Assessment of the Impact of Early Childhood Development Capitation on ECDE Programme in Kenya: A Case of Narok South Sub County, Kenya

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Abstract

The study looked at the assessment of the Early Childhood Development capitation grant on ECDE centres in Narok south Sub County. The main objective of this study was to assess the impact of capitation grant on ECD in the centres under study. The basis of the study was on a conceptual framework on the objectives of ECDE curriculum in Kenya and how the capitation grant fund enhanced the achievement of the holistic development. Descriptive survey design was used. Qualitative and quantitative data collection techniques were combined and used. The instruments used were questionnaires, observation checklist and structured interview. Purposive sampling was used in the selection of the population where 50 respondents from 20 ECDE centres were selected for the study. The data that was analyzed was presented in tabular and graphical form. The researcher established that the ECD capitation grant has led to an increase in the enrollment of learners in ECDE centers, there was adequacy of the teaching and learning materials and this in turn has enhanced learning despite the fact that the grant was considered inadequate. The community should be sensitized on the ECDE capitation grant so that it is not mistaken with Free Primary Education (FPE). Consequently, parents will offer support and demand for accountability from the administration. The government should employ early childhood development (ECD) teachers as a motivation to ensure efficiency in their delivery. The study will be of significance to the Ministry of Education and the development of ECD in Narok Sub-county. The management committee of the ECDE capitation grant will solicit for more funds to improve on the teaching and learning environment. The ministry of education will get assistance on how the funds have been utilized and improve the running of the ECDE capitation funds.

Keywords: capitation grant, early childhood development education programmes, Kenya

Introduction

The ECDE capitation grant programme was started in 2007. The purpose was to enhance access, quality and equity to early childhood development education (ECDE) services. It targets all children aged 4-5 years and of great concern are the most vulnerable living in Arid and Semi-Arid Lands (ASALs), pockets of poverty and the urban slums. Ngaruiya (2008) ascertains that about 65% of children in Kenya particularly those from poverty-stricken house holds do not access quality pre-school programmes.

The ECD capitation grant is calculated using a per pupil grant. This is done with the aim of encouraging ECDE centres to increase their enrollment. Te total capitation per child is Kshs 978.00 normally released in two tranches at the rate of Kshs 489/= per child. The grant is given with the aim of being used to improve the quality of teaching, learning materials and also the learning environment in each of the ECDE centres.

A cost saving ration of one to six has confined that cost benefit analysis is evident (McCain and mustard 1999). This is supported by schweinhart and weikart, (1988) who hold the view that spending money on early childhood education was a better investment than paying for remediation later in life.

Statement of the problem

In 2003, free primary education was introduction in Kenyan schools. ECDE was not included in this set up despite the fact that most parents are poor especially from the rural areas. An estimate of about 65% of children in Kenya especially from poverty stricken households do not access quality pre-school program. Parents have opted to avoid pre-schools and opt to take children direct straight to primary school (Ngaruiya, 2008).

The ECDE capitation grant has been mistaken for free primary education (FPE) by the parents hence expect their children to learn in ECDE centres freely. Presently access to ECDE services is low at 35% while the national target was to raise access to ECDE services to 60% by 2010. It is the aim of the ministry of education to ensure that all children aged 4 to 5 years particularly girls and those living under difficult circumstances have access quality ECDE services. This study therefore aims at assessing the impact of ECDE capitation grant on ECDE programs in Narok sub County.

Scope and limitation of the study

The focus of the study was funding of ECDE in Kenya through the capitation grants. This was based on the ECDE centres receiving the grant from the government. The research was based on assessment of the impact of ECDE capitation on ECDE programmes in Narok south sub county.

In the initial stages of the study, there was suspicion by teachers and parents. This was a limitation that was overcome by re-assuring them of confidentiality of information given. Establishing a rapport with the respondents was also important. Unreliable and invalid responses were tackled by triangulating the data through observation and interviews.

