** ECDE devolved management, County Government, teaching learning facilities, pupils' achievement in Public and Private ECDE centres.

## Introduction

### Background to the Study

Education for the young has been in existence for as long as there has been parenthood. Nevertheless, management of Early Childhood Development and Education (ECDE) has remained unstructured for a very long time. ECDE is a foundation on which Education for All (EFA) and especially Early Years' Education (EYE) should be founded (Nyamwange, 2012). Therefore, ECDE is the education given to younger children before the age of entering primary education (Obiweluzor, 2015). EYE has at different times been managed by the family, the church, the community, and the Private sector. In Kenya rarely has ECDE been the responsibility of any government agency. Immediately after Kenya's independence, the Simon Ominde-led African Education Commission of 1964 recommended the establishment and strengthening of early childhood education centres for Africans. Today the clamor for early childhood education is more widespread. Fifty percent of Kenyan children aged 3-6 attend ECDE centres.

Learning in ECDE centres is at its best when pupils are in a favourable environment. Availability of appropriate and adequate teaching and learning facilities is inevitable. According to Davies (2011), resources can be anything in the school or its environment that may be used to facilitate teaching or learning. This includes people in various guises, buildings and their surroundings, physical plant, and even actions resulting from a change in any particular section. According to Davies (2011), the conceptual framework for Jamaica early childhood curriculum from birth to five years, the development of interest corners depends on various factors which include availability of appropriate materials, physical space, and the practitioners' resourcefulness. The researcher explained that corners of interest provided in a classroom setting includes shop, home, science discovery, market, toys, art, music sound, contractions, blocks and play, water play computers, and special interest; home. However, the study did not address the kind of appropriate materials in relation to academic achievements of learners.

Bronfenbrenner (2004) pointed out that children's development is influenced by availability and use of relevant equipment, physical facilities, and materials present in the environment in which children live, and the interpersonal relationships of the persons with whom they interact. A survey of K-12 teachers in Washington, D.C. cited in Buckley, Schneider, and Shang, (2004) found out that facility quality is an important predictor of the decision of teachers to leave their current position.

The devolved management of EYE by the County government is a proxy for increased funding to early childhood education. Although primary ECDE Centres in Kenya were required to create an ECDE annex from January 2003, the government's involvement in planning and funding was minimal. The promulgation of the 2010 Constitution gave the responsibility of ECDE management to County Governments in terms of the development of required infrastructure for institutions providing ECDE services (Shinali & Kamau, 2016). County Governments were given budgets for

infrastructure, hiring of teachers, and the purchase of instructional materials.

Early Years' Education (EYE) is the cradle of future learning. Early Years' Education is globally recognized as a crucial period in children's physical, mental and psychosocial development (National Scientific Council on the Developing Child 2007). Early Years' Education is the level of education when children acquire basic skills that serve as a good foundation for their later learning. ECDE develops the capacity to learn, to read and use mathematics, to acquire information, and to think critically about the information acquired (Anderson & Anderson, 2018). The success of EYE squarely relies on funding. This is a critical input to education (Barret, 2018). Consequently, increased funding is expected to provide better teaching and learning facilities in the form of classrooms, resources, instructional materials, and better nutrition for pupils at the early childhood stage. Increased funding should therefore increase enrollment and class attendance.

The promulgation of the 2010 Constitution was to alter the landscape of ECDE completely. A new legal framework placed ECDE under county governments. An Act of Parliament (2014) came into force, stipulating the functions and procedures to be followed (Republic of Kenya (2010). It declares early years' education to be free and compulsory for young children in counties. The Act stipulates that every child has a right to education without discrimination, exclusion or restriction on the basis of sex, race, colour, ethnic origin, tribe, birth, creed or religion, social economic standing, political or other opinion, property, disability or other status. In Kenya the funding and management of early years' education is now the responsibility of the County Governments. The counties are expected to ensure the enjoyment of the right to early years' education by providing resources to ensure, among other things, availability and access to early years' education for all children within the county.

Nevertheless, the Private sector remains an active participant in the provision of quality ECDE. Over the years Public and Private early childhood study centres have risen in competition. The Private ECDE centres are perceived as more prestigious associated with better training and preparation for entry into primary ECDE Centres. Every primary school in Kenya created an ECDE wing as from 2003 and with much greater support from the County Government from 2010 following devolution. It is expected therefore that Public school early years' education will be more efficient and make an impact on the future of the learners.

