

Influence of Resources for Girls on Girls' Kenya Certificate of Secondary Education Performance in Mixed Day Secondary Schools in Nzambani Sub County

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Abstract: Education is generally regarded as a key tool for development and an invaluable means of addressing structural inequality and disadvantage through provision of life skills that enable people to prosper later in life. The skills help them to maintain a healthy and productive existence, hence grow into resourceful and socially active adults who can make cultural and political contributions to their communities. The education of girls is paramount to the development of a nation since they are involved in all kinds of activities both at community and regional level. The learning environment in mixed day public secondary schools is usually hostile towards girls. They are sexually harassed, teased and ridiculed by boys and teachers, when one is too intelligent or not too intelligent. The purpose of this study was to establish the influence of resources for on girls' KCSE performance in mixed day secondary schools. The study was conducted using Ex post facto design. The target population comprised of 13 principals, 78 teachers and 250 form three girls. The sample was 13 principals, 78 teachers and 250 form three female students. This study used questionnaires, to collect data. Pearson's product-moment correlation was used to statistically establish the independent variable and dependent variable. Findings revealed that resources for girls influenced girls' KCSE performance. This was shown by the Pearson correlation coefficient on the resources for girls on girls' KCSE performance which indicated an, r , of 0.785, that was statistically significant ($p=0.005$). Based on the findings, the study concluded that resources for girls influenced girls' KCSE performance. The study recommended that the school principals should avail resources both physical and materials so as to improve girls' KCSE performance.

Keywords: Performance, Resources and materials, Influence, Mixed secondary schools

1. Introduction

Education is the total process of developing human behavior hence it is said to be an organized and sustained instruction designed to communicate a combination of knowledge, skills, attitudes and understanding value for all the activities of life (United Nations Educational Social and Cultural Organisation [UNESCO], 2014). The World Education Forum (WEF) held 2000 in Dakar, argued that children should complete "Compulsory primary education of good quality", by 2015. There was also concern about gender disparities in education, pledging to eliminate them by 2005. The UN's millennium summit, heads of state adopted these targets as two of the eight Millennium Development Goals (MDGs) for reducing world poverty. It was indicated that since education was so crucial to improving health and increasing incomes, girls had an effect on all of the other Millennium Development Goals (Kombo, 1998).

In Africa, female education gained more emphasis in 1990 after the Jomtien Conference at Thailand on Education for All (EFA). World leaders agreed that the most urgent priority was to ensure access and improve the quality of education for girls and women and remove obstacles that hamper their active participation. They were to make efforts to end gender disparities within the educational system. This led to formation of organizations like FAWE (Kombo & Waiyaki, 2002). In 1992, a pan African Non-governmental

organization known as FAWE (Forum for African Women Educationists) was founded to promote girls and women's education. It was to ensure girls have access to education, perform well and complete their studies so that gender disparities in education are eliminated. This was to be done by promoting gender equity and equality in education in Africa by fostering positive policies, practices and attitudes towards girls' education (Ndiritu, 1988).

Poor performance is a major concern of all the stakeholders in education. This is because it leads to tragic wastage of human, social and economic potentials of countries worldwide (Oloo, 2009). Most girls enrolled in mixed day public secondary schools drop out before completion and the level of achievement they attain is very low. Girls face unique problems in their learning environments, which may go a long way in determining how they perform academically. Although low selection grades at the time of enrolment is a significant factor contributing to poor academic performance, research has shown that schools can draw from a similar group of students in terms of performance but end up a big difference in next national examinations. Analysis of Kenya Certificate of Secondary Education (KCSE) examination results in Nzambani Sub County, Kitui County Kenya indicated that academic performance of girls in mixed day public secondary schools is low compared to their boys' counterparts. As shown in Table 1.

Table 1: Analysis of performance (mean scores) in KCSE in Nzambani sub county 2011 - 2015

Year	Boys	Girls
2011	4.76	3.62
2012	4.72	3.97
2013	4.88	4.52
2014	4.03	3.82
2015	4.26	3.91

Data on performance of girls as shown in Table 1 indicate that the performance of girls has been below that of boys in mixed day secondary schools in Nzambani from 2011 to 2015. Table 2 presents an analysis of students scoring a mean of C+ and above in Nzambani sub county 2011 - 2015.

