HOW PERFORMANCE OF STUDENTS IN KENYA CERTIFICATE OF PRIMARY EDUCATION CAN PREDICT THEIR PERFORMANCE IN KENYA CERTIFICATE OF SECONDARY EDUCATION

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ABSTRACT

The study was to find out how performance of students in Kenya Certificate in Primary Education (KCPE) exams can determine their performance in Kenya Certificate of Secondary Education (KCSE). The research design used in the study was ex post facto and correlation research design. The study involved 110 students in medium Cost Private secondary school in Western Kenya. Saturated sampling was used in the study, and data was analyzed using Descriptive Statistics such as mean and standard deviation, while the inferential statistics used were Pearson correlation and linear regression analysis. The major finding was that there was a correlation of 0.559 between performance in KCPE and KCSE and the correlation was significant at 0.01 level in a two tailed test. The girls also performed better in KCSE exams then boys, though they were admitted with lower marks in KCPE.

Keywords: Kenya Certificate of Primary Education (KCPE) Kenya Certificate of Secondary Education (KCSE), Performance, Examination

INTRODUCTION

In Europe, higher education, including secondary education begun with training in religion and philosophy. Its purpose was to prepare leaders, especially religious leaders, and its curriculum reflected this purpose. As time passed, general topics for more applied professions were added as part of secondary education curricula (Cowell and Holsinger, 2000).Those early European secondary schools were almost exclusively for males, focusing on promotion of logical thinking, refined form of expression, and improved memory (Cowell and Holsinger, 2000). From nineteenth century to the second world war, the curriculum begun to encompass more subjects such as modern languages and literature, modern history, scientific and technological subjects.

Because of secondary education's middle position between primary and tertiary levels, its programs have had a functional role: giving students access to higher education, preparing students to lifelong education, and preparing students to work (World Bank, 2002). In addition to those traditional functions, society is increasingly demanding that secondary education encompass subjects such as the environment, human rights, drug addiction, AIDS, poverty and unemployment (World Bank, 2002). Education at secondary school level is supposed to be the bedrock and the foundation towards higher knowledge in tertiary institutions. It is an investment as well as instrument that can be used to achieve more rapid economic, social, political, technological, scientific and cultural development of the country.

Success in educational institution is measured by the performance of students in external examination. The examinations are used to measure the level of candidates' achievement. For

policy makers examinations are used to evaluate the curriculum improvement; for teachers and students, they are used for promotion to the next level of learning and for certification. For quality assurance personnel, they are used to evaluate the teachers' level of curriculum implementation. Examinations can also be used to improve quality of teaching and learning and because of this reason when Kenya Certificate of Secondary Education (KCSE) results are released the feedback is sent to schools through a report indicating not only how students have performed, but also what teachers and students should do to improve future examinations.

KCPE is used to select form one students to various cadres of secondary schools on the premise that their performance in KCPE will affect their performance in KCSE which comes at the end of secondary education. Kenya's education system is such that one takes examinations after 8 years of primary education. Adriaan (2008) posits that many of the performance problems at secondary school level have their roots from primary school level. This is because few countries have effective strategies for teaching languages to pupils who enter primary schools. This poses a challenge, because English is the medium of instruction and plays a key role in understanding the content of any subject taught in the curriculum. A study by Amburo (2011) found out that students' performance in KCPE had a Pearson Correlation of 0.452 to their performance in KCSE. This correlation was significant at 0.01 in a two tailed test.

STATEMENT OF PROBLEM

Studies by Fuller (1987), Glewwe and Kremer (2006), Heyneman and Loxley (1983), Hanusheck (2003), Jagero (1999), Maundu (1986), Omariba (2003) and Wobmann (2005) shows a positive relationship between school inputs such as teacher qualification and experience, head teacher qualification and experience, teacher pupil ratio, student admission score, instructional materials available, laboratory facilities available to performance. This study was conducted in one private secondary school therefore the students had the same school inputs and facilities. A study by Wanjohi and Yara (2011) showed that school category predicts performance of students in KCSE.

By controlling for the effects of school inputs on performance, the study determined whether performance in KCPE can predict performance of the same students in KCSE performance when provided with the same educational facilities and inputs.

