Influence of School Funding on Quality Education in Public Primary Schools in Machakos County, Kenya

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ABSTRACT

The purpose of this thesis was to investigate the influence of school funding on quality education in public primary schools in Machakos County, Kenya. Objective of this paper was to explore the influence of school funding on quality education in public primary schools in Machakos County, Kenya. The study adopted descriptive research design approach and the population was 403 head teachers, 2015 teachers and 756 standard 8 pupils from public primary schools located in rural areas. A sample size of 343 respondents was selected through purposive sampling and simple random sampling. Primary data was collected using questionnaires which were issued to teachers who taught standard 8. Focus Group Discussions were conducted by standard 8 pupils while the researcher carried out document analysis after head teachers filled forms containing school related records. Descriptive analysis was used, and this included means, standard deviation, relative frequencies and percentages. A computer software programme, Statistical Package for Social Scientist (SPSS) version 26.0 was used to generate data array that was used for subsequent analysis of the data. Inferential statistics using regression model was applied to examine the relationship between the research variables. The study findings revealed that a change in school funding led to a significant change in quality education in public primary schools in Machakos County, Kenya. The conclusion drawn from the study is that there was a linear positive relationship between school funding, and quality education. The study recommends that; Ministry of Education (MOE) to increase the capitation of Free Primary Education (FPE) funds and disburse it on time and parents or guardians to provide financial support to meet hidden expenses which are not catered for by FPE.

Key words: Disburse, influence, public primary school, quality education, school funding.

INTRODUCTION

Quality education dates back in the Dakar Framework for Action (2000) which declared that access to quality education was essential and a right of every child (United Nations Education Scientific and Cultural Organizations (UNESCO), 2012). In an effort to attain this right, the United Nations (UN) Sustainable Development Goals (SDGs) agenda four was established, hence went beyond access of Education For All (EFA) to access of quality education. On this matter, developed countries have continued to make rapid progress towards universal primary education over the past decade by expanding access to schooling for a large number of children. However, the past decade has also seen a growing need for developed nations to broaden the concept of EFA beyond a concentration on increased access to schooling, to include

improvements in the quality of learning outcomes for all children (Ferguson, 2017). Schinder (2013) reiterates that there was an attempt of solving the problems affecting quality education in State schools in developed countries, though the available findings are not comprehensive. In the same vein Samson (2011) adds that school funding is a key determinant that influences quality education in many developed states hence should be scrutinized. Moreover, Mhidiwa (2015) emphasized that quality education is determined by, school funding which is likely to influence educational outcome and pupils' progression to the next level of learning in a given society. This is key because the goal of education is to provide access to quality education to all children of primary going age on an equitable basis. It is in this context this study sought for in-depth literature so as to shed more light on this aspect.

Adding another angle to the above, in Africa, there has been slight improvement in regard to quality education over the past decade due to strategies initiated in basic education sector such as Free Primary Education (FPE), School Feeding Programme (SFP), among others. However, quality of the education has been affected as outlined by the Global Partnership for Education (GPE) (2013) who noted that 250 million children in developing countries either dropout of school or do not attain basic reading, writing, and math skills by grade four despite the implementation of FPE funds. This was further reiterated by a study by the World Bank (2016) on the Africa learning barometer which showed that Sub-Saharan African children in primary schools have only a 10 % chance of completing the learning cycle. Similarly, Sifuna and Sawamura (2010) reiterate that millions of children in African Countries enrolled in schools for the first time, but too few learnt despite the heavy investment of FPE funds. This discourse implies that quality education in primary schools in developing countries has been compromised despite the fact that education is an important tool to spearhead development in all aspects of life as it is the process of imparting knowledge, skills, and values which brings positive changes in human life and behaviour.