Early Childhood Education funding in Kenya

There has always been a partnership between the government, parents and communities in financing ECDE education. The cost sharing policy (Kamunge Report, 1988) was implemented in 1988. The cost sharing policy entailed the government paying the salaries of teachers and education administrators and also was required to fund some limited school facilities while the parents chipped in on private tuition, textbooks, materials and examination. Land for building the schools is also provided by the parents, put up physical facilities as well as maintain the same. According to economic survey (2004) 57% of public funds go to primary education, 16.2% to secondary education while 20% goes to post secondary education. Kshs 0.60 was spent on each pre-school child, Kshs 1774 per primary school child Kshs 9,418 was spent per secondary student while 11,812 per university student by 1997.

The government has been shouldering a heavier burden of financing the cost of primary school education since the cost of free primary education is stressed. The upkeep of the children and general school development consisting of putting up buildings, upgrading facilities, furniture and paying for maintenance of facilities (Kenya policy framework on early childhood development 2006). For the ECDE programme to be effectively implemented, it needs adequate financial support.

All the stakeholders i.e. the parents, local communities, NGOs support the ECDE programme. The government support is minimal but acts as a motivation to others to contribute towards the programme. The ability of parents and communities to give financial support has been hindered by poverty in supporting the programme. Although there has been a rapid growth of education in Kenya since independence, enrollments in ECDE especially in the ASAL and urban slums has been low.

Enrollment in ECDE centres has risen from 1.53 million children in 2003 to 1.72 million on 2008. This translates to 9.9 percent. The government targets to hire ECDE teachers to improve access and quality of education. The provision of teaching and learning materials is also essential in quality education. In Narok south sub county, where the research was carried out the total enrollment of ECDE children was 3078 (2014) comprising of 1790 boys and 1288 girls.

Methodology

Descriptive survey design was used to get the information under investigation. Descriptive survey design has been described as those studies concerned with describing the characteristics of a particular individual or a group (Kothari, 2004). The design has been postulated as the most appropriate design in the behavioral sciences as it seeks to find out factors associated with certain occurrences, outcomes and conditions of behaviour (Best and Kahn, 1993). The researcher is able to collect in-depth information concerning the issue under investigation. Mugenda and Mugenda (1999), postulates that a survey is an attempt to collect data from members of a current status of a particular population with respect to or more variables.

The study location was purposively selected and it consisted of selected ECDE centres in Ololulunga, Lemek and Mulot divisions in Narok sub County. The researcher selected 20 ECDE centres from the above divisions because they receive the ECDE capitation grants otherwise there are 178 ECDE centres in the sub county. Two ECDE teachers were selected from the centres as a sample presentation of the study. A group of people believed to be reliable for the study is purposely selecting (Kombo and Tramps, 2006). Justification of the ECDE centers receiving the governments capital grants is well captured by Krathwohl (1993) who observed that in survey studies, two categories of respondents are crucial i.e. the consumers and the informed specialists. This therefore led to the 20 head teachers in the particular ECDE centres being selected for the study and 40 pre-school teachers.

The main research instrument was the questionnaire. It included both open and closed ended questions. Questionnaires were in two sets: one set for the head teachers and the other for the ECDE teachers. The

development of the questions was done in such a way that difficult questions were first asked before placing sensitive questions at the end. Observation checklists were also used to observe the teaching and learning materials available in the ECDE centres after the ECDE capitalization find was received. The researcher was able to directly view the resources available and ascertain how they were being used in the teaching as one way of obtaining information about the progress, or outcomes of an educational programme. This entails observing directly selected aspects of its development and implementation as they occur (Ogula, 1998). Interview schedules were also used to allow in-depth insight of the capitation grant. This involves presentation of oral-verbal stimuli and oral verbal responses (Kothari, 2004). Secondary data used in the research included sourcing information from journals, books, newspapers and periodicals.

In order to examine the interview schedules and observation checklists before identifying the patterns and organizing data into categories, qualitative data was done. To make meaning of the findings, research responses were compared and interpreted bearing in mind the perceptions, opinions and experiences. Quantification and categorization of data was involved by assigning numerical values to the various categories to facilitate the statistical representation of data. The statistical package for Social Sciences (SPSS) computer package version 17.0 was used to centre the coded responses. The presentation and interpretation of analyzed data was done using descriptive statistics. This included frequency tables, bar graphs, mean and percentages.

