Jumuga Journal of Education,
Oral Studies, and Human Sciences (JJEOSHS)
editor@jumugajournal.org
http://www.jumugajournal.org
Volume 7, Issue 2, 2024
DOI: https://doi.org/10.35544/jjeoshs.v7i2.89

Remedial Levies & Academic Achievements:

A review of Public Day Primary Schools in Nyamira County, Kenya

Cliff Nyakeya Onyancha
https/orcid.org/0009-0005-3501-591x
Department of Educational Planning and Management
Masinde Muliro University of science and technology
&
Dr Geoffrey Ababu Musera, PhD
https://orcid.org/0000-0001-8494-4778
Department of Educational Planning and Management
Masinde Muliro University of science and technology
&
Dr Jason Nganyi, PhD
https://orcid.org/0000-0002-4685-7152
Department of Educational Planning and Management,
Masinde Muliro University of science and technology

Abstract

In its initial research, this article investigated the effect of remedial levies on academic achievement in public day primary schools in Nyamira County, Kenya. The theory that guided the research was Education Production Function. The study used an ex – post facto research design with questionnaire and documentary analysis guide as the tools for research. Target population of this study comprised 392 public day primary school. Slovin's sample size formula was used to calculate the sample size of the public day primary schools in Nyamira County. Stratified random sampling was used to ensure all Sub- Counties are proportionately represented and simple random sampling techniques were used to select the sample respondents. Copies of questionnaire were used to collect data from the public day primary schools. Documentary analysis guide was therefore, administered to a sample size of 198 public day primary schools. Research tools were validated through a pilot study. Test re–test method was used to test reliability and a Cronbach's alpha of 0.70 was obtained. Descriptive statistics (mean, frequencies and percentages) and inferential statistics using Pearson Product-Moment Correlation Coefficient and Multiple Linear Regression were used for data analysis. The findings of multiple linear regression showed that *B* coefficient for evening remedial levies (b=0.0006, t=293, p=0.004) and morning remedial levies (b=0.0007, t=3.37, p=0.001) were statistically significant.

Key Words: Remediation, remedial, remedial levies, academic achievement.

Introduction

Some scholars in education, such as Melton (2008), Ngoma (2009), Huang (2010). Analice (2012), Munene et al., (2017), Mogeni et al., (2018), Asio et al., (2020), have carried out wide researches on remedial teaching over the years, and linked remedial teaching to academic achievement(s). The remedial program has been supported largely as a significant strategy for academic improvement by researchers such as Bettinger (2005) and Panlilio (2012). It

is therefore, notable that, from all these studies, none of these scholars have delved into remedial levies as a new phenomenon and a requirement for provision of remedial teaching to learners in learning institutions. It is therefore a subject worth understanding through an empirical study.

The motivation behind the emergence of remedial levies is the desire for pupils' academic performance in their transitional examinations. Exams such KCPE and KCSE are a basis upon which teachers start remediation activities to their pupils through interventions and strategized methods of increasing student retention of learning (Asio, et al., 2020). According to Aming'a (2013), emphasis on some core subject in secondary school was found to be one of the greatest determinants towards the provision of remedial teaching to the learners. However, parents and care givers in support of remedial classes claim that schools are a custodian of their children while they attend to other duties, children are busy throughout away from home influence and would like their children to read well (Mogeni et al., 2018).

The desire by households for better performance, has also contributed to the emergence of remedial levies for the purpose of provision of remedial teaching. This is evident from the research findings by Obar (2014) that revealed a large population of about 72% reported to have paid over 1,000/= in a term as remedial levies. Because of these remedial levies, Wasanga, et al (2010) reported that, 71.0% of teachers are involved in remedial teaching. Which over time now, this remedial teaching has been a common practice during holidays, weekends, morning, evening and even within the normal school hours (Ngugi, 2012).

It is to this end that, with the emergence of remedial levies, there has been a wide debate not only in the scholarly world but also in the education sector in Kenya. Several scholars in support of remedial levies such as Little et al., (2008), Mboi et al., (2013), Asuba (2016) and Asiago, et al., (2018), in their studies, argue that remedial programs, such as educational interventions, have a significant effect upon students' reading, While on contrary, scholars such as Yameda et al (2009), Asaba (2016), Ngwenya (2016), argue that those preps encroach on normal sleep time and there are chances that they could negatively impact academic performance. However, a clear study on remedial levies in particular still lacks.

In Kenya, primary school teachers are required to work for eight hours a day for five days in a week. Teacher's contractual working time includes the statutory hours devoted to actual teaching as well as the statutory hours devoted to teaching related activities (when specified), such as lesson preparation, correction, in – service training, staff meetings, student support and co – curricular activities (Wasanga et al., 2010). However, for the public day primary schools to leverage over private schools and boarding school, remedial teaching has been taken as a key strategy for academic achievement. While their involvement cannot be free, it may not be very clear on who meets the cost and the effect of this cost thus, this study sought to fill this research gap through the examination of remedial levies and its effect on academic achievement in public day primary schools in Nyamira County Kenya.

