

FACTORS INFLUENCING EDUCATIONAL WASTAGE AMONG GIRLS IN SECONDARY SCHOOLS IN KENYA: A CASE OF KISII CENTRAL DISTRICT

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Abstract

The purpose of this study was to examine the factors influencing wastage among girls in secondary schools in Kisii Central district. Generally it looked into the factors that force girls to drop out of school or repeat grades. The objectives that were used to guide this study were to; establish the influence of school related factors on the wastage rate among girls at secondary level in Kisii central district, establish the influence of economic factors on wastage among girls in secondary schools in Kisii Central district, investigate the influence of cultural factors on wastage among girls in secondary schools in Kisii central district , and finally establish the influence of social factors on wastage rate among girls in secondary level in Kisii central district. The study was both qualitative and quantitative in nature. Descriptive survey research design was used in conducting the study. This study was based on the production function theory as expressed by Psacharopoulos and Wood hall (1985). Stratified random sampling was used to select 22 secondary schools which were either public mixed or public girl's schools. This formed 35% of the total 63 public mixed and public girls' schools in the study area. The respondents were all head teachers and one form three class master in each selected school. Form three students of the selected schools also participated. All the above respondents were purposively sampled into the study. A total of 399 respondents participated. Data was collected using questionnaires and interview schedules. Piloting of the study was conducted in two schools in the neighbouring Gucha district. The collected data was analyzed using descriptive and inferential statistics. The inferential statistics used was chi-square. From the findings it was found out that economic factors like poverty at household level, cultural factors

such as pregnancy and marriages were responsible for dropout among girls. Also, school related factors like school examination regulations and social factors such as provision of sanitary towels were found to affect girls' education negatively. It is therefore hoped that the findings and recommendations of this study will be useful to educational planners and other educational stakeholders in solving the problem of wastage among girls in secondary schools in Kenya.

Keywords:**Introduction**

Basic education is a fundamental right that all school going age children are entitled to regardless of their sex. This is why the government has been investing heavily in the education sector with the aim of achieving gender equality in basic education (Republic of Kenya, 2005). Despite the governments' concerted effort of introducing Free Primary Education and Free Secondary Education, educational wastage in secondary schools in Kenya is on the increase.

Any system of education experiencing high dropout and repetition rates is wasteful because those students who drop out have not gained a lot and furthermore they have consumed resources that would have been used by other students. Koech Report (1999) asserts that the greatest challenge facing Kenya is that of ensuring access by eliminating all existing disparities, with particular reference to the education of girls, women and children in disadvantaged regions like arid and semi-arid lands (ASALS).

On girls education the "Koech Report" (1999) recognizes the government's effort to improve girls education by putting into place a policy that allows girls who dropout due to pregnancy to continue with their education later. It observes that the dropout rate for girls is higher than for boys in most areas in the country. Some of the constraints that face girls include poverty at household level, social cultural attitude that favours boys, forced marriages and high demand for girls labour among others. When formal education was introduced, only boys were allowed to go to school. Girls were not allowed to go to school in Kenya until 1917 when the first three (3) girls were admitted in the first government Indian school. This disparity for female participation continued such that by 1988 females in all secondary schools in Kenya were 30,895 as compared to males who were 216,047. This implies that girl's rate of participation and access to education is not at par to the boys (Mulati, 1989).

The development of any country needs the full participation of men and women. This is why the Kenya national development plan 2002- 2008, identifies women's roles, as being crucial by asserting that; Kenya's pace of

development can best be accelerated and sustained if the full creative and productive potential of both women and men are mobilized. The major challenge facing Kenya is how to reduce gender inequality and enhance women participation in economic activities (Republic of Kenya, 2003).

A study by Muganda (1997) on the effects of dropping out of secondary school in Shinyalu- Kakamega district- Kenya, showed that though there were increased expenditure in education many children especially girls were still out of school. It argues that girls have limited access to school and that even those who join school do not complete basic education. In this study lack of school fees was identified as a major cause of girl's dropout at secondary. While 10 % of girls dropped out of school due to pregnancy, 90 % were victims of inability to pay fees. According to the study carried out by Olweya (1996) on wastage among girls in secondary schools in Homa Bay district; wastage of girls was found to be higher in co-educational schools than in single girl's schools. Here repetition was established as a significant cause of dropout among girls.