Closure to home, the Government of Kenya (GoK) like other developing countries has significantly invested a lot of resources with an aim of enhancing quality education. This has led to an increase in the count of public primary schools from 26,549 as reported in 2012 to 35,442 as observed in 2017, with enrollment increasing from 9.8 million in 2012 to 10.4 million pupils as observed in 2017 (Maina, 2018). This translates to a growth in Gross Enrollment Rate (GER) from 104.4% to 106.4% in public primary school education, while Net Enrollment Rate (NER) rose from 88.0% in 2012 to 91.2% in 2017. Despite this tremendous improvement, the completion and retention rates of primary school pupils have significantly gone down as a result of poor school funding, poverty and other social problems in the society hence affecting quality education. Further, in the same period, the completion rates decreased from 84% in 2012 to 80% in 2017 while retention rates decreased from 86% in 2012 to 77% in 2017 (GOK, 2019). This implies that quality education in Kenyan primary schools is at stake given the fact that the dropout rate is alarming and therefore a need to re-think a workable formula to address the problem. It is for this reason that this study was carried out to establish whether school funding influence quality education in public primary schools in Machakos County, Kenya.

In regard to the area of study, Muli (2015) found out that in Machakos County, a relationship exists between school funding and quality of education though the available information is scanty. He further highlighted that efforts have been put to enhance quality education, though no much improvement has been attained. Kieti (2017) concurs with Muli and reiterates that if the value of education in public primary schools in Machakos County will not be evaluated, right to education among school going children will be compromised. This explains why there is general concern that the quality of education that is being offered in public primary schools in Machakos County does not provide learners with the desired competencies.

Objective of the study

The objective that guided the study was to explore influence of school funding on quality education in

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public primary schools in Machakos County, Kenya.

METHODS

This study made use of descriptive design utilizing both qualitative and quantitative approaches. According to Kerlinger (2013), descriptive design is used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret for the purpose of clarification (Cresswel, 2014) .Similarly, Mugenda and Mugenda (2009) point out that descriptive survey research is intended to produce statistical information about aspects of education. The independent variable was school funding as defined by the way schools were funded by the Government and other stakeholders in Machakos County. The dependent variable was quality of education which was the expected outcome of the research.

According to MOE (2019), Machakos County has 8 Sub Counties and consists of 909 public primary schools. Among them, 403 are located in the rural areas with 403 head teachers, 2015 standard 8 teachers and 756 standard 8 pupils from each sub County. These formed the target population of 3174 respondents. Considering the nature of the sample study and geographical spread of the respondents, the researcher used different instruments: Questionnaires, interviews, Focus Group Discussion (FGDs), Observation schedule and document analysis. This is enunciated by Gay, Airasia, and Mills (2011) who argue that in social science research, the most commonly used instruments are questionnaires, interview schedules and observational forms.

There was both qualitative and quantitative data. Qualitative data was written down and narrated by the researcher. The analysis of this data considered the inferences that were made from the opinions of respondents. The analysis was then presented thematically in a narrative form. Quantitative raw data was first cleaned, sorted, coded and subjected to the SPSS software version 26. Thereafter it was analyzed using descriptive statistics. The data was further subjected to regression analysis. This type of analysis is used when a researcher is interested in finding out whether an independent variable predicts a given dependent variable (Mugenda & Mugenda, 2009). This study was interested in the Goodness of Fit. The Goodness-Of-Fit (GOF) of a statistical model describes how well it fits into a set of observations. GOF summarizes the discrepancy between the observed values and the values expected under a statistical model in question (Kombo & Tromp, 2009). GOF was be measured by the R- Square statistic. The F-test was used to test the significance of the independent variable with the dependent variable. This is because the sample size was larger than 30.

Based on the study objectives and variables as constructed in the conceptual framework, a multiple linear regression model analysis was carried out to determine the form of mathematical model that explains the relationship between the dependent variable and the significant independent variables previously shown through correlation analysis. This regression model was used because it provides a sufficient and flexible framework that suits the needs of a lot of analysts and has been adopted in similar past studies including those by Feng *et al*. (2010). The coefficient of the significant variables as determined by correlation analysis was established. From the analysis of data, the researcher was able to interpret the findings and draw conclusions. This in turn enabled the researcher to come up with suggestions and recommendations depending on the interpretations that come out as a result of the study.