Theoretical Framing

The theoretical framework of this research study is Educational Production Function (EPF) theory. It is applicable for this study because, according to Hanushek, (2007), the common inputs are things like school resources, teacher quality, and family attributes, and the outcome is student achievement. This theory however gives room basing upon this, statistical analysis (typically some form of regression analysis) if employed to infer what specifically determines achievement and what is the importance of the various inputs into student performance. Thus, one aspect becomes an input is remedial levies.

Methodology

Research Design

For this investigation, an ex post facto research design was employed. Kerlinger et al. (2000), Cohen et al. (2000), and Marilyn et al. (2013) define an ex-post facto research design as a systematic, empirical study in which the researcher does not directly control independent variables because their manifestations have already occurred or because they are not manipulative in nature. It was decided that an ex post facto research design would be appropriate because the main goal was to examine the impact of an independent variable that had already happened and could not be changed.

Target Population

Target population is the total group of subjects to whom the study wants to apply, the conclusion from the findings (Mugenda et al., 2003). The study targeted a total of 392 public day primary schools in Nyamira County.

Sample Size and Sampling Procedures

A sample, as defined by Orodho (2012), is a tiny subset of the target population chosen by a methodical process that is intended to choose a specific number of people from the target population as representative of that group. Owing to its size, the study used Slovin's Formula (Sloniv, 1960) to generate a sample for analysis. The Slovin's Formula is as follows:

$n = N/1+Ne^2$

Where:

n is the sample size,

N is the population size and

e is the margin of error to be decided by the researcher (the tolerance at a desired level of confidence, at 95% confidence level) or take 0.05

$n = N/1+Ne^2$

$= \{392/ 1+392x0.05^2)$

$= 392/1.98$

=198 respondents

Thus, the study sample size consisted of 198 public day primary schools. Further, a stratified random sampling technique was used to guarantee a fair representation of the study population. This ensured that the sample was proportionately and adequately distributed among the five Sub-Counties according to the population of Sub- County. By distributing the sample throughout the entire county, this ensured that all of the sub-counties were included in the study and that the socioeconomic dynamics of the area were taken into account. Finally, the study participants were selected purposively, using purposive sampling technique. Table i displays the sample size.

Table 1: Sample Size of Public Day Schools by Sub-County

Sub-county	Targeted schools	Sample size
Nyamira South	89	45
Nyamira North	112	57
Borabu	64	32
Manga	63	32
Masaba North	64	32
Total	392	198

Data Collection Method

The initial study used both a questionnaires and documentary guide for data collection. The data collected by the questionnaires were obtained from the head teachers of the sampled schools while documentary analysis guides were used to capture information from the documents that contained analyzed KCPE results and teaching staff demographic data.

Validity and Reliability

According to Mugenda et al. (2003), the significance and correctness of conclusions drawn from research findings constitute validity. In order to verify the content validity of the instruments, two experts (supervisors) examined the questionnaires and the documentary analysis guide, closely examining each subsection's questions and determining which ones were pertinent to the study's goals.

Construct validity was also used as index to measure the validity of the instrument. The content validity index was thus calculated as follows: 540 items were piloted and the returned items checked for content and construct. If 420 returned items are in agreement with questionnaire, then;

CVI = Sum of agreement on every relevant judgment X 100
Total number of items in Instrument

Construct Validity Index 420/540= 0.77. This value was deemed appropriate and thus the questionnaire was adequate for data collection.

Reliability of this study instruments were ascertained by piloting the questionnaires in the field. A

According to Oladipo et al. (2015), reliability is the degree to which a measure produces consistent outcomes. If a measure or observation may be verified by another measurement or observation, that issue should be raised when evaluating dependability (Oladipo et al, 2015). Therefore, reliability was assessed by comparing the answers respondents gave in one pretest with answers in another pretest. We can estimate the reliability of the sum scale via the spearman-Brown split half coefficient: $r_{sb} = 2r_{xy} / (1+r_{xy})$

In this formula, r_{sb} is the split-half reliability coefficient, and r_{xy} represents the correlation between the two halves of the scale.

Ethical Considerations

According to Oladipo et al (2015), research ethics is defined as the moral principles that guide research from its inception through to its completion and publication of the results. The fact that this study was looking into extremely delicate topic that can cause antagonism, insecurity, or participants hiding the true information needed from them made them. For the purpose of protecting the subjects' interests, confidentiality and privacy were therefore guaranteed. The participants, school administrators, and pertinent authorities, such as the Ministry of Education, Science, and Technology (MOEST), were consulted in order to obtain permission to conduct the study. It was entirely voluntary to participate. The participants were given a clear explanation of the research's goal by the researcher. Participants received an assurance from the researcher that any information collected for the study would be treated with strict secrecy. Participants had to be willing in order for them to make wise selections. The information gathered was kept private and utilized exclusively for this study. Every source is cited.

Result and Discussion

This section presents the study findings. The total of 198 head teachers responded to the questionnaires making it 100% return rate. This study modelled the effect of remedial levies on academic achievement in public day primary schools using multiple linear regression analysis.