Results and discussions

In this section, the data analysis, presentation and interpretation are reported. The following main questions guided the study: How can the ECDE capitation grant on ECDE centres in Narok south sub County be assessed? In addressing this question: the following subsidiary questions were asked:

- i. How does the ECDE capitation grant influence the enrollment of learners in ECDE centres in Narok south sub county?
- ii. How does the ECDE capitation grant influence the quality of teaching and learning resources in the ECDE centres?
- iii. What are the challenges of implementing the ECE capitation grants in the ECDE centres?

In order to systematically address these questions, the researcher grouped the data into sub-theme: background information of the respondents, enrollment in the ECDE centres, and ECDE capitation grant on the quality of teaching and learning resources and the challenges of implementing the ECDE capitation grant in the centres.

Background information of the respondents

A total of 60 copies of questionnaires were issued to the pre-school teachers and head teachers. Basically, this section sought the characteristics and gender of the respondents. The information is tabulated below:

Sex	Head teacher		Teacher	
	f	%	f	%
Male	17	85	8	20
Female	3	15	32	80

Table 1: Distribution of Head teacher and teachers

Source; Research Data (2014)

 $Key \ -f - Frequency, \ \% \ percent$

The respondents were kindly requested to indicate their gender on their questionnaires. The above table presents the gender of the participants who were involved in the study 85% of the head teachers who participate were male while 15% were female. This was a representation of 17 male head teacher and 3 females respectively. The males dominate as headteachers. 32 ECDE teachers were female representing 20% while 8 were male which is 80%. This confirms statistics from the educational statistical booklet (2003 - 2001) that the female ECDE teachers have been dominantly female.

Table 2: Educational level of headteachers and teachers

Level	Headteachers		Teachers	
	f	%	f	%
Degree	4	20	0	0
Diploma	7	35	13	32.5
Certificate	9	45	27	67.5

Source; Research Data (2014) Key: f-Frequency, % -Percentage The respondents were requested to indicate their academic qualifications in the questionnaires, 20% headteachers were degree holders while 35% were diploma holders and 45% were certificate holders. This represented 4 degree holders, 7 diploma holders and 9 certificate holders. 32.5% of the ECDE teachers were diploma holders while 67.5% were certificate holders. This is an indicator that all the teachers were professionally qualified and therefore had the ability to effectively teach and use the teaching and learning materials provided by the ECDE capitation grant.

Findings on ECDE centre's enrolment.

Objective 1 sought to establish whether the ECDE capitation grants has an effect on enrolment in ECDE centres. The headteachers were required to give data of enrolment for their ECDE centres since the inception of the capitation fund i.e. year 2007 to 2014. Answers to research question 1 were provided by the analysis of this data as indicated below.

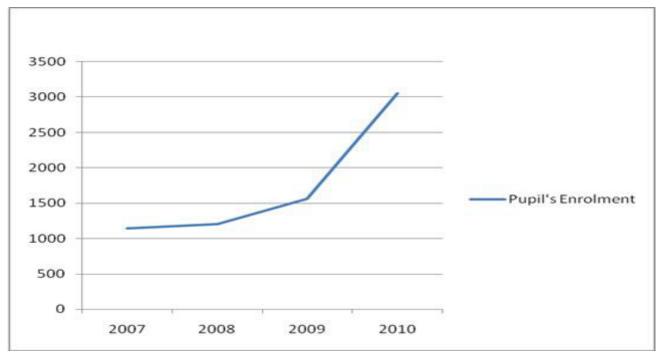


Figure 1; Learner's enrolment in ECDE centers in 2007-2014 Source; Research Data 2014-Researcher's fieldwork findings.

There has been a constant rise on ECDE enrolment since the inception of ECDE capitation grant in 2007. From the above figures in 2007, there were 1078 learners while in 2008 the number rose by 7% representing 1150 learners.

In 2009 the enrolment was 1395 representing a percentage of 21.30% while 2010 it shot up to 11.83% representing 1560 learners. 1825 learners (16.99%) were enrolled in 2011 and 2042 learners, a representation of 11.89% enrolled in 2012. The year 2013 had an increased enrolment of 22.92 % representing 2510 learners and 2014 saw an increased enrolment of 3078 representing 22.63%. This is a clear indication that the ECDE capitation grant has led to the increase in access to learning.

