



RESEARCH ARTICLE

A COMPARATIVE STUDY OF ACADEMIC PERFORMANCE BETWEEN PUBLIC AND PRIVATE
PRIMARY SCHOOL LEAVERS AT KENYA CERTIFICATE OF SECONDARY EDUCATION (KCSE)
IN SELECTED SECONDARY SCHOOLS IN KERICHO COUNTY, KENYA

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ABSTRACT

Mixed and unpredictable performance of pupils taught in private and public primary schools both at Kenya Certificate of Primary Education (KCPE) and Kenya Certificate of Secondary Education (KCSE) exams is still a challenge in Kenya despite documentation that private primary schools produce better school leavers than public primary schools. This study was set to compare academic performance of private and public primary school leavers at KCSE in Kericho County. Two County schools; (a girls' and a boys' school) were randomly selected out of six County schools. A total of 337 students; 170 boys and 167 girls were selected for the study. Out of the 170 boys, 81 and 89 came from private and public primary schools respectively, while out of 167 girls, 89 and 78 came from private and public primary schools respectively. KCPE and KCSE results were obtained from school documents containing students records and were subjected to descriptive and inferential statistics using Statistical Package for Social Sciences, (SPSS) version 17.0. Results indicated that public primary school leavers performed better than those from private primary schools at KCSE; however, further comparative analysis using independent t- test showed that there was no significant statistical difference. Regression analysis showed a positive relationship between KCPE marks and KCSE points, while Pearson Product Moment Correlation Coefficient was used to find the effect of KCPE marks on KCSE points showed that for public primary school leavers it was weak while for private primary school leavers it was moderate. The study therefore concludes that performance at KCSE depends on KCPE but not much influenced by the private or public primary school background. There is need for education stakeholders to harmonize teaching approaches and other co-curricular activities in both private and public primary schools for better performance at KCSE.

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INTRODUCTION

Primary education in Kenya is provided through public and private primary schools; at the end of primary and secondary school, children from both private and public primary schools are assessed by sitting a national exam; Kenya Certificate of Primary Education, (KCPE) and Kenya Certificate of Secondary Education, (KCSE), (GoK, 1980). In private primary schools pupils enjoy several benefits; including enriched academic opportunities, low teacher-pupil ratio, parental involvement, dedicated teachers, safe environment, community involvement, extra-curricular activities, shared educational philosophy and development of today's and tomorrow's world among others, (Maga, 2014).

On the other hand pupils from public primary schools are privileged to pay no fees at all due to the Free Primary Education, (FPE) and Free school Feeding Programs in some schools, (Chepkwony, Kariuki and Kosgei, 2013). This makes public primary schools cheaper and preferred by majority of Kenyans who cannot afford fees in private schools. This has led to a high influx of pupils in public primary schools leading to a high teacher-pupil ratio in these schools. Currently most parents in Kenya enroll their children in private primary schools due to the perception that those who attend private primary schools perform better than those in public schools in national exams both at primary and secondary levels, (Bold, Kamenyi, Mwabu and Sanderfur, 2013). Contrary to this belief some parents believe that private school leavers are not the best due to their mixed and unpredictable performance at secondary level as well as their social life and interaction with other people after school, (Jagero, 2013). Further studies on factors leading to better performance of private primary schools has linked the

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results to drilling of pupils to pass exams, (Euphrasia, Nyaga, Oundo, 2014). In addition, recent findings in other countries indicate that there is no significant correlation between the performance of a pupil at primary and secondary, indicating that it is not automatic for a pupil who scores high marks at primary level to obtain the same results at secondary level, (Graddy and Steven, 2003). However, strong correlation exist between school inputs and resources, (Graddy and Stevens, 2003); teachers' gender, age, professional qualifications, professional experiences, instructional practices or teaching methods, (Adunola 2001; Kimani, Augustine and Lucy, 2013), among others factors influence performance of pupils at KCPE and KCSE. Despite all these finding little research has been done in Kenya to determine whether there is a link between performance of pupils in private and public primary schools and their subsequent performance at KCSE. Therefore this study sought to compare and link academic performance of pupils from private and public primary schools at the end of their secondary education using their KCSE results. This would provide an empirical position on which people can base their arguments concerning performance between private and public primary school leavers in KCSE.