Table 2: Analysis of students scoring a mean of C+ and above in Nzambani sub county 2011 - 2015

Year/Gender	2011	2012	2013	2014	2015	Total
Boys	30	43	32	20	28	153
Girls	5	12	5	14	10	37

An analysis of KCSE results for mixed day secondary schools in Nzambani Sub county indicates that only 37 girls scored a mean grade of C+ and above between the years 2011 to 2015 while 153 boys scored C+ and above during the same period (Nzambani Sub County Education Office, 2016). This shows that despite the girls scoring lower than boys in the sub county, the percentage of girls scoring a C+ and above is still lower than that of boys. It is evident that a majority of girl students who sit for KCSE do not manage to proceed for further studies or even get good jobs due to poor KCSE performance. Despite government measures like teacher salary increase to boost performance, it is apparent that girls in single sex public boarding secondary schools continued to perform better than counterparts in mixed day public secondary schools in KCSE, Nzambani Sub County.

Although studies done on secondary school revealed that such factors like inadequate and relevant text books, teacher qualification and student background affect performance in examination, few research have been done on the influence of resources for girls on girls' KCSE performance in mixed day secondary schools in Nzambani Sub County hence this study aims at determining the influence of resources for girls on girls' KCSE performance in mixed day secondary schools in Nzambani Sub County.

2. Literature Review

Resources related to girls and girls' academic performance

Resources refer to those materials that support or aid the learner in understanding of the concepts or ideas presented to the learner in a learning environment or situation (Kitavi, 2005). These are the materials that teachers use to assist learning and also increase interest in learning. The resources include, print electronic, models and multi-media, print media which refers to books, magazines, newspaper, chart, map and posters (Mbilinyi, 2013). The print media make learning practical and the learners can see models which make learning real or represent real things. Learning materials for girls are meant to stimulate the total growth

and development of children leading to academic achievement (Kivuli, 2006).

Teaching and learning materials in terms of adequacy and quality have been noted to have a great impact on performance of students in the examination (Husen, Saha, & Noonan, 1978). A school that has adequate instructional materials is likely to post better quality grades than a school which has poor quality physical resources. A school with inadequate classrooms will be forced to accommodate more students than recommended. This will exert a lot of pressure on resources such as teachers who may compromise their methodology as part of adaptive mechanism (Nafukho, 1991)

Teachers use resources to enhance learner's participation in class activities for effective learning (Klier, 2005). Resources clarify information, sometimes a concept may be complex and words alone cannot offer a clean explanation. Instructional materials stimulate lively class discussion after watching a film in a class or listening to a radio. They also challenge independent thinking especially when used individually in an assignment or as a class activity. Learning resources also increases learning and hence performance (Mbilinyi, 2013). Kathuri (1991) observes that apart from the facilities and resources, teacher's ability to communicate, organize and manipulate those resources into useful products in order to achieve desired objectives become important. The underlying factors in those variables were teacher characteristics; availability, quality, experience and level of training. He also observed that the caliber of teachers in any school or school system form an important input variable which can have tremendous impact on school outcomes. In a country like Kenya where the language of the school was not necessarily the native language of the child, the ability of teachers to impart language skills is critical for the success of the schooling girl (Klier, 2005; Agosiobo, 2007).

According to Agosiobo (2007), the use of teaching resources is important because they motivate learners to learn as they offer stimulus variation and assist in sustaining learners' attention throughout the lesson. According to Agosiobo (2007), learning resources clarify information, sometimes a concept may be complex and words alone cannot offer a clear explanation. Instructional materials stimulate lively class discussion after watching a film in a class or listening to a radio. They also challenge independent thinking especially when used individually in an assignment or as a class activity.