Under this new arrangement it is expected that the quality of ECDE will rise against this background it is important to establish the impact of these allocations on the quality of ECDE. It is therefore logical to compare Public and Private ECDE centres. It is often assumed that investors in Private ECDE centres provide better quality education. Is it still the same when County governments are generously funded? There is need for research evidence for this.

Hanushek, Kain and Rivkin (2004) asserted that teachers might be willing to take lower salaries in exchange for better working conditions. This statement may appear like an overstatement, but it's not, considering that the quality of school buildings affects the quality of teachers' motivation to stay and that of educational outcomes. While the Kenyan teachers may not appreciate this, poor "Indoor Air Quality" (IAQ) reportedly leads to "sick building syndrome" which in turn increases student absenteeism, negatively affects pupils' achievement and affects both learners and teachers' health (Buckley, et al, 2004).

School teaching/learning facilities have a critical influence on learner satisfaction. In Kenya, Nyaga (2013) carried out a study on the administrative challenges faced by Public Primary School head teachers in the management of pupils in Embakasi District. A descriptive survey design was employed and a focus was made on head teachers in 42 Public ECDE Centres in Embakasi District Nairobi County. The County Education Officer (CEO), Embakasi, and Area Education Officer (AEO), Embakasi were among those interviewed. Findings indicated that majority of respondent revealed that physical facilities were important. They complained that inadequate classroom and other facilities in the school was the main problem. It was established that classroom chairs and desks in their ECDE Centres was inadequate to cater for the influx of the pupils in the recent years leading to inadequate learning facilities which is crucial for pupils' management and learning. The findings further revealed that the school sanitation was below standard. A number of toilets in majority of the ECDE Centres were inadequate or below standard. This affected the implementation of the Free Primary Education (FPE) programme.

Erden (2010) carried out a research on problems that preschool teachers face in curriculum implementation in Turkey. A total of 223 preschool teachers teaching in Public and Private Kindergartens in Ankara were used. Qualitative data was gathered through interviews with a group of participants selected from the 223 teachers. One-way repeated measure of ANOVA and Multivariate Analysis of Variance (MANOVA) was employed to analyze the quantitative data. Content analysis was conducted for the qualitative data. Findings from the study indicated that physical facilities were key issues affecting implementation of ECDE programmes. The study discovered that toilets, classrooms playing grounds were not adequate which affected the implementation on pre-school programme.

Njoroge (2011) conducted a study on factors influencing children enrolment in preschool education in Thogoto and Karai Zones in Kikuyu Division, of Kenya, a survey research design was used. The target population of the study included ECDE Centres pupils, teachers, head-teachers, proprietors of ECDE Centres, and parents from Thogoto and Karai zones of Kiambu County. The sample comprised of 3 head teachers, 3 directors, 6 teachers, and 6 parents. The study showed that physical facilities in the Public ECDE centres were not conducive hence parents were not willing to enroll their children in the Public ECDE centres. Findings from this study established that physical facilities, teaching-learning resources are the major factors influencing children enrolment in pre-school education. The study emphasized that the role of physical facilities

is paramount in enabling teaching and learning in the ECDE centres. Recommendations were made that physical facilities should be available so that learning can be effective, and this finding informed the need for this study. Many ECDE centers in Kenya lack adequate teaching and learning resources and facilities suitable for ECDE in their learning environment.

A study carried out by Offenheiser and Holcombe (2008) attested that inadequate teaching, and learning resources, lack of properly ventilated classrooms, furniture suitable for children, kitchen, safe clean water, playground, toilets and play material have a negative effect on the effective implementation of ECDE programmes. Similar views have been posited by a study carried out by the International Association for the Education of Young Children, (2011). Findings revealed that teachers do not have adequate teaching and learning resources to enable them to implement ECDE curriculum in their countries effectively. This affects implementation of ECDE curriculum positively.

