
COMPARISON OF STANDARD FOUR PUPILS' ACADEMIC PERFORMANCE IN PUBLIC AND PRIVATE PRIMARY SCHOOLS AFTER THREE YEARS OF FREE PRIMARY EDUCATION (F.P.E.) IMPLEMENTATION

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ABSTRACT: *In Kenya, basic education is provided through public and private institutions. . This paper focused on class 4 pupils admitted in class 1 the year 2003 when Free Primary Education (F.P.E.) programme was implemented. The purpose of this study was to compare the academic performance of these pupils in Private and Public Primary Schools. The research made use of ex post facto research design. Simple random sampling was used to select eight public and eight private primary schools in Kitale Municipality. A test was given to class four pupils of the year 2006 in both private and public primary schools and used to assess academic performance. The study used descriptive statistics to compute data for academic performance. The tests of significance showed disparity in academic performance of both boys and girls in private school from those of the public. There is need for education and policy assurance officers to step up inspection to enhance effectiveness among public primary school teachers.*

KEYWORDS: Academic Performance, Comparison, Free Primary Education, Implementation, Private Primary Schools, Public Primary Schools.

INTRODUCTION

Waithaka (2004), the chairman of the Kenya Private Schools Association in his article “Academies Vilified for no Good Reason” said that; Kenyan education is very competitive. This competition is due to the high demand and the acute shortage of places. Thus National Examination has almost become a matter of life and death. Private schools are established to ease pressure on public schools and their management is different from public schools. Private schools focus on producing quality results. They have relatively better facilities and are able to pay their teachers better. Waithaka argued that the study on “concerns of various stakeholders in regard to the performance of students from private/academies in public high schools in Kenya” (Nation, January 6, 2004) failed to achieve its objectives. The study however didn't take into consideration other factors that would have given a broader picture of the situation like, concerns of the students and other non-public secondary institutions. It should have established whether good performances by private schools were due to spoon-feeding, exam coaching or drilling. It could also have established if students' performance could have been due to effective teaching resulting from motivated teachers, effective school management, optimum class size and good facilities.

Majority of media reports showed that it was the rich who benefited from the education system in Kenya because they could buy places in private schools. Once these children are in those schools they are given too much individual attention, are drilled to pass exams, are spoon fed and work under a lot of pressure to pass exams. This is meant to attract more customers. The children are

rude, spoilt and rich, (Nation correspondent, 2004; Siring, 2004; Mwiria, 2004; and 2005). Despite the fact that these reports agreed that private schools were doing well, they were quite controversial. They claimed that majority who did well in private primary schools joined good national schools to fail. However they had no empirical/statistical evidence. In fact they appreciated the fact that private schools had the best teachers and learning facilities. They talked of private schools cheating to pass exams but such cases had also appeared in public schools.

Waithaka (2004) stated clearly that a student could not perform well under poor conditions provided by rural-based high school teachers. The secondary school teachers regard children from academies with hatred and viewed them as rude and spoilt with too much money. Such views created an atmosphere of “hatred, prejudice and stereotypes”. Waithaka insisted that private boarding primary schools were well placed with plenty and therefore no challenges as students were provided with everything.

The main concern of the stakeholders according to this study was that students from academies flopped when they entered secondary schools however the representative number of schools picked both in primary and secondary were inadequate for analysis on the performance of all the students who joined high school. The study having inadequately achieved its objective, Waithaka posed a question, which was not answered; “Do students from private schools perform poorly in comparison with those from public schools when they enter public secondary schools?”

It was these controversial issues about academic performance of private schools vis-a-vis public school that called for the study. What type of education was offered in these two types of schools that lead to the disparity, which had called for a lot of arguments?

MATERIALS AND METHODS

This study was conducted through descriptive research using ex post facto design, which was convenient for the study. The ex post facto design is a substitute for the experimental design. The ex post facto design is limited in the interpretations of relationships between variables. This study was conducted in eight public and eight private primary schools in Kitale Municipality. The target population being class 4 pupils who were chosen because the district has a high population of primary school age going (6 – 13) children.

The dependent variable, academic performance was measured by the average mark obtained by each pupil in the tests conducted in the middle of first term of year 2006 and the mean mark for the two types of schools compared using t-test case II. ANOVA case II was used to determine the interaction effect of gender and type of school. Probability sampling technique mainly simple random sampling was used. For this study, all the pupils of class 4 from the eight private and eight public primary schools were involved. Gender differences in performance were also established for the two types of schools.

A list of pupils was compiled in each school separately for both boys and girls and their mean score established. This sample of class 4 was selected as these were the pupils who were admitted in class one the year F.P.E. was introduced in public schools. It was a homogeneous group that used the same curriculum (i.e. private and public).