Table 3: ECDE Capitation	orant and qualit	y of teaching and learn	ing resources on ECDE
Table 5. ECDE Capitation	grant and quant	y of teaching and leaf h	ing resources on ECDE

Statement	Qualification	SA	A	U	D	SD	TOTAL
ECD Teachers:	Diploma	3	7	3	2	3	18
The government funding for CSG is							
adequate for effective implementation							
Head Teachers:	Degree	6	8	5	4	13	36
The government funding of CSG is	Diploma	-	-	-	2	2	4
adequate for effective implementation.	Certificate						
Statement	Diploma	-	-	2	3	4	9
Teaching in the ECD centres is hampered	certificate	6	13	-	4	3	26
by limited resources		17	20	2	2	1	42
The introduction of CSG has led to	Head teachers	7	9	2	5	5	28
development of new outdoor materials	ECD teachers	18	15	4	2	10	49
Individual members of the community	Male	4	10	3	6	8	31
have contributed towards the	Female	8	18	3	3	7	39
implementation of CSG programmes							

Source: Research Data (2012) - Author's fieldwork findings

Key: SA- Strongly Agree, A – Agree, U –Undecided, D – Degree, SD – Strongly Degree Responses obtained from headteachers whether the government's funding of the ECDE capitation grant was adequate indicate that the headteachers with degree qualification 100% disagreed to the statement while 33% with diploma also disagreed and 22% were undecided 11% of those with certificates disagreed while 13.89% were undecided and 22% agreed that it was adequate.

Diploma ECDE teachers 38.89% agreed while those with certificate responded as follows 22.22% agreed, 13.89% were undecided and 11.11% disagreed. The findings indicted that the teachers are in agreement that the ECDE capitation grants is adequate while the headteachers disagreed. The ECDE capitation grant is donor money and has many conditions (Ministry of Education, 2008). This report corresponds to Otieno and Colclough (2005) in their paper Financing of Education in Kenya which found out that there has been difficult relationship with the aid community since time immemorial.

The researcher sought to find out it teaching is hampered by limited resources and 50% of the headteachers agreed while 15.38% disagreed. On the teacher's sides 47.62% agreed while 4.76% disagreed and 4.76% were undecided.

On whether the ECDE capitation fund led to the development of outdoor material, 32.14% of the head teachers agreed to it while 17.85% disagreed. The ECDE teachers' response was that 30.61% agreed while 8.10% were undecided and 4.08% disagreed.

The ECDE teachers being the implementers of the curriculum agreed that the ECDE capitation fund has led to the development of the out door materials yet the head teachers who are managers were noncommittal on the matter.

On the statement of teachers' attendance of in-service course on the implementation of ECDE capitation grant, the response indicated that 51% had attended in-service training course on implementation of the capitation grant of the selected ECDE centres while 40.6% had not and 8.4% were undecided.

This implies that the Ministry of Education has done some effort to reach more than a half of the ECDE teachers but more should be done to reach the remaining teachers for effective implementation of the ECDE capitation grant.

The Dakar framework of action (2000) renewed its commitment to ECDE for expanding access to integrate ECDE services, improving their quality and ensuring equity. Investment in ECDE has been established that it pays off educationally, socially and economically (UNESCO, 2003).

The respondents were asked if individual members of the community have contributed towards the implementation of the ECDE capitation grant programme. From the responses which they gave of which were

analyzed in terms of sex i.e. Male and female, 32.26% males agreed while 9.68% were undecided and 19.35% disagreed 46.15% females agreed, 7.69% were undecided and 7.69% disagreed on the individual community's member's contribution towards the implementation of the programme. The communities should be more involved in ECDE programmes.

Table 4: Observation checklist:			
Area of observation after capitation grant	Adequate	Not adequate	
1. Physical facilities			
Classroom	82.7%	17.3%	
Toilet	53.4%	46.6%	
Furniture	70.5%	29.5%	
Outdoor equipment	84.8%	15.2%	
2. Teaching/Learning material			
ECDE Curriculum material	81.6%	18.4%	
Learning areas	78.2%	21.8%	
Indoor play materials ECDE material	69.9%	30.1%	
Sources Descended data (2014)			

Source: Research data (2014)

Research question 2 was answered by the observation checklist on teaching and learning materials. The researcher noted that the resources in 11 of the 20 ECDE centres that were observed with an adequacy index of 74.4 after the capitation grants were disbursed.