Results

The study sought to establish the effect of remedial levies on academic achievement in public day primary schools in Nyamira County, Kenya. This study tested the null hypothesis that remedial levies have no statistically significant effect on academic achievement in public day primary schools in Nyamira County Kenya. This study therefore modelled the effect of remedial levies on academic achievement in public day primary schools using multiple linear regression analysis.

Descriptive analysis first sought data from the primary school head teachers on the total monies solicited from class eight parents to support the school remedial program for the class eight students. The results from the total monies collected from parents towards supporting the school weekend remedial program are presented in figure 1.

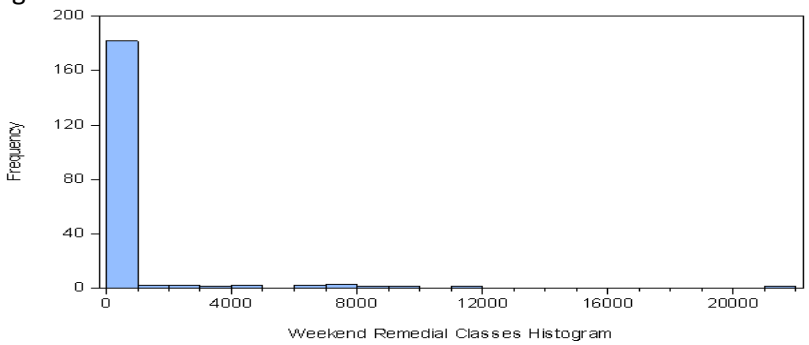
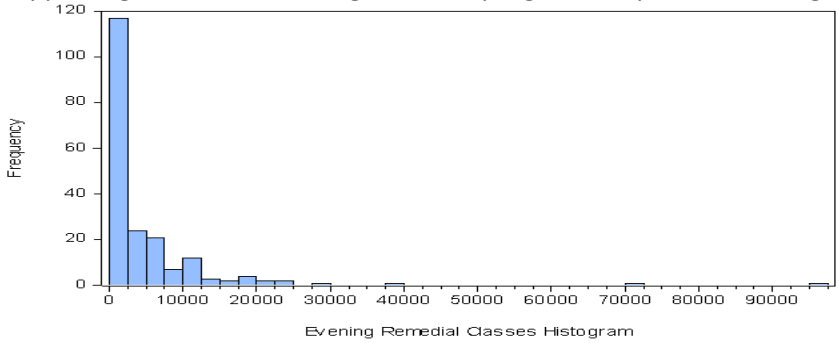


Figure 1: Summary Statistics and Histogram of Weekend Remedial Classes Levies.

The histogram in Figure 1 showed that most schools (n=181, 91%) do not collect money for weekend remedial classes, according to head teachers. Thus, results show that only one school in every ten schools collect money for weekend remedial classes. Levies for weekend remedial ranged from zero to a maximum Kshs 21,730, with an average of Kshs 540.73. The median was zero, which supports the finding that most schools do not collect weekend remedial levies. The standard deviation (Kshs 2,286.70) was larger than the mean, indicating considerable variations amongst schools in collection of weekend remedial levies. The skewness (5.79) showed most data values were less than the mean while kurtosis (44.03) leptokurtosis in the data. The distribution of this variable was non-normal, as shown by skewness, kurtosis, and the *JB* test = 14994.62, $p<0.0001$.

Further the results from the school head teachers on the total monies collected from parents towards supporting the school evening remedial program are presented in figure 2.



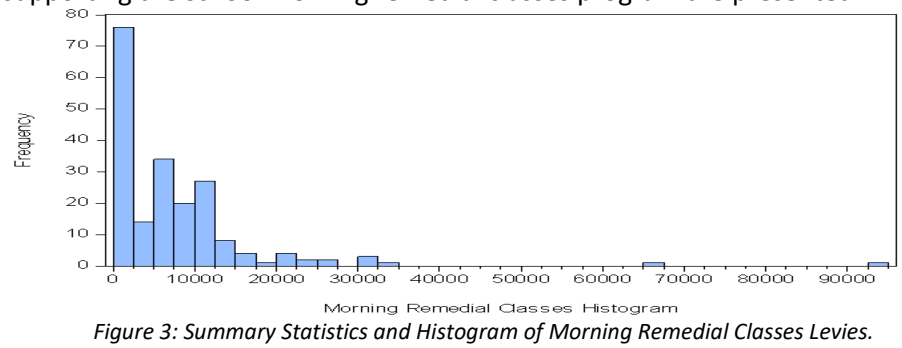
EVENING_REMEDIAL	
Observations	198
Mean	4773.030
Median	1800.000
Maximum	96720.00
Minimum	0.000000
Std. Dev.	10107.93
Skewness	5.757209
Kurtosis	46.21007
Jarque-Bera	16497.46
Probability	0.000000

Figure 2: Summary Statistics and Histogram of Evening Remedial Classes Levies.

Findings in Figure 2 showed that more schools were found to collect evening remedial class levies (*n*=117, 59%) relative to those which do not collect (41%). The levy ranged from zero to a maximum of Kshs 96,720, with an average collection of Kshs 4,773 per class. The median collection was Kshs 1,800. This confirms the study by Obar (2014), on implications of private supplementary tuition on student's academic performance, which revealed that a large population of about 72% reported to have paid over 1,000/= in a term.