OBJECTIVES

1. To evaluate whether students' performance in KCPE can predict their performance in KCSE.

2. To examine whether girls and boys performance in KCPE differ in predicting their performance in KCSE.

LITRATURE REVIEW

According to World Bank (2001), the first written public examination was introduced over 2000 years ago in China to select the most able citizens for positions in the civil service and to reduce the effects of patronage. The Chinese system was brought in Europe in the 16th century and the Jesuits incorporated the examinations in their schools. Prussians established an exam system for selection to civil service around the middle of 18th century, followed by

France after the revolution. By the middle of 19th century, competitive examinations had been introduced in Britain and India to select the increasing number of government officials in the expanding empire.

In many countries in Africa, Asia, Latin America and Europe, public or external examinations have long occupied a central role in the assessment of individual students at the end of secondary schooling (Ross and Genevois, 2006). Public examinations serve a number of important functions. First, they help control the disparate elements of education system by specifying goals and standards of education. Second, examinations are used to certify the achievement of students, providing evidence a student may need in the market place. Third, examinations are used to select students for further education in what is considered an objective and unbiased way in situations in which the number of student places diminishes at each level (Ross and Genevois, 2006). Fourth, examinations especially when results are published, may serve an accountability function for teachers and schools. Finally examinations at the end of secondary schooling legitimize membership in international global society, and facilitate international mobility (Keeves, 1994; Kellaghan and Greaney, 1992; Kellaghan and Madaus, 2003).

According to Hallack and Poisson (2007) the main function of public examinations is to distribute educational benefits throughout the world on the grounds that they can serve as instruments for making objective and neutral judgments. According to a study by World Bank (2005) learning assessments are crucial for measuring education quality and relevance, diagnosing system weaknesses and motivating policy reform.

Public exit examinations can provide performance information which can hold both schools and students accountable (Hunushek, 2003). Students in countries with public exit examinations systems tend to systematically outperform students in countries without such systems (Bishop, 1997; Bishop, 2006; Wobmann, 2005). In the two nations Canada and Germany where the existence of external examinations vary within the country because some region feature them and others not, it has been similarly shown that students perform better in regions with external exams (Bishop, 1997; Jurges, Schneider, and Buchel, 2005).

Weak monitoring and assessment systems remain major obstacles for improved learning outcomes at the secondary school level (Bregman and Stallmeister, 2002). Systematic and internationally comparable assessment of learning in secondary education at classroom, school, and system levels is not widespread, and considerable reliance has been placed on public examinations to ensure that the common curricula are covered (World Bank, 2001). The examinations then affect the content and the skills covered in school, and teachers gear their teaching to the examinations, which tend to encourage rote learning (Bregman and Stallmeister, 2002).

According to Ross and Genevois (2006), many studies and official reports have pointed to the limitations of public examinations. Those include the fact that a heavy reliance on paper and pencil tests limits the knowledge and skills that can be tested; and that examinations contain very little reference to the everyday life of the student outside the school.

According to Desarrollo (2007) in Latin America, girls outperformed boys in languages by 1-2% points, but there was no gender difference in mathematics scores. The question of gender difference in academic performance in African secondary schools is neither conclusive nor unanimous. In some countries such as Kenya girls have lower academic performance than boys, while in Mali there is no difference in performance between boys

and girls (Barthes, Nair and Malpade, 2000). But according to Mensch and Lloyd (1997) studies in Nigeria and Thailand have shown a higher achievement for girls in a single sex schools relative to mixed schools but lower achievement for boys when schools with similar resources are compared.

The third most important function of public national examination according to Wobmann (2005) was the measurement of education quality and relevance, diagnosing system weaknesses, and motivating policy reforms. In Kenya according to Munavu, Ogutu and Wasanga (2008), national examinations have tended to define the style and intensity of teaching at school level. Currently over 57% of the teachers in secondary schools spend most of their time preparing students to master test taking skills in order to pass KCSE examinations. Furthermore, over 30% of the teachers in secondary schools use past examination papers as teaching resources in the classroom at least once a week. Time for teaching is misappropriated to testing and coaching. This is understandable, since passing with relatively better grades means a different future world for both the students and the teachers.