The inadequacy index in the centres was 25.6%. This gives a conclusion to the effect that resources were adequate because of the index 74.4%.

Table 5: Quality of teaching and learning after l	ECDE
Canitation grant	

Quality factors	Frequency	Percent	
Adequate teaching/Learning material	7	11.21	
Smooth transition	3	5.17	
Conducive environment for learning	12	20.69	
Thematic Approach	10	17.24	
Increase in enrolment	15	25.36	
Absenteeism reduced	7	12.07	
Child centeredness	4	6.9	
Total	58		

Source: Research Data (2014) – Author's field work findings.

11.21% of the respondents felt that ECDE capitation grant has led to adequate teaching and learning material 5.17% of the respondents agree that the capitation grant has led to smooth transition from ECDE to primary schools 20.69% concurred that there was a conducive environment for learning while 17.24% were of the opinion that thematic approach of teaching was an increase in enrolment and absenteeism reduced by 12.07%. 6.9% of the respondent felt that learning is child centred.

These results attest to the fact that the ECDE capitation grant has tremendously improved the quality of teaching and learning in ECDE centres. The value of education lies in its quality (Kigotho, 2011).

Challenges	Frequency	Percent	
Over enrolment	3	3.57	
Bureaucracy in grants disbursement	4	4.76	
Feeder schools not benefitting	2	2.38	
Inadequate funding	22	26.19	
Lack of transparency	5	5.95	
Inadequate cooperation and commitment Of parents	30	35.71	
Non-payment of fees	14	16.67	
Absenteeism	2	2.58	
Diverse needs	2	2.38	
Total	84	100	

Table 6: Challenges of ECDE capitation grant

Source: Research Data (2004) – Researchers field

35.71% of the teachers involved in the study were of the opinion that adequate cooperation and commitment from parents was the biggest challenge. 26.19% felt that inadequate funding was another challenge while 16.67% were of the opinion that non-payment of fees by parents was a setback. Bureaucracy in grants disbursement accounted for 4.76% while enrolment was 3.57%. 2.58% saw absenteeism as a challenge and 2.38% felt that diverse needs of the children and feeder schools not benefiting as other challenges. Despite the various challenges, the government of Kenya still needs to review the amount of Money allocated to ECDE centres through the capitation grants.

Table7: Suggested solutions to ECDE capitation grant challenges

Solution	Frequency	Percent	
Free ECDE education	3	10	
Increase in ECDE capitation	grant 4	13.35	
Funding feeder ECDE centr	res 2	6.67	
Transparency in handling th	e grants 4	13.35	
Employment of ECDE teach	ers 6	20	
Empowering teachers	6	20	
Sensitization	5	16.67	

Source: Research Data (2014) – Researchers' field

The teachers involved comprising of 20% held the view that employment and empowering of teachers could be a solution in quality delivery while 16.67% felt that sensitization should be carried out 13.35% of the teachers had the opinion that funding feeder ECDE centres and transparency in handling the grants should be of priority. 10% of the respondents had the view that just like free primary education, ECDE should also be free. Funding feeder ECDE centres comprised of 6.67% to ease the influx in the mother ECDE centres.

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

The research was based on the assessment of the impact of ECDE capitation grants on ECDE programmes in Narok South Sub County. The main purpose of the study was to assess the impact of the capitation grant on Early Childhood Development and Education in Narok South Sub County in Kenya. The specific objectives of the study were:-

- To find out whether the ECDE capitation grant had influenced enrolment of learners in the ECDE centres in Narok South Sub County.
- To examine whether the ECDE capitation grant has an influence on the quality of teaching and learning resources in the ECDE centres.
- To establish the challenges encountered in implementing the ECDE capitation grant in the ECDE centres.

On objective one, the study noted that since the inception of the ECDE capitation grant in 2007, the children's enrolment increased. The enrolment in 2007 was 1078 children and in 2008 increased to 1150 children an increase of 7%. In 2009, the enrolment shot up to 1395 giving a 21.30% increase. Between 2010 and 2011, the enrolment was 1560 and 1825 i.e. 11.83% and 16.99% respectively. 2042 children were enrolled in 2012 giving an increase of 11.89%. In 2013, the enrolment was 2510 children an increase of 22.92%. Finally, 2014, the

enrolment increased by 22.63% translating to 3078 children. This clearly shows that the ECDE capitation grant has had an impact on ECDE centres in the Sub County.