The creation of a conducive learning environment helps deprived children to improve their academic performance Offenheiser & Holcombe, (2008). Nyaga (2013) also established that the classroom furniture in their ECDE Centres were inadequate to cater for the high enrollment of the pupils. The findings further indicated the fact that the school heads faced lack of adequate learning facilities which is critical for pupils' management and learning. It also points to the fact that the school lacked good atmosphere for learning as most of the classes faced congestion and the available furniture being inadequate for the pupils. A study by Takesure, Moses, Christmas, Kundzai, and Emily (2013) on challenges faced by ECD centres at satellite ECDE Centres in Mwenzi District Zimbabwe established that ECD centres faced severe challenges which include lack of suitable teaching and learning resources, understaffing, and inappropriate medium of instruction. However, the study did not determine specific resources because the learner was not involved in the study.

Given such massive investment through the County Government in Public ECDE centres through improvement of teaching-learning facilities it was expected that the achievement of learners should be commensurate with the investment so far made. It is with this in mind that the study investigated the Impact of Teaching and Learning Facilities on Pupils' Achievement in Public and Private ECDE Centres in Kenya in the context of Devolved System of Management.

#### **Purpose of the Study**

The purpose of this study was to establish the adequacy of teaching and learning facilities found in Public and Private ECDE centres and its influence on the achievement of learners in the context of increased funding to Public sector ECDE Centres by the County Governments.

#### **Objectives of the Study**

The study was guided by the following specific objectives:

- i) To compare adequacy of teaching and learning facilities found in Public and Private ECDE centres;
- ii) To compare achievement between pupils in Public and Private ECDE centres;

**Research Questions**

Research questions are set to help find answers:

- i. Are there any differences in the available facilities between Public ECDE centres and those in Private ECDE centres?
- ii. Are there any differences in achievement between Public ECDE centres and those in Private ECDE centres?

**Hypotheses of the Study**

The following hypotheses were therefore tested:

- i. H<sub>01</sub>: There is no significant difference in the teaching/learning resources available in Private and Public ECDE centres.
- ii. H<sub>02</sub>: There is no significant difference in performance on achievement test between Public and Private ECDE centres

**Theoretical Perspective and Conceptual Framework**

**Theoretical Framework**

The independent variables in this study are the teaching and learning facilities available in ECDE centres. These variables are inputs by the different school management systems. Learners' achievement is the output and constitutes the dependent variable of the study. The researcher sought to compare the effects of funding in ECDE centres on achievement by learners at this level.

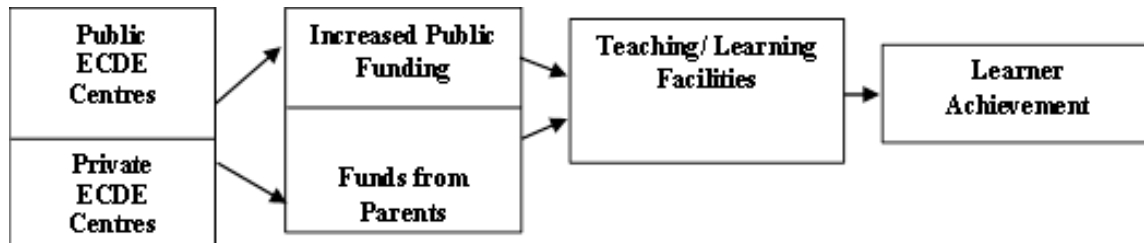
In view of these independent variables, and their link with the dependent variable, the most appropriate theoretical perspective adopted was the Education Production Function (EPF) Theory. The relationship between inputs and outputs of education may be called the education production function (World bank, 1980). Production function refers to the process by which inputs are converted to

outputs. The EPF theory is derived from the general Production Function theory. Education is a production process which uses financial, physical, and human resources to produce educated people. The school in this case is treated as a production firm whose aim is not to make profit. School funding is considered as input while academic performance by ECDE pupils is considered the output.

**The Conceptual Framework of the Study**

The conceptual framework depicts the researcher's understanding of the possible link between the IVs, the moderating variables, the DVs, and the control variables. It is a way of linking all the elements of the research process, research disposition, interest and personality, literature and theory, and methods as explained by Ravitch and Riggan (2017). A Conceptual Framework is purely a visual representation of a study's organization and the researcher's argument about the importance of the study and its rigor (Mugenda & Mugenda, 2012). In the present study, the conceptual framework shows that increased funding arising from devolution provides more resources which benefit education. Increased funding will lead to better quality facilities to be used in teaching, modern child-centered methods of interaction leads to better academic performance by learners in ECDE centres.