The researcher used questionnaires, interviews, document analysis and observation to collect data. The selection of these tools was guided by the nature of data to be collected, the time available as well as the objectives of the study.

The teachers of class four both private and public primary schools assisted the researcher in administering tests to the pupils, and collecting them back. They also assisted marking and in recording of scores for their pupils. To avoid the John Henry effect all the class 4 pupils in the sampled private and public primary schools sat for the same test during the same period for the same number of days.

The academic performance of both public and private primary schools was computed using t-test case II while gender and type of school interactions were made using ANOVA case II. The t-test is a measure of the difference between the mean scores of two (independent or dependent) groups. Data was analyzed at a level of significance of 95% or 0.05. The degrees of freedom were determined from the two cases. The value ($\alpha = 0.05$) has been chosen because the sample size is adopted from figures calculated on the basis of 0.95 level of confidence. ANOVA case II is a design that has two factors or more (two independent variables). In this study it was used to test variations in gender performance between private and public primary schools. It was also used as an indicator of interaction affects between, gender and type of school.

RESULTS AND DISCUSSIONS

Comparison of Academic Performance of Standard Four Pupils in Public and Private Schools

Disparity in Academic Performance

To establish the disparity in academic performance between private and public primary schools involved in the study, the author computed the mean scores of the schools.

Table 1. Mean Scores of Private and Public Schools

Private Schools		Public Schools	
	Mean Score		Mean Score
Jack & Jill	330.78	Milimani	231.51
Purpose Driven	228.63	Chetoto	178.32
All Saints	284.58	Showground	170.10
Greenfields	277.45	Lessos	166.35
Mount Emoru	271.00	Township	1162.62
Kitale Family	242.54	Kitale Union	157.38
Fairway	228.80	Muliro	156.31
Aquinoe	173.50	Section Six	154.02
Mean/Average	262.16	Mean/Average	172.08

From the table above private schools had a mean score of 262.16 while public schools had 172.08. Thus, the fact that private schools had 90.08 points higher than the public schools clearly indicating that private schools performed better even in lower classes.

The author, to establish the disparity between the academic performance of private and public primary schools used the design of case 11 t-test. This design is based on the assumptions that the population is normally distributed, random sampling is used and that there is homogeneity of variance. The researcher preferred this statistical test as it applies when the standard deviation of the population is not given. It involves two sample means; in this study case private and public schools means.

This statistical test computation assessed the following hypothesis:

1. $H_0 = \mu_1 = \mu_2$: there is no significance difference between the academic performance of private primary schools and public primary schools at class 4-level

Table 2. Statistical Computation

S^2_1	(Private school)	Mean score	X^2	S^2_2	(Public schools)	Mean score	X^2
	Jack & Jill	330.78	109415.41		Milimani	231.51	53596.88
	Purpose Driven	288.63	83307.28		Chetoto	178.32	31798.022
	All saints	284.58	80985.78		Show Ground	170.1	28934.01
	Green Fields	277.45	76978.50		Lessos	166.35	27672.323
	Mount Emoru	271.00	73441.00		Township	162.62	26445.264
	Kitale Family	242.54	58825.65		Kitale Union	157.38	24768.464
	Fairway	228.80	52349.44		Muliro	156.31	24432.816
	Aquinoe	173.50	30102.25		Section Six	154.02	23722.16
	Totals	Σ 2097.28	ΣX^2			Σ 1376.61	ΣX^2 2
			565405.31				41369.94
Mean /Average	262.16	\bar{X}_1		172.08	\bar{X}_2		

From the results there was a significant difference in the academic performance of 4.76 between private and public primary schools at class four level, which was higher than expected i.e. 2.145. This is clear evidence that public schools face a very high competition from private schools and that private schools start preparing their pupils for this competition quite early.

Gender Comparison of Academic Performance between Boys in Private and Boys in Public Primary Schools

Table 3. Boys Private Schools Mean Scores per Subject

School	Eng	Kis	Maths	Scie	S. Stu	Mean Score
Jack & Jill	68.75	58.33	68.58	70.42	71.79	337.88
Green Fields	57.54	56.69	50.00	53.69	57.77	275.69
Mount Emoru	54.22	56.67	53.44	52	57.89	274.22
All Saints	50.39	51.92	53.08	56.21	56.73	268.32
Purpose Driven	50	46.39	48.33	45	58	244.5
Kitale Family	43.38	57.25	47.13	37.50	51.20	233.25
Fairway	53.71	34	31.14	44.86	38.29	202
Aquinnoe	33.86	33.7	37.4	35.4	33.08	173.5
Mean Score	51.48	49.37	48.64	49.38	53.09	251.17