MATERIALS AND METHODS

Study area and Sample size: This study was carried out in Kericho County, Kenya. The study population was the 2011 secondary school leavers from public and private primary schools. Two County secondary schools were randomly selected for the study. These were a girls' and a boys' school. The performance of all the form fours who did KCSE exams in 2011 was studied with reference to their entry (KCPE marks). The number of boys was 170, 81 came from private and 89 came from public primary schools. The girls were 167, where 89 came from private primary schools while 78 came from public primary schools.

Data collection and sampling techniques: School documents acted as the source of the data. The school documents used provided the information on the performance of both students at KCPE and KCSE. Raw data on entry mark (KCPE) and KCSE performance was obtained from the two schools records, the documents used were the school admission register and the KCSE results sheet for 2011. Data for students from private and public primary schools were sorted.

Data analysis: Data on overall performance at KCPE and KCSE for both schools were grouped as per the objective of the study before analysis. The students' primary school background was grouped as public and private for each sampled school. The data on overall performance was subjected to descriptive and inferential statistics using Statistical Package for Social Sciences (SPSS), version 17.0. To determine mean differences; mode, median, standard error, standard deviation, variance and skewness at 5% level of significance were used. To test whether the overall performance of school leavers from public and private differed significantly at KCPE and KCSE, an independent t-test was conducted at 5% level of significance. The comparative results of the study were presented in tables, graphical standard error bars and figures. Regression analysis was conducted to determine whether there is a positive or negative relationship between KCPE marks obtained by school leavers from public and private primary schools and their corresponding performance at KCSE. To determine the effect of the

relationship between KCPE (Independent variable) and KCSE (Dependent variable), Pearson Product Moment Correlation analysis was performed.

RESULTS

Overall performance at KCPE and KCSE: The results reveal that the overall performance of school leavers in the boys' school was much better than that of the girls' school at KCPE and KCSE. The study results indicate that there was variation within the boys' samples in terms of their performance at KCPE and KCSE, since the confidence levels obtained through statistics were less than 5%. The lower standard error at KCPE and KCSE implies that the sample mean studied precisely represented the population mean. Further results indicate that majority of the boys from public and private primary schools scored 370 marks and 64 points at KCPE and KCSE respectively. However, the negative skewness for the boys' school indicates that majority of the school leavers scored below the median (64), (Table 1, Figure 1). Likewise the study results in the girls' school indicated that there was a variation within the study samples in terms of performance at KCPE and KCSE since the confidence levels obtained through descriptive statistics were less than 5%. Performance of the girls' school was lower than that of the boys' school both at KCPE and KCSE by about 28% 3% respectively. However, at KCSE the girls' school improved much better than the boys' school. This is evident by the zero skewness at both KCPE and KCSE for the girls' school; an indication that their performance is stable, normally distributed across the academic levels, (Table, 1), when compared to the boys' school whose performance reduced at advanced levels of academics, (KCSE), thus the negative skewness.

Comparative performance at KCSE based on KCPE results: Results from the girls' school indicate that girls from private primary schools scored higher marks than those from public primary schools by 11%. However, students from public primary schools scored higher points at KCSE; (Table, 2). An independent t-test conducted to compare the performance of private and public primary school leavers indicated that there was no significant difference in the scores for public and private primary school leavers; private primary school leavers, (Mean = 60.6; SD = 8.5;) and public primary school leavers, (Mean = 61.7; SD = 9.4) $t(156) = -0.85000$; $p = 0.3966$. Further results showed that majority of girls from public primary schools scored 351 marks while those from private primary schools scored 361 marks at KCPE. Similarly at KCSE, school leavers from public and private primary schools scored the same points on average, (60.6) and (61.7) for private and public primary school leavers respectively. Performance in the boys' school in KCPE and KCSE showed a similar pattern like that of the girls' school. School leavers from private primary schools performed better than those from public primary schools at KCPE, (Private, Mean = 367.4) and (Public, Mean = 362.2). However, at KCSE public primary school leavers performed better than those from private primary schools, KCSE means were as follows; Public 63.7, and private 63.1. Further comparative analysis to determine whether there was a significant statistical difference in performance between public and private primary school leavers using an independent t-test showed that there was no significant statistical difference. Private primary school leavers; (Mean = 63.1; SD = 10.8) and public primary school leavers, (Mean = 63.7; SD = 10.9; $t(167) = -0.3016$; $p = 0.7634$).