METHODOLOGY

Research Design

The research designs used in this were ex post facto and correlation research designs. Kerlinger (1983) states that ex post facto is a systematic, empirical inquiry in which the researcher does not have direct control of independent variables because their manifestations have already occurred. In this study the performance of students in KCPE and KCSE had occurred by the time data was collected, therefore the data cannot be manipulated. Correlation research design was used to evaluate the associations of student performance at KCPE and KCSE. This was done by comparing the marks scored by learners in KCPE and KCSE.

Population And Sample

The study was undertaken in a medium cost private mixed secondary school in Western Kenya. The study involved 110 students who sat their KCPE in 2007 and their KCSE in 2011. There were 82 boys and 28 girls.

Sampling Procedure

Saturated sampling was used in this study. Saturated sampling technique was used to select all the students by the researcher because the target population was so small that selecting a sample would have been meaningless.

Data Analysis

Data was analyzed using descriptive statistics, and inferential statistics using Statistical Package for Social Sciences (SPSS). Descriptive statistics used included, mean and standard deviation. Inferential statistics used were Pearson correlation, and multiple linear regression analysis. The advantage of Pearson correlation analysis and multiple regression analysis is that they permit one to analyze a relationship among a large number of variables in a single study (Gall and Borg, 1996).

RESULTS AND DISCUSSION

Objective One: To Evaluate Whether Students' Performance In KCPE Can Predict Their Performance In KCSE.

Table 1. Mean and Standard Deviation of KCPE and KCSE Performance

	Mean	*Standard Deviation*	*N*
KCPE	61.9091	10.76227	110
KCSE	379.69	25.47557	110

Source: Field data (2012)

As can be seen from table 1 the mean of the performance in KCPE and KCSE were 379.69 and 61.9091 respectively. The mean for KCSE was a B, and this performance was good considering that in Kenya a student needs a minimum of C+ (47) in order to be admitted to a university.

Table 2. Pearson correlation between KCPE and KCPE performance

		KCPE Performance	*KCSE Performance*
KCPE performance	Pearson correlation	1	
	sig (2 tailed test)	-	
	N	110	
KCSE performance	Pearson correlation	0.559**	1
	sig (2 tailed test)	0.000	-
	N	110	110

Source: Field data (2012)

As can be seen from Table 2 above, the Pearson correlation between performance of the students in KCPE and KCSE was 0.599' and the correlation was significant at 0.01 level in a two tailed test. This shows that students who performed well in KCPE are likely to perform well in KCSE. This finding concurs with the finding of Amburo (2011) who found out that the Pearson correlation of 0.452 between performance of students in KCPE and KCSE, and the correlation was significant at 0.01 in a two tailed test. The finding is also supported by the observation of Adriaan (2008) who posited that the performance problems at secondary school level have their roots from primary level of education.

Table 3. Model summary for Regression Analysis

Mode	R	R^2	Adjusted R^2	Standard error estimated	F change	Significant change
1	0.559	0.313	0.306	8.96345	49.139	0.000

Model	Unstandardized Beta	Coefficient Standard error	Standardized Beta	t	Sig
1	0.236	0.034	0.559	7.010	0.000

Dependent KCSE

From Table 3 the R square was 0.313. It can be concluded that students' performance in KCPE has 31.3% effect on their performance in KCSE. It shows that other factors are

responsible for the 61.7% of the performance in KCSE. These factors may include: students attitude towards learning, absenteeism from school due to fee or discipline problems, students socio economic background, motivation and interest of the student in the learning process among other factors.

From the regression analysis the un standardized beta when KCPE performance was regressed against performance in KCSE was 0.236, with a t value of 7.010 which is greater than 2.00 and a significance of 0.000. This shows that students performance in KCPE is a major predictor of their performance in KCSE, and this could be interpreted that 1% increase in students performance in KCPE will improve their performance in KCSE by 0.236%.

Objective Two: To Examine Whether Performance Of Girls And Boys In KCPE Differ In Predicting Their Performance In KCSE.