In the model presented it is conceptualized that increased funding of ECDE centres has led to better teaching and learning facilities Public ECDE Centres. The type of school attended may also influence academic output by the learner. This implies that the better the teaching-learning facilities the higher the achievement for the learner. The visual representation of the variables selected for this study and how they relate to one another is shown in Figure 1.



**Figure 1:** Conceptual Framework for the effect of Teaching/Learning Facilities on Learner's Achievement between Public and Private ECDE Centres on the context of increased funding as a result of devolution in Kenya

Source: The researcher

**RESEARCH DESIGN AND METHODOLOGY**

The paradigm selected for this study was the sequential mixed method approach in which the researcher began with qualitative techniques such as interview and observation to follow up with quantitative techniques such as survey on a larger sample.

**Research Design**

In order to compare the impact of the selected independent variable of teaching and learning facilities on academic achievement among ECDE learners the researcher chose to conduct a cross-sectional correlational survey study. Cross-sectional surveys collect data

from participants in different fields almost simultaneously, hence the term "cross-section". Correlational studies are concerned with assessing relationships among independent and dependent variables. In this case, the study sought to compare the teaching and learning facilities and later pupils academic achievement in Public and Private ECDE centres. Consequently, the study sought to determine the impact of availability and of teaching and learning facilities on achievement of pupils in Public and Private ECDE centres. The target population consisted of all pupils and teachers in all ECDE centers in Kericho County.

**Sampling Procedures and Sample Size**

Stratified simple random sampling technique was employed in which the use of the Krejcie & Morgan table gave a sample size of 254 Public ECDE centres and 155 Private ECDE centres from a population of 750 Public and 258 Private ECDE centres respectively. Consequently, from population 525 and 258 teachers from Public and Private ECDE centres respectively, a sample of

254 and 155 from Public and Private ECDE centres respectively. Finally, out of a population of 18,405 and 4,180, a sample of 375 and 351 pupils were randomly selected for use.

The sample sizes of ECDE Centres, teachers, and pupils selected randomly and purposively for this study are shown in the sampling

frame shown below. Table 1 show the sampling frame used in the study

**Table 1: Sampling Fram**

Unit	Population		Sample	
	Public	Private	Public	Private
ECDE Centres	750	258	254	155
Teachers	525	258	254	155
Pupils	18405	4180	375	351

The results in Table 1 shows the number of ECDE Centres, teachers, and pupils from both Private and Public ECDE centres selected for use in the study.

**Instrumentation**

The instruments used for data collection in this study includes; questionnaires, Interview Guides, observation checklists, and Pupil Achievement Tests.

**Validity and Reliability of Research Instruments**

Validity refers to a researchers’ ability to draw meaningful and justifiable inferences from scores about a sample or population (Creswell, 2005). In this study, the researcher engaged and sought assistance from her supervisors and members of the postgraduate class at Moi University to read and assess the relevance of the research instruments against the objectives of the study. The supervisors’ and students’ suggestions and opinions were incorporated to help improve the questions in the questionnaire and in the interview guide.

Test-retest reliability was used in this study. This test indicates the degree to which scores obtained from the same informants remain consistent over brief periods during which the subject's competencies are not likely to change. Data used in this case was obtained by administering the same test twice over a period of time to a group of individuals. The scores from Test 1 and Test 2 were then correlated in order to evaluate the test for stability over time. If the results of the study can be reproduced under a similar methodology, then the research instrument is considered reliable Joppe, (2000). In this study, the Cronbach alpha test gave an alpha ( $\alpha$ ) coefficient of 0.72 thus giving confidence that the items in the test are closely related and truly measure the internal consistency of respondents.

**Data Collection Procedures and Analysis**

Data was collected by the researcher assisted by two trained assistants. The researcher visited ECDE Centres and the Questionnaires were issued to respondents and given time to respond. Later they were collected physically to ensure high return

rate. The interview sessions were carried out face to face using probing questions for further explanations and clarifications and responses were recorded.

Data was analyzed based on the objectives. Qualitative objectives were analyzed qualitatively. Data was organized around themes which answer specific questions. Quantitative data was analyzed quantitatively and organized in tables. Descriptive statistics involved computing frequencies, percentages, drawing histograms and pie charts among others. It also involved computing means and standard deviation.