Table 1: Overall academic Performance in the Boys' and the Girls' School at KCPE and KCSE

STATISTICAL MEASURE	BOYS' SCHOOL		GIRLS' SCHOOL	
	KCPE	KCSE	KCPE	KCSE
Mean	364.7	63.4	347.2	61.1
Standard Error	1.6	0.8	1.4	0.7
Median	366.0	64.0	346.0	62.0
Mode	370.0	60.0	348.0	60.0
Standard Deviation	21.5	10.9	17.5	8.9
Variance	461.2	117.7	305.6	78.9
Skewness	0.5	-0.3	0.0	0.0
Confidence Level(95.0%)	3.3	1.6	2.7	1.4

Table 2: Performance of school leavers in KCSE in relation to their public and private primary school background

STATISTICAL MEASURE	GIRLS' SCHOOL			
	PUBLIC GRADUATES		PRIVATE GRADUATES	
	KCPE	KCSE	KCPE	KCSE
Mean	344.5	61.7	349.5	60.6
Standard Error	1.8	1.1	1.9	0.9
Median	342.0	62.0	348.0	61.0
Mode	351.0	60.0	361.0	60.0
Standard Deviation	16.2	9.4	18.3	8.5
Variance	263.6	87.7	334.3	71.5
Skewness	0.0	0.0	0.0	-0.1
Confidence Level(95.0%)	3.7	2.1	3.9	1.8

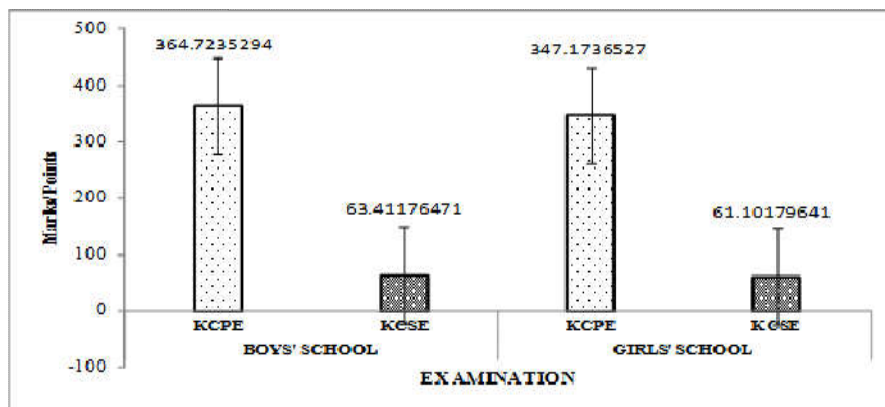


Figure 1: Overall performance in the Girls' and the Boys' school at KCPE and KCSE examinations

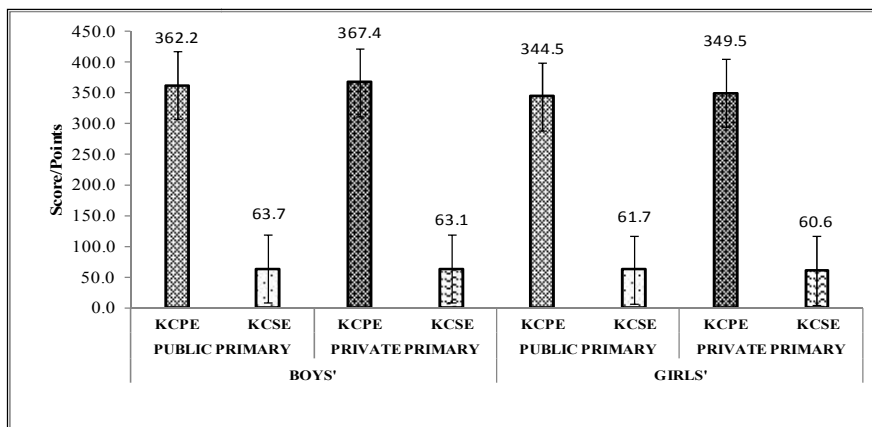


Figure 1. Performance of male and female school leavers from private and public primary schools at KCPE and KCSE