Miller and Seller (2006) assert that instructional materials are critical ingredients in learning and the intended programme cannot be easily implemented without them. Instructional materials provide information and opportunities for pupils to use what they have learnt, without resource materials and facilities, the teacher may not be able to set the objectives that he would like his students to attain. It would mean that pupils cannot be taught using the most suitable methods (Nderitu, 1999). In case of lack of resources and facilities the teacher should be innovative enough to improvise and provide alternatives using local materials. The study of Lowe (2009) on effective teaching

and learning resources found that, lack of relevant teaching materials caused dismal students' performance in Kenya Certificate of Secondary Education (KCSE).

The availability of resources makes a difference in achievement of learners and is generally agreed that better facilities in a school lead to high academic achievement (Kathuri 2004). It was also pointed out by Court and Ghai (2004) that the distribution of resources like books and equipment account for scholastic difference among schools. In the learning process, learning resources ought to be incorporated; organized and exploited otherwise learning will be passive and boring. Use of appropriate teaching and learning strategies enhances the acquisition of the subject matter.

According to Eshiwani (1992), schools which lack resources like laboratories, libraries and textbooks often performed poorly in national examinations. Availability of adequate teaching materials often made teaching easy and enhances retention of about 80% of what is learnt. Instructional materials like textbooks, visual and audio enhance communication between teachers and learners facilitate child-central learning and learning through discovery. They also motivate and encourage participation of learners and help clarify concepts and add meaning to texts (Njuguna, 2004).

Provision of adequate learning facilities at all levels including equipment and teachers enhances the quality and relevance of imparted skills of learners (Lumuli, 2009). Learning involves interaction of students with the environment. Teaching and learning resources include classrooms, laboratories, libraries, playing fields, textbooks among others. Indeed physical resources go a long way in creating conducive environment that promote effective teaching and learning. It is with this in mind that the Draft Report on Cost and Financing of Education in Kenya (RoK, 1995) identifies textbook ratio and school facilities as some yard sticks to be used to gauge the quality of secondary school education. Juma (2011) links performance in examinations to state of teaching and learning resources in schools. He notes that students from poor backgrounds perform poorly in the examinations because the poor are often in areas where schools are seriously deprived of vital facilities, an attitude of helplessness may be inculcated early into children making them feel that being in school is a waste of time.

The lack of basic facilities like laboratories has compromised the teaching of science subjects. Topics that are meant to be taught practically are taught theoretically as part of adaptive mechanism by teachers due to inadequate resources to enable effective teaching of the same. This ends up affecting negatively students' performance reducing their competitiveness for opportunities whose placement is pegged on performance in such subjects (Mayama 2012; Lumuli, 2009). Grantham *et al* (1998), while studying school performance of Jamaican girls declared that better achievement levels were associated with possession of school materials and access to reading materials outside of (the) school. A study by Hinum and Park (2004) determined that there was a positive correlation between the presence of reading materials at home and performance in

rural China. Morumbwa (2006) carried out a study on the factors affecting performance in Kenya Certificate of Primary Education (KCPE) in Nyamaiya Division. The confirmed that lack of facilities, cause poor performance.

3. Research Methodology

The study was hinged on Ex post facto design. The target population comprised of all the 13 public mixed day secondary schools in the Sub-County comprising of 13 principals, 78 teachers and 250 form three girls (Sub County Education Office, Nzambani Sub County, 2016). The sample size was 13 principals, 78 teachers and 250 form three female students (Nzambani Sub County Education Office, 2017). This study used questionnaires to collect data. Descriptive statistics such as measures of central tendency, dispersion, percentages and frequency distributions were used to analyze the scores distribution. Pearson product-moment correlation coefficient was also used as a measure of the strength and direction of association that exists between independent and dependent variables.

4. Findings and Discussions

The study sought to find out how resources influence girls' KCSE performance in mixed day secondary schools in Nzambani Sub County. The principals, teachers and girls were asked to indicate the extent at which they agreed or disagreed to the statements Influence of resources for girls on girls' KCSE performance. The principals' responses on influence of resources on girls' performance are presented in Table 3.