Further the histogram shows that most collections for each school is less than Kshs 30,000. The large standard deviation (Kshs 10,107.93) showed the extant wide disparities in schools' collection of evening remedial levies. Most data values were less than the mean, as skewness (5.76) was positive whereas the distribution was leptokurtic, as kurtosis was large and positive (46.21). The *JB* = 16,497.46, $p<0.0001$, indicated non-normality in the distribution.

Finally, the results from the school head teachers on the total monies collected from parents towards supporting the school morning remedial classes program are presented in figure 3.



MORNING_REMEDIALS	
Observations	198
Mean	7026.854
Median	6000.000
Maximum	94820.00
Minimum	0.000000
Std. Dev.	10225.56
Skewness	4.560493
Kurtosis	34.57219
Jarque-Bera	8909.964
Probability	0.000000

Figure 3: Summary Statistics and Histogram of Morning Remedial Classes Levies.

As for morning remedial levies, most schools (*n*=127, 64%) were found to collect morning remedial class levies relative to those that do not collect (36%). The levy ranged from zero to a maximum Kshs 94,820, with a mean collection of Kshs 7,026.85 per class. The median collection was Kshs 6,000. The histogram shows that most collections for each school is less than Kshs 30, 000. The large standard deviation (Kshs 10,225.56) suggests a large variance in the amount of morning remedial money collected by various schools in the county. Most data values were less than the mean, since skewness (4.56) was positive. On the other hand, the distribution was leptokurtic, as kurtosis was large and positive (34.57). The *JB* = 8909.96, $p<0.0001$, indicated non-normality in the distribution.

The mean contributions for weekend, evening and morning remedial classes were compared. The results are presented in Figure 4.

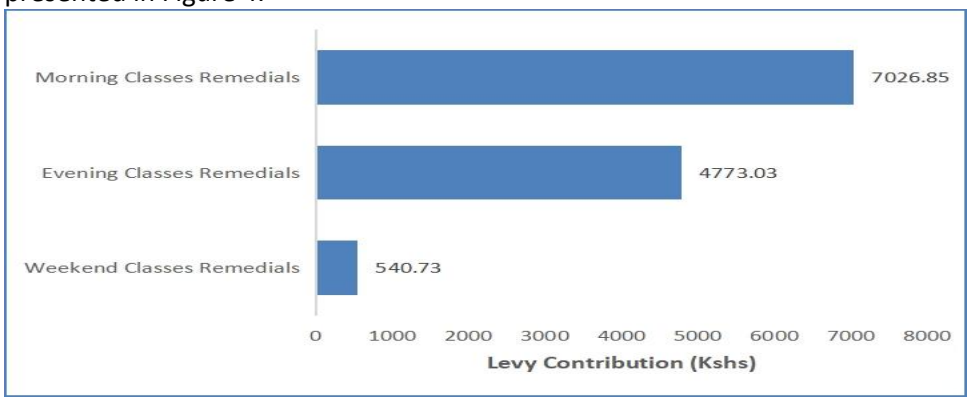


Figure 4: Comparison of School Morning, Evening, and Weekend Classes Levies

The results in Figure 4 indicate that the most important remedial classes were those of morning, where parents contributed roughly twice (Ksh 7,027) the money they contributed for evening remedial classes (Kshs 4,773). The lowest contribution was towards weekend remedial classes, where parents contributed, on average, just Kshs 541 per school.

To be able to fit the multiple linear regression model, the study ran two pair-wise correlations. First, the study ran a Pearson's Correlation Coefficient, *r* to establish which school remedial levies constructs (weekend remedial classes, evening remedial classes, and morning remedial classes) were correlated with the outcome variable (school KCPE mean score) in order to establish which variable constructs to pursue in the regression model. Correlation coefficients (in absolute value) which are $\leq$ 0.35 are generally considered to represent low or weak correlations, 0.36 to 0.67 moderate correlations, and 0.68 to 1.0 strong or high correlations with r coefficients > 0.90 very high correlations (Field, 2005). The results are presented in Table 1.

Table 1: Correlation between School KCPE Mean and School Remedial Levies

Variable (n = 198)		KCPE means	Weekend remedial	Evening remedial	Morning remedial
KCPE means	*R*	1			
Weekend remedial	*R*	0.127	1		
Evening remedial	*R*	0.184**	0.004	1	
Morning remedial	*R*	0.270**	0.465**	0.067	1

Key: *r* = Pearson correlation coefficient; **, * = correlation significant at .01 and .05 levels (2-tailed), respectively

The results in Table 1 showed significant, positive but weak correlation between evening remedial (r=0.184, p=0.009) and morning remedial (r=0.270, p<0.0001) with school KCPE performance. The findings showed that when levies for evening and morning remedial increase, school KCPE performance also goes up and vice versa. Nevertheless, the study failed to find significant relationship between weekend remedial levy and KCPE performance (r=0.127, p=0.075). The relationship between morning and weekend remedial was found to be significant, positive and moderate (r=0.465, p<0.0001), suggesting that schools that have weekend remedial are also likely to have morning remedial.