The negative skewness implies that majority of school leavers scored below the mean and the median and this affected school leavers from private primary schools. The findings on comparative performance of school leavers at KCSE for both the boys' and the girls' schools indicated clearly that there is no significant statistical difference in performance between public and private primary school leavers at KCSE, (Figure, 2. Based on gender, the male school leavers from both public and private primary schools performed better than the female

school leavers at KCPE and KCSE, (Figure, 2). Public primary school leavers in the boys' school obtained a KCPE mean of 362.2 and at KCSE a mean of, 63.7, those from private primary schools had a KCPE mean of,367.4 and KCSE mean of,63.1. The female school leavers from public primary schools obtained a mean of 344.5 at KCPE and at KCSE, the mean was 61.7, those from private primary schools had a KCPE mean of 349.5 and a KCSE mean of 60.6.

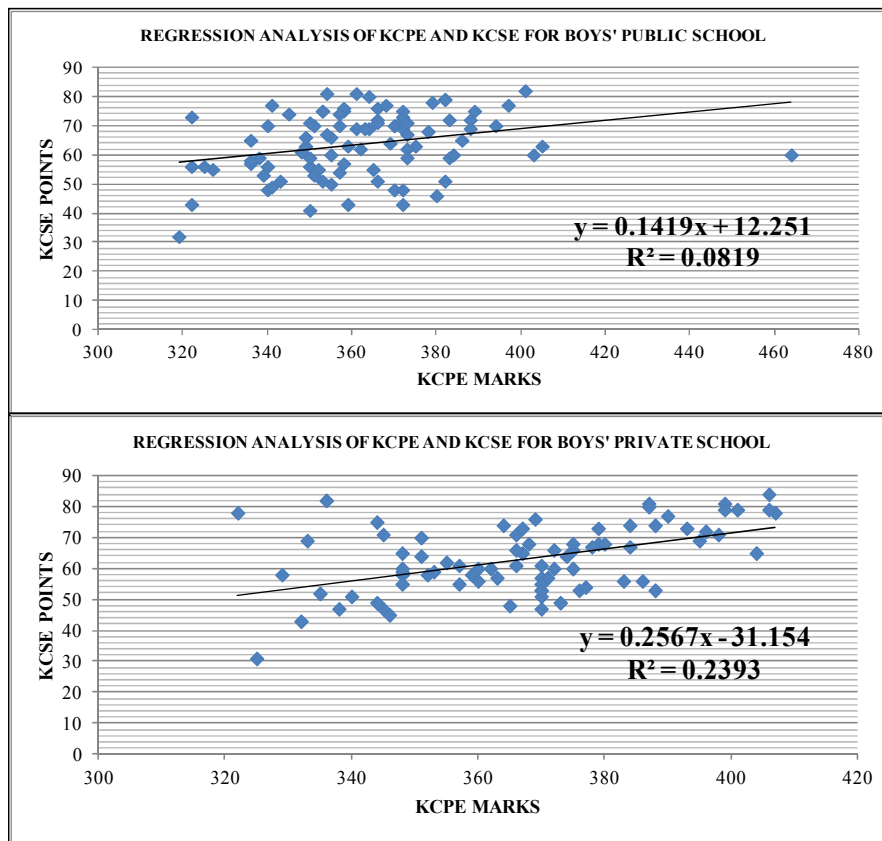


Figure 2. Regression and correlation coefficients for the influence and effect of KCPE on KCSE (BOYS')

Relationship and effect of KCPE marks on KCSE points:

Regression analysis was conducted to determine whether there is a positive or negative relationship between KCPE marks and corresponding performance at KCSE of school leavers from public and private primary schools. In both schools, (the boys' and the girls' school) the study results showed a positive but extremely weak relationship between marks scored at KCPE and points scored at KCSE for both private ($R^2 = 0.2$) and public ($R^2 = 0.1$) primary school leavers. The correlation coefficient showed that for school leavers originating from public primary schools, the effect of KCPE marks on KCSE points was weak, ($r = 0.3$), implying that their performance is not much affected by the marks attained at KCPE. However, for school leavers from private primary schools the effect of KCPE on KCSE was moderate, ($r = 0.5$), implying that their performance dropped at KCSE, (Figure, 3).