Table 4. Boys Public Schools Mean Score per Subject

School	Eng	Kis	Maths	Scie	S.Stu	Mean Score
Milimani	46.33	37.65	42.63	43.43	32.19	201.21
Chetoto	41.23	38.54	32.70	31.63	43.41	177.96
Showground	33.86	33.83	29.33	25.79	29.17	169.45
Section Six	30.61	36.00	35.57	27.90	33.59	169.29
Lessos	29.24	35.16	39.56	31.05	35.19	166.95
Muliro	31.99	38.1	29.52	29.05	34.95	162.81
Township	33.41	30.70	34.21	29.95	34.28	157.10
Kitale Union	26.89	29.41	38.43	28.76	32.38	142.89
Mean Score	34.20	34.92	35.24	30.94	34.39	168.46

From the tables above the mean score per subject for boys in private schools was slightly higher than that of the public schools by 83.24. However the difference in means from one subject to another was insignificant in both public and private schools. This is an indication that there is no subject competition in the two types of schools. Performance was about average for private schools but below average for public schools.

This statistical computation tested the following hypotheses:

Hypothesis:

1. $H_0: \mu_1 = \mu_2$: There is no significance difference between the academic performance in various subjects of Boys in private primary schools and Boys in public primary schools at class 4-level

Table 5. Subject Variation in Private and Public Schools

Subjects	(S ² ₁) Private Schools Mean Score	X ²	(S ² ₂) Public Schools Mean Score	X ²
English	51.48	2650.19	34.2	1169.64
Kiswahili	49.37	2437.40	34.92	1219.41
Maths	48.64	2365.85	35.24	1241.86
Science	49.38	2438.38	30.94	957.28
Social Studies	53.09	2818.55	34.99	1224.30
Total	Σ251.96	ΣX ² 63483.84	Σ170.29	ΣX ² 28998.68
Mean	50.39 \bar{X}_1		34.06 \bar{X}_2	

The table above indicates a higher mean score for private schools than for public schools, the difference in the mean being 16.33. Statistical tests gave a difference of 0.14 which was far below the expected of 2.31. From these results, there was no significant difference in the performance of various subjects between boys in private schools and those in public primary schools at class four level.

Table 6. Girls Private Schools Mean Scores per Subject

School	Eng	Kis	Maths	Scie	S.Studies	Mean Score
Jack & Jill	68.6	56.72	66.32	69.6	68.56	329.8
All Saints	54.573	60.282	59.466	57.806	58.350	290.476
Mount Emoru	69.33	61.83	50	51.33	53.67	266.17
Fairway	49.25	47.5	49.88	61.13	44.5	252.25
Green Fields	46.06	45.33	49.86	46.78	48.42	232.91
Purpose Driven	44.1	44.15	44.2	36.08	48.22	214.35
Aquinnoe	33.86	33.7	37.4	35.4	33	173.5
Kitale Family	55.32	52.64	53.29	53.79	53.62	264.33
Mean Score	52.64	50.27	51.30	51.49	51.04	252.97

Table 7. Girls Public Schools Mean Score per Subject

School	Eng	Kis	Maths	Scie	S. Stu	Mean Score
Milimani	45.17	41.23	47.54	45.79	40.56	214.93
Lessos	46.10	44.85	45.06	43.94	46.18	224.20
Chetoto	40.92	41.65	33.50	29.04	39.92	178.72
Show Ground	33.90	35.21	29.13	25.95	30.44	170.10
Township	36.17	36.34	35.78	28.94	34.00	169.22
Section Six	26.35	34.70	32.95	28.53	29.50	153.37
Muliro	28.06	35.00	30.04	25.41	33.76	152.29
Kitale Union	27.71		38.43	30.02	31.18	144.78
Mean Score	35.55	38.43	36.55	32.20	35.69	175.95

From the tables above, girls in private schools are average in performance in all the subjects while those in public schools are below average. The difference of the average mean score was 77.02 between the public and private schools. Tables 3 and 6 indicate that there is no difference in the performance of boys and girls in private schools while tables 4 and 7 indicate a very slight difference between boys and girls in public schools.