The research study established whether the data for objective two met the assumptions of the multiple regression model. The study conducted several diagnostic tests statistics. Its analysis included linearity, normality, homoscedasticity, and outlier's presence to ensure the validity of the results. The core assumptions of OLS are as follows. First, linearity asserts that the dependent variable is a linear function of a set of predictor variable and the error term. Secondly, disturbances (errors/residuals) have the same variance (homoscedastic) and are not related

with one another (non-auto-correlated). Lastly, there is no exact linear relationship among independents, that is, no multicollinearity (Chatterjee et al., 2012; Green, 2008).

1. Linearity

The scatterplot predicting KCPE mean from school weekend remedial levies and a Lowess smoother is shown in Figure 5.

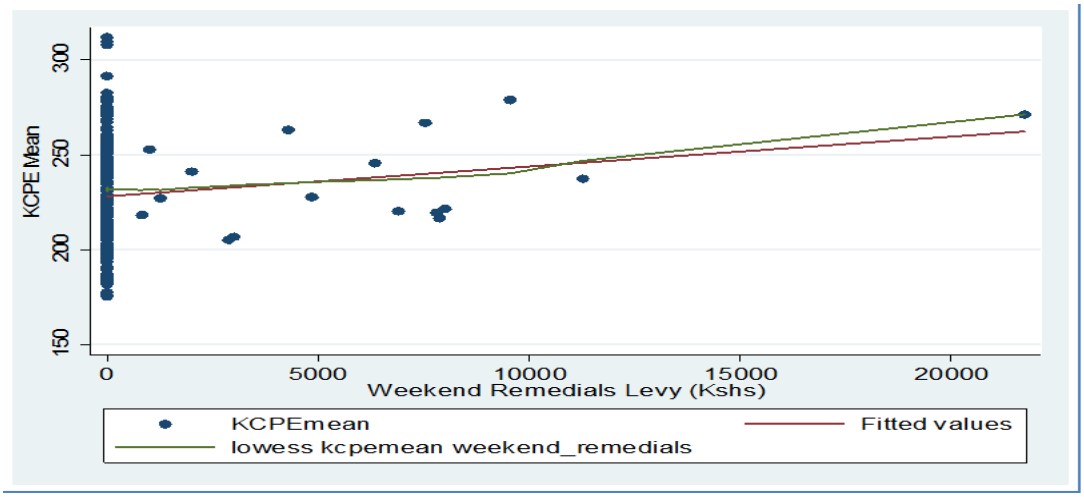


Figure 5: Scatterplot of KCPE Mean and Weekend Remedial Levies

From Figure 5, the curves of predicted values and loess values were relatively straight, suggesting linearity in the data.

The scatterplot predicting KCPE mean from school evening remedial levies and a Lowess smoother is shown in Figure 6.

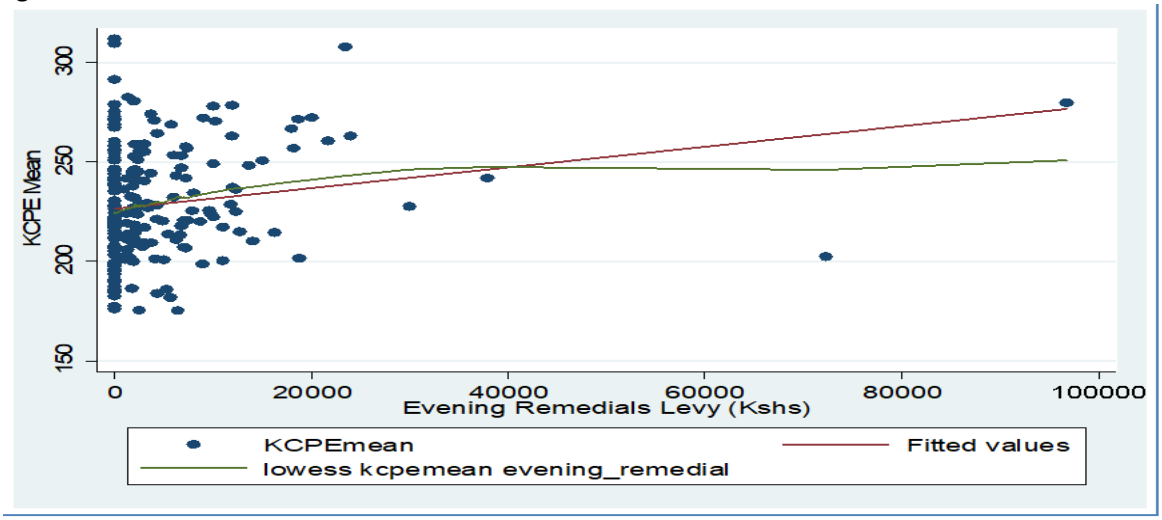


Figure 6: Scatterplot of KCPE Mean and Evening Remedial Levies

From Figure 6 while the fitted values showed a linear relationship, a kink in the loess curve suggested some nonlinearity in the data.

The scatterplot predicting KCPE mean from pupils' morning remedial levies and a lowess smoother is shown in the Figure 7.