DISCUSSION

Overall performance at KCPE and KCSE: The results reveal that the overall performance of school leavers in the boys' school was much better than that of the girls' school at KCPE, however, at KCSE the girls' school improved better than the boys' school. The good performance by the boys' school could be attributed to several factors which include childhood training and experience, parental and teacher expectations, behaviors and biological differences between male and female school leavers, these may have played an instrumental role in the observed differences in performance, (Wilberg and Lynn, 1999).

Comparative performance at KCSE based on KCPE marks: In most occasions, it is normally hard to predict the performance of public and private primary school leavers.

This is because school leavers with a private primary school background join with high marks but may perform poorly at KCSE level or maintain the higher standards; some school leavers from public primary schools also join with lower KCPE marks but perform better than those who joined with higher marks. In both schools students from private primary schools performed better than those from public primary schools at KCPE. This difference could be attributed to the differences in teaching methods used in public and private primary schools that have been identified to have significant effect on the final performance of students, (Ganyaupfu, 2013). However, at KCSE school leavers from public primary schools scored higher points than those from private primary schools. Better performance by public primary school leavers could mean that such students have a higher resilience i.e. "A set of protective characteristics possessed by those who are able to adapt to hardship and succeed," than those from private primary schools when they reach secondary level, (Savannah, 2013).

Comparative performance based on gender: Based on gender, the male school leavers from both private and public primary schools performed better than the female school leavers at KCPE and KCSE. However, at KCSE, the female school leavers improved much better than the male school leavers. These results correspond to that of other researchers who found out that girls perform better than boys since they read to understand the course content than boys who just read to improve their overall performance, (Jagero, 2013; Voyer and Voyer, 2014).

Relationship and effect of KCPE marks on KCSE points: The results in both schools showed a positive but extremely weak relationship between KCPE marks and KCSE points. The positive trend implies that the higher the marks scored at

KCPE, the higher the likelihood that a candidate will score higher points in KCSE. The correlation coefficient showed that, for public primary school leavers the effect of KCPE on KCSE was weak; this implies that their performance is not much affected by the marks attained at KCPE. However, the effect of KCPE marks on KCSE points for private primary school leavers was moderate; this implies that their performance dropped at KCSE.

Conclusions and recommendations

This study has given an account on academic performance between school leavers from public and private primary schools in two selected county schools in Kericho County, Kenya. In particular this study compared the performance of public and private primary school leavers at KCPE and KCSE in two single gender secondary schools in Kericho County, Kenya. Private primary school leavers performed better than those from public primary schools in KCPE; however, at KCSE public primary school leavers performed better. This shows that there was an improvement from low KCPE marks to better KCSE points. Further analysis showed that there was no significant statistical difference between performance of public and private primary school leavers. Based on gender the boys performed better than the girls both at KCPE and KCSE. Relationship between KCPE marks and KCSE points revealed a positive but extremely weak relationship for both public and private primary school leavers. The positive trend implies that the higher the marks scored at KCPE the higher the likelihood that a candidate will score high points at KCSE, however, this is highly variable and not obvious, this phenomenon is true for both private and public primary school leavers in the two schools. This study established that marks scored at KCPE have a positive effect on points attained at KCSE, but is highly variable and not obvious. This study recommends that there should be harmonization of teaching approaches and curricular activities in both public and private primary schools so as to assist in narrowing the gap in examination performance between public and private primary school leavers at KCPE and KCSE. In addition, teachers in secondary schools should identify weaknesses of school leavers from both private and public primary schools and improve on them since they are linked to performance at advanced levels of education.

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