RESULTS AND DISCUSSION

The study involved various categories of respondents. Among them were head teachers of public primary schools, teachers of standard eight and standard eight pupils. The researcher issued 217 questionnaires to the standard eight teachers out of which 215 were adequately filled and returned. This represented a successful

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response rate of 99% among the standard eight teachers. Record forms were issued to 44 heads teachers, out of which 42 were sufficiently filled and returned; this indicated a response rate of 95%. The researcher also set out to conduct focused group discussions with 82 standard eight pupils. Out of these, only 71 were available during the time of carrying out the study hence a successful response rate of 87%.

School funding and quality education

The study sought to establish the influence of school funding on quality education in public primary schools in Machakos County, Kenya. Teachers who taught standard eight pupils were presented with a series of questions regarding school funding. In order to establish the influence of school funding on quality education, a descriptive analysis of the responses was conducted, followed by a correlation and regression analysis.

Descriptive analysis of school funding

The teachers who taught standard eight pupils were asked to express their degree of agreement or disagreement with a number of statements related to school funding. The findings are displayed in Table 4.1. The mean results were interpreted using a scale interval where a mean value of (5.000-4.500) was an indication of strongly agree, (4.499-3.500) indicated agree, (3.499-2.500) indicated neutral, (2.499- 1.500) indicated disagree and (1.499-1.000) indicated strongly disagree.

The study found out that on average, the teachers disagreed that FPE funds was disbursed timely and without delay given (Mean=1.87, SD=0.853). Similarly, the teachers also disagreed with the statement that allocation of FPE funds per pupil is adequate as shown by (Mean=1.74, SD=0.722). Further, the teachers were in disagreement with the assertion that FPE funds sufficiently cater for all the pupil's educational needs as supported by (Mean=2.01, SD=0.809). Finally, teachers also on average disagreed with the statement that parents sufficiently provide for the educational needs of their children given (Mean=2.28, SD=1.013). These findings implied that though the GOK is committed in catering for educational needs of school going children through FPE programme, the funds were not adequate and there was delay in disbursement of the funds. In addition, there were hidden expenses which were not catered for by the FPE funds hence the parents did not sufficiently provide for the needs. This explains why the performance of KCPE for the past five years was poor as confirmed by the records filled by the head teachers. This was supported by Sifuna and Sawamura (2010) who pointed out that the Kenyan Government capitation for FPE was insufficient given that it has not been revised since the commencement of the programme amidst the escalating costs of goods and services. Much worse is the fact that the Government still delays the release of the funds as Samson (2011) reiterated and further said that the delay led to poor performance among the pupils and paralyzed management of most schools and lead to clash with suppliers who demand prompt payment.

Table showing descriptive statistics on school funding

School Funding	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dvn.
FPE funds disbursement is done without delay	37.70%	42.80%	14.00%	5.60%	0.00%	1.87	0.853
Allocation of FPE funds per pupil is adequate	40.00%	48.40%	9.3%	2.3%	0.00%	1.74	0.722
FPE funds caters for all pupils' educational needs	27.40%	48.80%	19.10%	4.70%	0.00%	2.01	0.809

Parents sufficiently provide for educational needs oftheir children	24.70%	38.60%	20.50%	16.30%	0.00%	2.28	1.013
Average						**1.975**	**0.849**