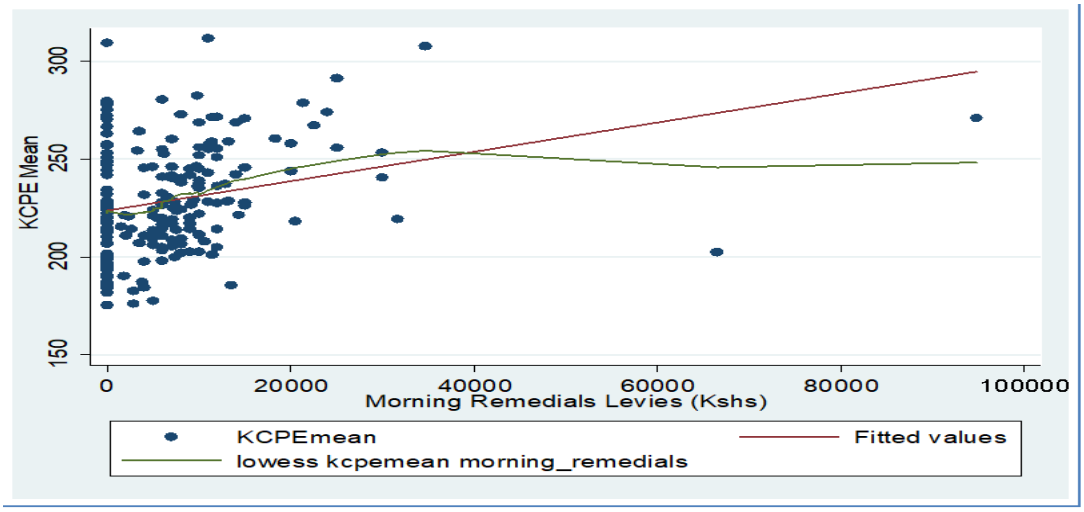


Figure 7: Scatter plot of KCPE Mean and Morning Remedial Levies

From Figure 7 while the fitted values showed a linear relationship, a kink in the loess curve suggested some nonlinearity in the data.

2. Homoscedasticity of the residual

Figure 8 shows a plot of the residuals versus fitted (predicted) values.

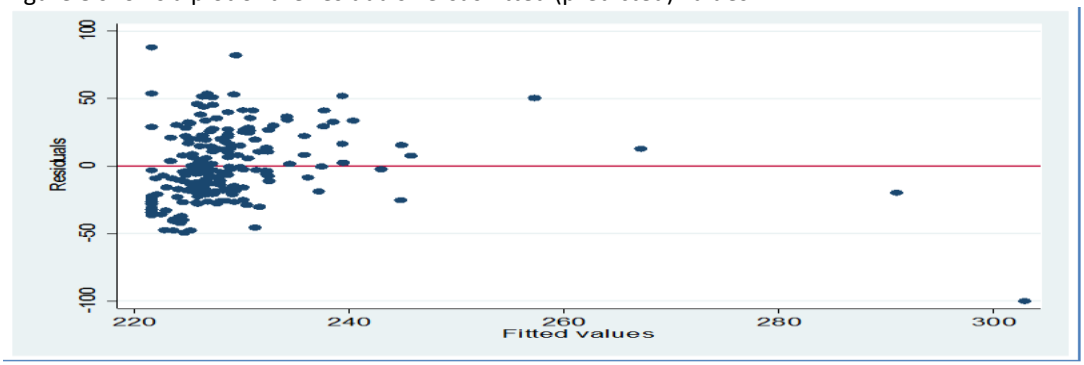


Figure 8: Plot of Residuals versus Fitted Values for Remedial Levies' Variables

The results in Figure 8 showed that the residuals for the MLR were randomly scattered around the centre line of zero, with no discernible pattern. This showed that the residuals were homoscedastic, approximately normally distributed, and non-auto-correlated.

3. Multicollinearity

Table 2 presents Variance Inflation Factor (VIF) and tolerance (1/VIF) values from MLR.

Table 2: Multicollinearity Statistics for School Remedial Levies

Variable	VIF	1/VIF
Morning remedial	1.28	0.779
Weekend remedial	1.28	0.783
Evening remedial	1.01	0.995
Mean VIF	1.19	
Key: VIF=variance inflation factor		

From Table 2, the tolerance values were close to the maximum (one), showing that multicollinearity might not have been a problem for remedial levies' variables. Consequently, the results suggest that no variable was a linear combination of other predictor variables. VIF merely expresses tolerance in a mathematically different way.

In addition, correlations amongst the independents (Table 2) were positive but moderate or weak (minimum = 0.184, maximum 0.465), which indicated that multicollinearity was unlikely to be a problem.

4. Autocorrelation

The Durbin-Watson statistic in this model was 1.873, which showed that the errors were independent.

Finally, this study ran a multiple linear regression analysis using two models to model the effect of school remedial levies on academic achievement in public day primary schools in Nyamira County. In model 1, the study assesses the effect of school remedial levies on academic achievement in public day primary schools. In model 2, the study assesses the effect of school remedial levies on academic achievement in public day primary schools while controlling for head teachers' characteristics.