This statistical computation tested the following hypothesis:

1. $H_0; \mu_1 = \mu_2$: there is no significance difference between the academic performance in various subjects of girls in private primary schools and girls in public primary schools at class 4-level

Table 8. Subject Variations

Subjects	(S^2_1) Private Schools Mean Score	X^2	(S^2_2) Public Schools Mean Score	X^2
English	52.64	2770.97	35.55	1263.803
Kiswahili	50.27	2527.07	38.43	1476.865
Maths	51.30	2631.69	36.55	1335.903
Science	51.49	2651.22	32.20	1036.84
Social Studies	51.04	2605.08	35.69	1273.776
Total	$\Sigma 256.74$	ΣX^2 65915.43	$\Sigma 178.42$	ΣX^2 31833.7
MEAN	51.348 \bar{X}_1		35.68 \bar{X}_2	

From the table above the average mean score for girls in private schools was higher than that of girls in public schools by 15.66. Statistical test revealed no significance different in subject performance between girls in private and those in public primary schools at class four level. From statistical observations in whichever type of school girls and boys performance range is very close with that of boys. In fact girls in both cases seem to be performing fairer than boys though the difference is minimal.

Table 9: Private to Public Gender Comparison of Academic Performance

Type of School	Academic Performance		
	Boys Mean Score	Girls Mean Score	
Private Schools	268.32	290.476	
	173.5	173.5	
	202	252.25	
	275.69	232.91	
	337.88	329.8	
	233.25	264.33	
	274.22	266.17	
	244.5	214.35	
	Total	2009.36	2023.786
Means	251.17	252.97325	
Public Schools	177.96	178.72	
	142.89	144.78	
	166.95	224.2	
	201.21	214.93	
	162.81	152.29	
	169.29	153.37	
	169.45	170.1	
	157.1	169.22	
	Total	1347.66	1407.61
Means	168.4575	175.95125	

From the table above the gender difference in academic performance in private schools is minimal. Boys mean score was 251.17 while that of the girls was 252.97 giving a difference of 1.8. The same applies to public schools where the boys mean score was 168.46 against 175.95 for the girls giving a difference of 7.49. From these results girls in Kitale Municipality primary schools are doing better at class four level than boys.

The statistical computation tested the following hypotheses for gender difference:

1. Hypothesis for the type of gender academic performance:

H₀: $\mu_1 = \mu_2$: The main effects of the type of gender are not significant.

H₁: $\mu_i \neq \mu_2$: The main effects of the type of gender are significant.

2. Hypothesis for the type of school:

H₀: $\mu_1 = \mu_2$: The main effects of the type of school are not significant.

H₁: $\mu_i \neq \mu_2$: The main effects of the type of school are significant

3. Hypothesis of interaction:

H₀: Interaction = 0: Interaction effects are not significant

H₁: Interaction \neq 0: Interaction effects are significant.

Table 10. ANOVA Source Table

Source	SS	df	MS	F _{ob}	F _{Crit}
Columns	173	1	173	0.0167	F _{CritC} (0.05,1,4)= 7.71
Rows	51030.22	1	51030.22	4.9137	F _{CritR} (0.05,1,4)= 7.71
RXC	64.78	1	64.78	0.0062	F _{CritRXC} (0.05,1,4)= 7.71
Within Cells	41541.28	4	10385.32		
Total	92809.28	7			

From the ANOVA source table the following conclusions were made:

1. The main effects of the type of gender were not significant. There were no gender variations in academic performance in all the subjects in the two types of schools.
2. The main effects of the type of the school were not significant. The type of school a child attended had no effect on academic performance.
3. Interaction effects were non-significant. There were no interaction effects on the type of school and gender on academic performance.

These results indicated a high competition in academic performance between boys and girls in either public or private primary schools at class four levels. This could have a positive influence on performance at class eight level and in future.

Observation 1: Both boys and girls in private schools were better in academic performance than those in public primary schools at class four level. The private schools performance was higher than that of public schools of the same level.

Observation 2: Boys and girls in private primary schools were at the same level in academic performance and the same applies to those in public primary schools. However the girls and boys in private schools were far above those in public schools in class four level.

CONCLUSION

The study sought to establish if there was any disparity in the academic performance between private and public primary schools at class four levels. In academic performance primary private schools were not only performing well at K.C.P.E. examinations but even at lower class levels than public primary schools, as the study showed significant difference of 4.76 which was higher than the expected. Both boys and girls in private schools performed better than those in public schools. In either type of school there was no variation in the performance of boys and girls, thus gender and type of school had no major interaction effect. The best pupil in private primary schools scored 407 marks out of 500 marks, while in public school it was 321 marks. The worst pupil in private school had 39 marks while that of the public had 12 marks. This gave a big difference in range.

RECOMMENDATIONS

1. Through media the government should advertise some of the best performing public primary schools and give awards to those schools so as to encourage others to work hard and improve their standards.
2. Inter school exchange programs and inter class competition should be encouraged in primary schools to boost performance right from lower classes.
3. The author recommends that; a comparative study of pupils' academic performance at lower levels and its influence in upper levels be done. This will help improve effectiveness of teaching at lower levels.

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