Table 4. Mean and Standard Deviation of KCPE and KCSE Performance

	Mean	*Standard Deviation*	*N*
KCPE	61.8049 (62.2143)	10.65444 (11.26567)	82 (28)
KCSE	381.9756 (373.00)	24.3092 (28.0179)	82 (28)

Source: Field data (2012)

As can be seen from table 4, the girls KCPE average was 373.00, that was lower than the boys 381.9706, but their performance in KCSE was better at 62.2143 compared to the boys 61.8049. This shows the girls though they were admitted with lower marks in KCPE they performed better than the boys in KCSE. This shows that if the girls can be given the same educational inputs and same environment as boys they could perform better than the boys. This finding is similar to the findings of a study Mensch and Lloyd (1997) in Nigeria and Thailand that found a lower achievement for boys than girls when schools with similar resources were compared. The finding in this study differed with that of Barthes, Nair and Malpade (2000) that stated that performance of girls were inferior to that of the boys. This could be explained by the fact that there could been difference in educational inputs unlike in this study where the students were in the same institution.

Table 5. Correlation between KCPE performance and KCSE performance for boys and girls

		KCPE Performance	KCSE Performance
KCPE performance	Pearson correlation	1	
	sig (2 tailed test)	-	
	N	82.00 (28.00)	
KCSE performance	Pearson correlation	0.538**(0.647**)	1
	sig (2 tailed test)	0.000 (0.000)	-
	N	82.00 (28.00)	82.00 (28.00)

** Correlations significant at the 0.01 level in a 2 tailed test.

NB: The results for the girls are in bracket.

As can be seen from Table 5 the Pearson correlation coefficient for the relationship between performance of students in KCPE and KCSE was higher for the girls than for the boys. The Pearson correlation was 0.647 for girls and 0.538 for boys; both the correlations were significant at 0.01 level in a 2 tailed test. These findings shows that the girls who perform well in KCPE are more likely than boys who perform well in KCPE to also perform well in KCSE.

Table 6. Model summary for Regression Analysis for both boys and girls

	Mode	R	R^2	Adjusted R^2	Standard error estimated	F change	Significant change
Boys	1	0.538	0.289	0.280	9.04036	32.506	0.000
Girls	1	0.647	0.418	0.396	8.75563	18.700	0.000

Predictor (Constant) KCPE

As can be seen from table 6 R square for boys and girls were 0.289 and 0.418 respectively. This data shows that for the boys, the performance in KCPE had only 28.9% effect on the performance of KCSE compared to the girls 41.8%. Other factors rather than performance in KCPE accounted for 71.1% for boys and 58.2% for the girls' performance in KCSE. This implies that the boys more than the girls were affected in their performance in KCSE, by factors such as absenteeism due to fee or indiscipline problems, students attitude towards learning etc (objective one above).

Table 7. Regression Analysis of KCPE Performance against KCSE performance for Boys and Girls

Model	Unstandardized Beta	Coefficient standard error	Standardized Beta	t	Sig
Boys KCPE	0.236	0.041	0.538	5.701	0.000
Girls KCPE	0.260	0.060	0.060	4.324	0.000

Dependent KCSE

From Table 7, the un standardised Beta for boys and girls was 0.236 and 0.260 respectively. Both their t was greater than 2 i.e. 5.701 for boys and 4.324 for girls, and their significance was 0.000 (less than 0.05 level). This shows that the performance in KCPE for both the both the boys and girls had a major effect on their performance in KCSE. The above results can be interpreted that 0.236 % increases in the performance for boys in KCPE will increase their performance in KCSE by 1%, while increase in the performance by 0.260% will increase girls' performance by 1%. The performance of girls and boys in KCPE differ in the predicting their performance in KCSE.

CONCLUSION

Performance in KCPE can predict the performance in KCSE for both boys and girls, as shown by the results of Pearson correlation coefficients and linear regression analysis. The prediction indicator was more pronounced in the girls' performance in KCPE than the boys. Though the girls performance in KCPE was on average lower than the boys, their performance was on average better in KCSE. This outcome shows that when the same school inputs and environment is provided for both boys and girls the girls can outperform the boys.

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