In the model, the value of the coefficient indicates aggregate mean points in KCPE. The positive sign and negative signs of the coefficient indicate increased and decreased school aggregate points in KCPE respectively. The significance of the relationship between a given explanatory variable and school mean score in KCPE is tested at p=0.05. The results of the multiple regression modelling for the effect of school remedial levies on academic achievement in public day primary schools is presented in Table 3.

Table 3: Multiple Linear Regression Results for the Effect of School Remedial Levies on School Academic Achievement

Variable (n=198)	Model 1				Model 2			
	B	B	*T*	*p*	*B*	*β*	*t*	*p*
(Constant)	221.669		2.49	0.000	332.45		7.29	0.000
Weekend remedial	0.00009	0.0073	0.1	0.92	0.0002	0.0175	0.23	0.82
Evening remedial	0.0005	0.1673	2.45	0.02	0.0006	0.1966	2.93	0
Morning remedial	0.0007	0.2553	3.31	0	0.0007	0.2532	3.37	0
Control Variables								
Sex_2					8.7163	0.1235	1.85	0.07
Mean age					-2.5236	-0.222	-2.24	0.03
Mean experience					0.333	0.0267	0.27	0.79
R^2	0.1007				0.16			
Adjusted R^2	0.0868				0.1336			
F Change	7.24				6.06			
P	0.0001				p<0.0001			

Key: *B*= b coefficient (unstandardized), *β* = Beta (standardized coefficient)

Results of multiple regression analysis in Table 3 shows that in the first model, R^2 was 0.1007, showing that weekend, evening and morning remedial could jointly explain about 10% of the variation in school KCPE performance. The results indicated that remedial levies account for greater school KCPE performance. Adding control variables (Model 2), significantly [F (3, 194) = 7.24, p<0.0001], improved the explanatory power of the model to 16%. If the second model had been derived from the population rather than the sample, then it would have accounted for about 13% of the variance in the dependent variable.

In the final model, the partial regression coefficient for evening remedial levies (b=0.0006, t=293, p=0.004) and morning remedial levies (b=0.0007, t=3.37, p=0.001) were statistically significant. This showed that an increase in the evening remedial levy by one Kenya shilling results in an improvement in the school KCPE mean by 0.006 points, *ceteris paribus*. Similarly, when morning remedial levy goes up by one Kenya shilling, there is an increase in school KCPE mean by 0.007 points, *ceteris paribus*.

These results are similar to a large number of studies that agree to the effect that there is a positive relationship between remedial engagement and academic achievement in primary schools. Mboi et al, 2013, Asuba (2016) Asiago et al. (2018), in their studies show that remedial programs, such as educational interventions, have a significant effect upon students' reading, language, and math. While Asiago et al., (2018), delved on financial aspect in secondary school, similar relationship can exist in remediation in public day primary schools due to the fact that remedial is pegged on the financial resources available.

However, weekend remedial levy was found to have no significant effect on school KCPE performance (b= -0.0002, t= 0.23, p=0.816). The standardized coefficients showed that morning remedial levy (β=0.253) has a greater effect on school KCPE performance relative to evening remedial levy (β=0.1966).

Among the control variables, only teacher's age (b= -2.523, t= -2.24, p=0.026) was found to significantly influence school KCPE performance. This showed that when the age of teacher increases by one year, school KCPE performance decreases by 2.52 points. Neither the teacher's gender (b=8.716, t=1.85, p=0.065) nor teacher's experience (b= 0.333, t= 0.27, p=0.787) were found to significantly influence school KCPE performance.

The hypotheses of the study were tested using t-tests provided in various regression analyses. The B coefficient for evening remedial levies (b=0.0006, t=293, p=0.004) and morning remedial levies (b=0.0007, t=3.37, p=0.001) were statistically significant. It was therefore highly unlikely that the population B coefficients for these variables were zero. Thus, the null hypothesis that school remedial levies have no statistically significant effect on academic achievement in public day primary schools in Nyamira County was rejected.

Conclusion

In conclusion, the multiple regression analysis's findings after adjusting for each model variable indicate that evening remedial levies (b=0.0006, t=293, p=0.004) and morning remedial levies (b=0.0007, t=3.37, p=0.001) were statistically significant in explaining variations in the school KCPE mean score. It was concluded that head teachers and parents in public day primary schools should focus more on morning and evening remedial to improve the school KCPE mean score. Any levy associated with weekend remedial was found to be insignificant towards the school KCPE mean score.

Recommendation

The conclusions reached from the theme under the study's primary objective led to the following suggestion. That the Ministry of Education, school board of management, head teachers, teachers, parents and guardians should encourage public day primary schools to conduct morning and evening remedial so as to boost their school KCPE mean score.