Table 3: Principals' responses on influence of resources on girls' performance

Statement	SA	A	D	SD
	F %	F %	F %	F %
The school has adequate teaching resources for girls that cater for girls needs	0 (0.0%)	8 (72.7%)	3 (27.3%)	0 (0.0%)
There are enough classrooms for girls to handle all the girls in the school	3 (27.3%)	7 (63.6%)	1 (9.1%)	0 (0.0%)
There is a spacious playing ground for the girls	1 (9.1%)	4 (36.4%)	2 (18.2%)	4 (36.4%)
The school has enough toilets/latrines for all girls in the school	1 (9.1%)	4 (36.4%)	5 (45.5%)	1 (9.1%)
The school has enough books and other learning resources for all girls	0 (0.0%)	4 (36.4%)	7 (63.6%)	0 (0.0%)

Data on the principals' responses on the influence of resources on girls' performance, as reported by the principals showed that the school has adequate teaching resources for girls that cater for girls needs as shown by the majority 8(72.7%) who agreed with the same. Majority of the principals 7(63.6%) agreed that there are enough classrooms for girls to handle all the girls in the school. Also findings showed that not all the schools had spacious playing ground for girls as shown by 4(36.4%) principals who strongly agreed with the statement. Also, it was evident

that not all the schools had adequate latrines for the girls as shown by 5(45.5%) of the principals who disagreed. Majority 7(63.6%) of the principals disagreed that the school has enough books and other learning resources for all girls. The principals' responses indicated that the school had the required resources. According to Agosiobo (2007), the use of teaching resources is important because they motivate learners to learn as they offer stimulus variation and assist in sustaining learners' attention throughout the lesson. The teachers were also asked to indicate the extent to which they agreed or disagreed with statement on the influence of resources on girls' performance. Their responses are presented in Table 4.

Table 4: Teachers' responses on influence of resources on girls' performance

Statement	SA	A	D	SD
	F %	F %	F %	F %
The school has adequate teaching resources for girls that cater for girls needs	11 (14.1%)	47 (60.3%)	15 (19.2%)	5 (6.4%)
There are enough classrooms for girls to handle all the girls in the school	28 (35.9%)	42 (53.8%)	3 (3.8%)	5 (6.4%)
There is a spacious playing ground for the girls	10 (12.8%)	35 (44.9%)	19 (24.4%)	14 (17.9%)
The school has enough toilets/latrines for all girls in the school	20 (25.6%)	36 (46.2%)	17 (21.8%)	5 (6.4%)
The school has enough books and other learning resources for all girls	16 (20.5%)	29 (37.2%)	20 (25.6%)	13 (16.7%)

Teachers' data on the how resources affect performance shown that the school has adequate teaching resources for girls that cater for their needs as shown by majority 47(60.3%). Majority of teachers 42(53.8%) agreed that there are enough classrooms to girls to handle all the girl's needs. Majority of them, 35(44.9%) agreed that there is a spacious playing ground for the girls. The school has enough toilets for girls as shown by majority of the teachers 20(25.6%) and 36(46.2%) who strongly agreed and agreed respectively to the same. Also, majority 16(20.5%) and 29(37.2%) strongly agreed and agreed respectively that the school has enough books and other learning resources for all girls. The teachers responses were in agreement with the responses of the principals that the school had the required resources. According to Eshiwani (1992), schools which lack resources like laboratories, libraries and textbooks often performed poorly in national examinations.

The girls were also asked to indicate the extent to which they agreed or disagreed with statement on the influence of resources on girls' performance. Their responses are presented in Table 5

Table 5: Girls responses on influence of resources on girls' performance

Statement	SA	A	D	SD
	F %	F %	F %	F %
The school has adequate teaching resources for girls that cater for girls needs	46 18.8	47 19.2	65 26.5	87 35.5
There are enough classrooms for girls to handle all the girls in the school	59 24.1	69 28.2	57 23.3	60 24.5
There is a spacious playing ground for the girls	33 13.5	27 11.0	67 27.3	118 48.2
The school has enough toilets/latrines for all girls in the school	63 25.7	66 26.9	66 26.9	50 20.4
The school has enough books and other learning resources for all girls	36 14.7	51 20.8	49 20.0	109 44.5