From the findings on objective two, the ECDE capitation grant has influenced the quality of teaching and resource in the ECDE centres. Resources for teaching and learning were bought and therefore the environment was conducive for learning.

There were many challenges in implementing the ECDE capitation grant. The first on the list was inadequate cooperation and commitment of parents, then inadequate funding non-payment of fees, lack of transparency, bureaucracy in grant disbursement, over-enrolment absenteeism and feeder schools not benefiting and diverse needs of the schools.

CONCLUSION

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

It is very clear from the study that the ECDE capitation grant has had an impact on ECDE programmes. This is due to the fact that there has been an improvement on the general teaching and learning infrastructure such s the outdoor playing materials, acquisition of teaching and learning material and an increase in the ECDE centres. This has factored positively on the quality of teaching and learning in the ECDE centres whereby thematic approaches have been employed by teachers since the resources are readily available. This has led to childcenteredness being practiced in the schools and this has motivated the children to learn.

However, there were many challenges still being felt years after the inception of the ECDE capitation grant. The pertinent challenge seen is that the parents confused this grant with free primary education hence their reluctance to co-operate and support the ECDE programmes. This led to their inadequacy in paying school levies for ECDE programmes hence their inadequacy in paying school levies for ECDE children. Lack of transparency on the part of the headteachers was another challenge that was cited.

RECOMMENDATIONS

From the findings of this study, the researcher is obliged to recommend the following:-

- 1) Sensitization of the community should be scaled up on ECDE capitation grant so that it is not mistaken with free Primary Education (FPE). The importance of ECDE should also be stressed to the parents in order for children to be enrolled in the centre.
- 2) The disbursement of ECD capitation grants should be increased in order to develop more physical facilities and the per pupil grant should be increased from 978/=. This will mean buying more teaching and learning resources for quality ECD education.
- 3) The community should come in more strongly together with the MOE to construct more ECD centres to ease the challenge of over enrollment.
- 4) The administrators (headteachers) need to be trained and inducted on the proper management of the ECDE capitation funds to facilitate transparency and accountability of the grants. They should be in serviced on the financial regulations contained in the community support Grant Management Handbooks, 2007.
- 5) To sustain the enrolment of the existing enrolment levels of ECDE, more ECDE capitation grant should be increased and the government should take up the responsibility of employing ECDE teachers to make them have the motivation to teach effectively.

REFERENCE

Kombo, D & Tromp, D. (2006). Proposal and Thesis Writing. Nairobi: Pauline's Publications Africa.

McMillan and Schumacher, J. (1993).*Research Education: A Conceptual Introduction (3rd* Ed.).New York: Harper Collins. Ministry of Education (2005) in Kenya- *Report of the National Conference on Education and Training Nov*27-29 2005

Ministry of Education (June 2009). Education Facts and Figures: EMIS KENYA. Government Press.

Ministry of Education. (2006) National Early Childhood Development Policy Framework. Nairobi: Government Press

Ministry of Education. (2007). ECD Centre Community Support Grant Management Handbook 2007. Nairobi: Government Press.

Ministry of Education. (2008) Community Support Grant Monitoring Report. Nairobi: Government Press.

Mugenda, O.M & Mugenda, (1999). Research Methods: Quantitative and Qualitative Approaches. Nairobi: Acts Press.

Ngaruiya, S. (2008). Pre-school Education and School Readiness: The Kenya Experience Association for the

Development of Education in Africa (ADEA).

Ogula, P.(1998). A Handbook on Educational Research. New Kemit Publishers. Nairobi.

Otieno & Colclough (2005). *Financing of Education in Kenya*. Retrieved 25th Sept 2010. Paris: UNESCO Republic of Kenya (2005), *Sessional Paper No. 1 of 2005 .A Policy Framework for Education, Training and Research*. Government Printers, Nairobi-Kenya.

UNESCO/OECD (2005) Early Childhood Policy Review Report: Early Childhood Care and Education in Kenya. Early Childhood and Family Policy, series No.11-2005.

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