References

Aminga, M. J. (2013). Determinants of Provision of Remedial Lessons in Public Secondary Schools in Manga District, Kenya Unpublished Master's Thesis of University of Nairobi

Analice, C. S. (2012). Remedial Education Programs to Accelerate Learning for All *GPE Working Paper Series on Learning, No. 11.*

Asiago, D., Kalai J. M. & Gichuhi, L. (2018). Influence of School Financial Resources on Academic Achievement in Kenya Certificate of Secondary Education Examination (KCSE) in Public Secondary Schools in Kenya *Journal of Education and Practice Vol.9, No.32, pp 110*

Asio, J. M. R., & Jimenez, E. C. (2020). Effect of Remediation Activities on Grade 5 Pupils' Academic Performance in Technology and Livelihood Education (TLE). *Pedagogical Research, 5(4), em0075. https://doi.org/10.29333/pr/8464*

Bettinger, E. P., & Long, B. T. (2005). Remediation at the Community College: Student Participation and Outcomes. *New Directions for Community Colleges, (129), 17-26.*

Chatterjees, S. & Siminoff, J. S. (2012). *Handbook of Regression Analysis.* John Willey & Sons. Inc.

Cohen, L., Manion, L. & Morison, K. (2000). *Research Methods in Education*. Routledge Falmer.

Field, A. (2005). *Discovering Statistics Using SPSS*. 2nd Edition, Sage.

Greene W. H. (2008). *Econometrics Analysis 6th Edition.* Pearson.

Huang, C. P. (2010). Making English remedial instruction work for low-achieving students: an empirical study. *Journal of Lunghwa University of Science and Technology, 29(6), 167-183.*

Kerlinger, F. N. & Howard, B. L. (2000). *Foundations of Behavioral Research (4th* Edition). Harcout College Publishers.

Little, P. M. D., Wimer, C. & Weiss, H. B. (2008). After School Programs in the 21st Century: Their Potential and What it Takes to Achieve It. *Harvard Family Research Project. https://archive.globalfrp.org/evaluation/*.

Marilyn, K. S. & Jim, G. (2013). Ex Post Facto Research Design.*w.w.w.dissertatiojecipies.com*

Mboi, P. A. & Nyambedha, E. O. (2014). Implication of Extra Tuition in Primary Schools on Pupils' Social Life in Kisumu Municipality, Western Kenya. *International Journal of Education and Research Vol. 1 No.11.*

Melton, K. (2008). Effects of remedial education *Unpublished Doctoral Dissertation of Kent State University, Kent, OH.*

Mogeni B. N., Gathara P. M. & Karuga A. M. (2018). Efficacy of Remedial Teaching and Influence on Performance of Learners in English Language Test Scores in Primary Schools in Nakuru County International *Journal of Innovative Research and Advanced Studies (IJIRAS) Volume 5 Issue 12*

Mugenda, O. M. & Mugenda, A. G. (2003). Research Methods: Quantitative and Qualitative Approaches; Nairobi: African Centre for Technology Studies.

Munene J. N., Kimiti, R. P. & Njoka, O. (2017). Influence of Remedial Program on Academic Performance of Pupils in Public Primary Schools in Nyahururu District, Kenya. *Journal of Research & Method in Education Volume 7, Issue 5 Ver. II, PP 45-50*

Ngoma, J. W. (2009) Effect of Remedial Teaching on Pupils' Academic Performance In Kitise Zone, Makueni District, Kenya. *Unpublished Research Thesis of Kampala International University*

Ngugi, R. (2012). Implications of Holiday Tuition on Student's Academic performance in Gatundu South District, Kenya. *Unpublished Research Thesis of Kenyatta University*

Ngwenya, V. C. (2016). The best way of collecting fees without infringing on the Liberties of learners in Zimbabwean primary schools. *International Journal of Research in Business and Technology Vol 8, No. 3*

Obar, O. E. (2014). Implications of Private Supplementary Tuition on Students Academic Performance in Secondary Education in Awendo Sub – County, Kenya. *Unpublished Research Thesis of Kisii University.*

Oladipo, R., Ikamari, L., Kiplang'at, J. & Barasa, L. (2015). *General Research Methods.* Oxford University Press

Orodho, J. A. (2012). *Elements of Educational and Social Science Research Methods*¸ Kanezja Publishers.

Panlilio, M. C. (2012). The Effect of Remediation and Student Support Programs on the Academic Outcomes of Underprepared College Students *Unpublished Doctoral Thesis of the State University of New Jersey*

Slovin, E. (1960). Slovin's Formula for Sampling Technique. *https://prudencexd.weebly.com/*

Acknowledgements
Authors acknowledge the peer reviewer's reports, the editorial input and their sources of funding.

Funding: The author (s) received financial support for the research, authorship and/or publication of this article from Masinde Muliro University of Science and Technology.

Ethical Pledge
All data collected were handled responsibly, and any findings have been presented accurately, without manipulation or bias.

Competing Interests
There were no competing interests that could have influenced the outcomes of this research. The research was conducted impartially, with no financial, professional, or personal interests that may have biased the results or interpretation.

Author Contributions
The researchers are the sole authors of this research article.

Disclaimer
The views expressed in this research article are those of the author and do not necessarily reflect the official policy or position of any affiliated agency of the authors or the journal itself.

Ethical Consideration Statement
This article adhered to all ethical guidelines for research involving human or animal subjects. Approval was given by Masinde Muliro University of Science and Technology and the National Commission for Science, Technology and Innovation.