As shown by the table above, majority 65(26.5%) and 87(35.5%) disagreed and strongly disagreed respectively that the school has adequate teaching resources for girls that cater for girl's needs. Majority 59(24.1%) and 69(28.2%) strongly agreed and agreed respectively that there are enough classrooms for girls to handle all the girls in the school. Majority 118(48.2%) strongly disagreed that there is a spacious playing ground for the girls. Majority 63(25.7%) and 66(26.9%) strongly agreed and agreed that the school has enough toilets/latrines for all girls in the school. Majority 109(44.5%) strongly disagreed that the school has enough books and other learning resources for all girls. The above findings by the girls contradict those of the principals and teachers that the schools have the required resources. The findings are in line with the technical working group by Ministry of Education, Science and Technology (MOEST, 2010) which recognized the fact that availability of educational materials has a major bearing on academic achievement.

Further all the categories of respondents were asked to indicate whether in their own opinion resources in the school affect performance of girls as represented by table 6.

Table 6: Opinions on whether resources in the school affect performance

Category of respondent	Yes		No	
	F	%	F	%
Principals	8	72.7	3	27.3
Teachers	50	64.1	28	35.9
Girls	108	44.1	137	55.9

Findings on the respondents opinions on whether resources in the school affect performance of the girls majority 8(72.7%) of the principals, 50(64.1%) of the teachers and 137(55.9%) of the girls agreed that resources really affect the performance of girls in schools. Data from the principals, teachers and girls indicated an agreement that resources affected academic performance. The study of Lowe (2009) on effective teaching and learning resources found that, lack of relevant teaching materials caused dismal students' performance in Kenya Certificate of Secondary Education (KCSE).

To statistically establish the influence of resources for girls on girls' KCSE performance in mixed day secondary schools in Nzambani Sub County, Persons product-moment

correlation was used. In doing so, the researcher correlated the mean for the descriptive statistics and the KCSE mean scores. Table 7 shows the descriptive statistics on resources and girls' KCSE mean scores.

Table 7: Descriptive statistics on resources and girls KCSE performance

Statements	N	Min	Max	Mean	KCSE mean
The school has adequate teaching resources for girls that cater for girls needs	245	1	4	2.79	3.62
There are enough classrooms for girls to handle all the girls in the school	245	1	4	2.48	3.97
There is a spacious playing ground for the girls	245	1	4	3.10	4.52
The school has enough toilets/latrines for all girls in the school.	245	1	4	2.42	3.82
The school has enough books and other learning resources for all girls	245	1	4	2.94	3.91

A Persons product-moment correlation was run using the mean scores for items representing the resources and girls KCSE mean scores. Table 8 presents the data.

Table 8: Persons product-moment correlation for resources and girls KCSE performance

Correlations			
		Resources	KCSE Mean scores
Resources	Pearson Correlation	1	.785**
	Sig. (2-tailed)		.007
	N	10	10
KCSE Mean scores	Pearson Correlation	.785**	1
	Sig. (2-tailed)	.007	
	N	10	10

** . Correlation is significant at the 0.01 level (2-tailed).

From the table 4.6 Pearson correlation coefficient, r , is 0.785, and that it is statistically significant ($p=0.005$). The results indicated that there was a strong, positive correlation between resources and girls KCSE performance which was statistically significant. The data implied that girls KCSE performance in mixed day secondary schools in Nzambani Sub County was influenced by the availability of resources.

5. Conclusions and Recommendations

Based on the findings, the study concluded that resources for girls affected girls' KCSE performance in mixed day secondary schools in Nzambani Sub County. This was revealed by the Pearson correlation coefficient on the resources for girls on girls' KCSE performance which indicated an, r , of 0.785. This was statistically significant ($p=0.005$) hence it was concluded that there was a strong, positive correlation between resources and girls KCSE performance. The study recommended that school principals should avail resources both physical and materials so as to improve girls' KCSE performance.

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