**RESULTS AND DISCUSSION**

The findings are discussed according to the objectives of the study.

**Effect of teaching/learning facilities on the performance of learners in Public and Private ECDE centres**

The objective was to analyze the effect of teaching/learning facilities on achievement of learners in Public and Private ECDE centres in the context of increased funding to Public ECDE centres by National Governments through the County Governments.

A growing body of research has found that school facilities can have a profound impact on both teacher and student outcomes. With respect to teachers, school facilities affect teacher recruitment, retention, commitment, and effort. With respect to students, school facilities affect health, behavior, engagement, learning, and growth in achievement (Tanner, 2006). Thus, the Public ECDE centres and ECDE Centres with provisions from the county government were expected to be at an equal footing with the Private ECDE Centres as far as learning facilities were concerned. An observation scheduled was used to collect the relevant data to find out if this was so. The results are presented Table 2.

Table 2: Facilities found in Public and Private ECDE Centres

Type of School	Public								Private							
	1		2		3		4		1		2		3		4	
State of Facilities	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Administration office	64	25	140	55	25	10	25	10	16	10	109	70	15	10	15	10
Staff room	64	25	114	45	76	30	0	0	16	10	62	40	77	50	0	0
Sitting and writing space	216	85	38	15	0	0	0	0	0	0	62	40	62	40	31	20
Chalk/white board	140	55	76	30	38	15	0	0	0	0	62	40	46	30	46	30
Furniture	102	40	140	55	12	5	0	0	0	0	77	50	31	20	46	30
Health Facilities	88	35	76	30	64	25	25	10	0	0	31	20	109	70	15	10
Indoor play	254	100	0	0	0	0	0	0	0	0	155	100	0	0	0	0
Outdoor play	0	0	178	70	25	10	51	20	0	0	109	70	31	20	15	10
<b>Mean Rating</b>	<b>1.760</b>								<b>2.540</b>							

Rating of the adequacy of the facilities: 1=Unsatisfactory, 2=Satisfactory, 3=Good & 4=Very Good

**Administration Offices**

This means that more administration offices in the Public ECDE Centres were unsatisfactory 64(25%) compared to 15(10%) which was unsatisfactory in the Private ECDE Centres whereas 15(10%) was good and 15(10%) was very good. However, the overall impression of the administration offices was below expectation with a total of 204(80%) scored on the lower half in the Public ECDE Centres and 124(80%) in Private ECDE Centres were in the lower half. This means both Public and Private ECDE Centres did not put prominence on the provision of quality administration offices.

**Staff Room**

This means more staff rooms in the Public ECDE Centres 178(70%) were unsatisfactory and satisfactory combined in the Public ECDE Centres compared to 78(50%) in the Private ECDE Centres on the two lower cadres combined. This implies that Private ECDE Centres have better staff rooms for their teaching staff.

**Sitting and Writing Space**

Majority of the Public ECDE Centres, 216(85%) had unsatisfactory space, while only 38(15%) was satisfactory. Conversely in Private ECDE Centres, none was found to be unsatisfactory, 62(40%) were satisfactory, 62(40%) were good while 31(20%) were very good. This means that more sitting and writing space was provided in Private ECDE Centres, 93(60%) being good and very good put together, compared to none in the Public ECDE Centres which scored good or very good.

**Provision of chalk and white board**

Majority 140(55%) in Public ECDE Centres were unsatisfactory, 76(30%) were satisfactory, 38(15%) were good and none was very

good. On the contrary, none in Private ECDE Centres was unsatisfactory, 62(40%) were satisfactory, 46(30%) were good and 46(30%) were very good. This shows that provision of chalk and whiteboard was better in Private ECDE Centres; 92(60%); good and very good, likened to only 38(15%) of the same quota in the Public ECDE Centres.

**Furniture**

In 102(40%) Public ECDE Centres, furniture was said to be unsatisfactory, 140(55%) were satisfactory, 12(5%) was good and none was very good. In Private ECDE Centres, none was unsatisfactory, 77(50%) were satisfactory 31(20%) were good and 46(30%) were very good. On this variable, 77(50%) Private ECDE Centres were scored good and very good compared 12(5%) in the Public ECDE Centres where majority 242(95%) were either unsatisfactory or satisfactory.