Correlation between school funding and quality education

Correlation analysis was carried out in order to establish the relationship between school funding and quality education in public primary schools in Machakos County, Kenya. The direction, strength and significance of the correlation between these two variables were tested. Pearson correlation coefficient was used in this study and it ranged from -1 to +1. The strength of these coefficients was interpreted using the criteria outlined by Sedgwick (2012) as follows: +/- .00 to .19 is very weak, +/-.20 to +/-.39 is weak, +/-.40 to .59 is moderate, +/-.60 to .79 is strong while +/-.80 to 1.0 is very strong. The tests were conducted at the 95% confidence level or the 0.05 significance level. The rule of the thumb was that a calculated p value greater that the critical p value which was set at 0.05 for this study implied that the correlation between the variables was insignificant and vice versa. The findings outlined in the table below show that there was a weak, positive and significant correlation between school funding and quality education in public primary schools in Machakos County, Kenya (r=0.375, p=0.000, p<0.05). The correlation between these variables was strong. The findings implied that school funding and the quality of education changed together in the same direction. According to Mhidiwa (2015) quality education is determined by school funding which is likely to influence educational outcome and pupils' progression to the next level of learning in a given society. This is key because the goal of education is to provide access to quality education to all children of primary going age on an equitable basis.

Table showing correlation between school funding and quality education

		School funding	Quality of Educated
School funding	Pearson Correlation	1	
	Sig.(2-tailed)		
	N	215	
Quality of education	Pearson Correlation	.375**	1
	Sig.(2-tailed)	.000	
	N	215	215
**. Correlation is significant at the 0.01 level (2-tailed).			

Regression analysis between school funding and quality education

The study carried out bivariate regression analysis to show the relationship between school funding and quality education in public primary schools in Machakos County, Kenya. The main aim was to quantify the influence of school funding on quality education. The following hypothesis was therefore tested:

H01 : There is no significant relationship between school funding and quality education in public primary schools in Machakos County, Kenya.

MODEL SUMMARY

The model summary results for the influence of school funding on quality education revealed that school funding explained a slightly significant proportion on quality education in public primary schools in Machakos County, Kenya. This proportion is indicated by the coefficient of determination (R-Square) which

in this case R^2 = 0.141 which meant that 14.1% of the changes in quality education outcomes among public primary schools in Machakos County could be attributed to changes in school funding. The findings implied that the school funding was a significant variable in explaining how it influenced quality education in public primary schools in Machakos County Kenya.

Table showing model summary for the influence of school funding on quality education

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.375[a]	.141	.137	28.172
a. Predictors: (Constant), School funding				

Analysis of variance

The study carried out ANOVA test to determine the significance of the model for the relationship between school funding and quality education in public primary schools in Machakos County, Kenya. The F statistic and its associated p value were used in checking whether the regression model fitted was significant. If the significance (p value) associated with the F value was less than 0.05, the model was considered significant, otherwise insignificant. The findings as displayed in Table 4.4 showed that the model used in showing the link between school funding and quality education in public primary schools in Machakos County, Kenya was significant given F (1, 212) = 34.694, p = .000 < 0.05. The findings implied that school funding was a significant predictor of quality education outcomes in public primary schools in Machakos County, Kenya.

Table showing analysis of variance

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27535.496	1	27535.496	34.694	.000b
	Residual	168258.897	212	793.674		
	Total	195794.393	213			
a. Dependent Variable: Quality of education						
b. Predictors: (Constant), School c. funding						

Regression coefficient for school funding

The regression output as presented in the Table below helped the researcher in determining the extent to which school funding influence quality education outcomes in public primary schools in Machakos County, Kenya. This is achieved by observing β coefficient and its associated t statistic and p value. The findings revealed that school funding had a significant positive influence on quality education given (β = 18.861, t = 5.890, p = .000) since p < 0.05. The findings implied that a unit increase on school funding would increase quality education by 18.861 units holding all the other factors constant. These results led to the rejection of the null hypothesis and hence the conclusion that school funding had a significant influence on quality education in public primary schools in Machakos County, Kenya.

The following linear regression model was therefore fitted;

Quality education = 200.993 + 18.861 School funding

Table showing regression coefficient for school funding

Unstandardized Coefficients				Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	200.993	6.623		30.347	.000
	School funding	18.861	3.202	.375	5.890	.000

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