**Health facilities**

A bulk of Health facilities in Public ECDE Centres 88(35%) and 76(30%) were said to be unsatisfactory and satisfactory respectively, while only 64(25%) and 25(10%) were good and very good correspondingly. In the Private ECDE Centres, no health facility was unsatisfactory, 31(20%) were satisfactory, 109(70%) were good and 15(10%) was very good. It's clear from this result that 124(80%) health facilities were better in Private ECDE Centres but dismal in Public ECDE Centres where 164(65%) were lower half.

**Provision for Indoor and Outdoor play**

The results on Table 4.11 show that there was either very poor or no indoor play in Public ECDE Centres as all 254(100%) were rated unsatisfactory. Similarly, all the 155(100%) observed in the Private ECDE Centres were satisfactory. Though it was slightly

better in Private ECDE Centres, this seems a common weakness in both types of ECDE Centres.

Outdoor play was also sought for in the study where none was found to be unsatisfactory in the Public ECDE Centres, 178(70%) were satisfactory, 25(10%) were good and 51(20%) were very good. In the Private ECDE Centres none was unsatisfactory, 109(70%) were satisfactory, 31(20%) were good and 15(10%) was very good. This facility was provided equally poorly by Public and Private ECDE Centres with 70% in the lower half in both types of ECDE Centres.

The overall mean rating in adequacy of the teaching/learning facilities gives an average of 1.76 (Satisfactory) for Public ECDE Centres and an average of 2.540 (Very Good) for Private ECDE Centres. Earlier studies indicate that Pre-school facilities are mostly semi-permanent, local or church halls or any other building that the local communities accept as suitable (Jepleting, 2013). The mean adequacy of 1.76 of the available facility in Public ECDE Centres after devolution interpreted as satisfactory could be as a result of increased funding compared to the mean rating of 2.54 interpreted as Very Good for Private ECDE Centres.

An inspection focusing on the status of pre-primary premises indicates that the present facilities fail to meet minimum education standards (Mabatuk, 2016). The quality of school facilities seems to have an indirect effect on learning. Buckley, et al (2004) opined that school facilities have a critical bearing on teacher and learner satisfaction. They said that facility quality is an important predictor of the decision of teachers to leave their current position. Results from the study shows that the teaching and learning facilities are more adequate in Private ECDE centres. In spite of the funding from County Government, the teaching and learning facilities available so far in Public ECDE centres in the County are inadequate. Hanushek, Kain & Rivkin (2004) asserted that poor learning environments reportedly lead to ‘sick building syndrome’ which in turn increases teacher and student absenteeism thus reducing student performance.

**Hypothesis 1**

Hypothesis on of the study stated that there is no significant difference in the adequacy of teaching/learning facilities available in Private and Public ECDE centres.

**Table 3: Independent Samples t-test for Equality of Means between Private and Public ECDE centres on the Adequacy of T/L facilities**

Scale	Group	N	Mean	SD	Df	t-value	p-value
Rating on the Adequacy of T/L facilities	Private ECDE Centres	1238	2.540	0.132	3267	0.520	0.478(ns)
	Public ECDE Centres	2031	1.760	0.122			

ns = not significant at 0.05 alpha level; Rating on the Adequacy of T/L facilities Maximum Mean Score = 4.000

Independent Samples t-test results for Equality of Means between Private and Public ECDE centers on the Adequacy of T/L facilities in Table 3 shows that there was no statistically significant difference in the means of the rating on the Adequacy of T/L facilities Private and Public ECDE centres (t(3267)=0.520, p>0.05). Consequently, hypothesis 1 of the study was accepted. This implies that there is no statistically significant difference in the adequacy of teaching/learning facilities available in Private and Public ECDE centres. However, a study on nature of schools and academic performance of public schools carried out by Murungi (2012) explained that school buildings must be not only a container or a functional program but also a friendly and attractive. The study also stated that buildings and toilets are some of the basic facilities that impact on academic performance. Lilian (2015) investigated the classroom environment on pupil’s academic performance in primary schools in Bungoma Sub County, Kenya. This study pointed out that availability of physical facilities in schools contributed positively to pupil’s performance. Eshiwani (2001) stated that school facilities such as laboratories, playing fields, and library positively influenced student’s performance. However, this study targeted physical facilities and how they influenced learning environment in achievement of pupils of social studies in Kibwezi Zone lower primary school.

**Comparison of Pupils’ Achievement in Public and Private ECDE Centres**

The study went further to compare the academic achievement of pupils in Public and Private ECDE Centres. Table 4 shows the academic performance of pupils in Public and Private ECDE Centres.

**Table 4: Comparison of Pupils’ Achievement in Public and Private ECDE Centres**

School Category	Categorized Marks								Entry	M. S
	40 & below		41-60		61-80		81-100			
	Freq	%	Freq	%	Freq	%	Freq	%		
Private School	0	0.0	5	1.3	110	31.3	236	67.3	351	83.16
Public School	29	7.8	242	64.5	104	27.8	0	0.0	375	54.77

The results in Table 4 show that the achievement of pupils in Public ECDE Centres was much lower than that of pupils in Private ECDE Centres with a mean score of 54.77 and 83.16 respectively. These results indicate that majority of the pupil’s in Private ECDE centres continue to outshine their counterparts in Public ECDE centres with regard to their academic performance.

**Hypothesis 2**

The second hypothesis of the study stated that there is no significant difference in performance on Achievement Test between Public and Private ECDE centres. The data collected as analyzed using t-test to compare the mean of Private ECDE Centres with that of Public ECDE Centres. The results of this analysis are shown in Table 5.

Table 5: Table of Independent Samples t-test for Equality of Means between Private ECDE Centres and Public ECDE Centres pupils' Achievement Test Scores

Scale	Group	N	Mean	SD	df	t-value	p-value
Pupils' Achievement Test Scores	Private ECDE Centres	351	83.160	21.155	724	0.721	0.002(s)
	Public ECDE Centres	375	54.770	18.170			

s = significant at  $p > 0.05$  alpha level; Achievement Test Maximum Mean Score = 100.000

Table 5 shows that the differences in the mean performance on Achievement Test between Public and Private ECDE centres was significant at 0.05 alpha level,  $t(724) = 0.721$ ,  $p < 0.05$ . With this result, the null hypothesis ( $H_0$ ) is thus rejected. The improvement of teaching/learning facilities in Public ECDE Centres as a result of devolved management may not be a predictive measure of pupils' better achievement. This implies that there is need to explore other factors that could have a direct influence of pupils' achievement in ECDE Centres.

**CONCLUSION AND RECOMMENDATIONS**

**Summary of Major Findings**

The teaching/learning facilities are critical to provision of quality education at all levels of learning. Consequently, this could lead to better achievement of pupils in ECDE centres. However, results from this study showed that on average the standard of teaching/learning facilities of majority of Public ECDE centres in Kericho County did not match that of the Private ECDE centres. In view of the objectives of the study the following major findings were arrived at:

- i. the overall mean rating in adequacy of the teaching/learning facilities gives an average of 1.760 (Satisfactory) for Public ECDE Centres and an average of 2.540 (Very Good) for Private ECDE Centres.
- ii. there is no statistically significant difference in the adequacy of teaching/learning facilities available in Private and Public ECDE centres.
- iii. majority of the pupil's in Private ECDE centres continue to outshine their counterparts in Public ECDE centres with regard to their academic performance.
- iv. There is a significant difference in performance on Achievement Test between Public and Private ECDE centres

Lack of adequate classrooms, desks, chairs, and tables affected pupils learning as overcrowding affected learners acquisition of competency skills required at ECDE level. Inadequate learning facilities hinder the achievement of pupils in Public ECDE centres in the County. Based on these findings, there is need for County Government of Kericho to continue investing on improving the standards of Public ECDE Centres by constructing more classrooms to ensure learners admitted learn in a spacious classroom. The Board of Management (BOM) of ECDE centres

and Parents Association (PA) need to engage other stakeholders parents, donors, and other well-wishers to mobilize resources for construction of more classrooms and other facilities that will ensure more learners are admitted and retained in their institutions.

**Recommendations**

Based on the findings of the study, the following recommendations were made:

- i) all ECDE Centres whether public or private should ensure that there is provision of good teaching and learning facilities. This will help in providing conducive learning environments for both the learners and the teachers.
- ii) the quality of school facilities seems to have an indirect effect on learning. This explains why the achievement of pupils in Public ECDE centres remained low even after improvement of T/L facilities. There is need to determine other factors that could be having a direct influence on learners achievement.

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