According to the Kisii central development plan 2002-2008, the total population of females was 273,253 as compared to 248,198 for males. Under normal circumstances the huge population of females is expected to be reflected in school enrolment. However this is not the case since the number of girls in secondary schools is lower than boys at all levels. At primary, the total number of boys is higher than girls that is, 59,018 boys against 58,545 with a total dropout rate for boys being 2 % while that of girls is 3 %. At secondary level, the total enrolment for boys is 44 % that is 12,376 while girls have 39% that is 11,180. The dropout rate for boys at this level is 1.9 % while that of girls is 4.6 % (Republic of Kenya, 2001). This is what made the government to observe that at primary level there is almost gender parity but the low progression of girls from primary to secondary means that gender ratios will not be maintained at secondary level (Republic of Kenya, 2005). In 2007 the total enrolment of boys was 19,984 as compared to 13,121 girls giving a total enrolment of the district to be 33,105 students at public secondary level. Those enrolled at private secondary schools were 1487 boys against 1229 girls giving a total of 2716. The dropout rate for girls is 24 % while boy's rate is 18 % (The DEO's office-Kisii, 2008). This study therefore intended to investigate the factors influencing educational wastage among girls in secondary schools in Kenya.

Statement of the Problem

The number of female population in Kisii central was 273,253 while the males were 248,945; giving a total population of 522,198 (Republic of Kenya, 2002). Though the total number of females was higher in population than males, this was not reflected in school enrolment as expected in normal

circumstances. The situation was different whereby the enrolment of boys was higher as compared to girls. In 2007 the total enrolment of girls in the district was 13,121 as compared to 19,984 for the boys. This gives a disparity of 6,863 between boys and girls. Data from the DEO's Office Kisii Central District, also indicated that the girls had higher dropout rates than boys. It showed that the dropout rate for girls was 24 % as compared to 18 % for boys. The high dropout rates therefore showed that there was a problem with girl's education in the district that needed to be solved (DEO's Office Kisii District, 2008). This study therefore sought to establish the reasons for the wastage and the possible solutions.

Purpose of the Study

The primary purpose of this study was to establish the factors influencing wastage among girls in secondary schools in Kisii central district of Nyanza province. The specific objectives of this study were:

- (i) To establish the influence of school related factors on the wastage rate among girls at secondary level in Kisii central district.
- (ii) To establish the influence of economic factors on wastage among girls in secondary schools in Kisii Central district
- (iii) To investigate the influence of cultural factors on wastage among girls in secondary schools in Kisii central district
- (iv) To establish the influence of social factors on wastage rate among girls in secondary level in Kisii central district.

Hypotheses

The hypotheses were tested using the chi-square test at 0.05 level of significance. The hypotheses were:

H₀₁ : There is no significant relationship between school related factors and wastage rate among girls in secondary schools

H₀₂: There is no significant relationship between economic factors and wastage of girls at secondary level.

H₀₃: There is no significant relationship between cultural factors and wastage rate among girls in secondary schools.

H₀₄: There is no significant relationship between social factors and wastage rate in secondary schools among girls.

Scope of the Study

The study sought to establish the factors influencing wastage among girls in secondary schools in Kisii central district of Nyanza province. The aspects covered in this study included school related factors, economic factors, cultural and social factors that influence educational wastage of the

girl-child. The study was conducted only in girls and mixed public secondary schools in the area of study.

Theoretical Framework

This study was based on the production function model. This model takes education institutions as production units. This production units, utilizes inputs which are pupils, teachers, classrooms, lockers etc. to produce outputs in form of graduates at different levels of the education system. This relationship between inputs into the education system and output from the education system is what is referred to as the production function (Psacharopoulos and Woodhall 1985 and Todaro 1992). This relationship can be represented symbolically as follows:

$Q = f(A, B, C, D, \dots)$. Where by

Q- Is the output which is a function of (A, B, C, D); f- Means function of (A, B, C, D)

A- These are a variety of measures of school environment like; Physical facilities, quality of teachers, availability of the teachers, number of text books available, amount of time students are exposed to the above variables and quality of school facilities.

B- This represents individual and family background characteristics like: Family income, Social class and parental educational attainment

C- This represents the student’s ability and initial level of education

D- It represents influences by peers. This can be either positive or negative in nature.

The above equation or function cannot be used as it is in the education system. Therefore it had to be broken down to represent a wastage production model which would also be a function of the various factors that combined to determine whether a student (input) would finish a cycle, repeat a grade or drop out before completing a cycle. Hence the wastage production function was expressed as relationship between wastage which represents (repeaters and dropouts and the factors that influence wastage. This was expressed as:

$W = f(a_1, a_2, a_3, \dots, a_n)$

Whereby: W-is the level of wastage

$a_1 a_2 a_3 \dots a_n$ are the factors influencing wastage among girls. In this study these variables were; lack of fees, school examination regulation, availability of sanitary facilities and premarital pregnancies.

Conceptual Framework

Girls are more likely to dropout of school when faced with difficulties. If it becomes difficult to obtain what they require at school they usually feel that they are neglected by their parents. Likewise they easily

become stressed while in school as a result of various constraints at the school environment. Consequently they are forced to look for exits out of school. Kakonge et, al (2001) points out that high wastage rates among girls is due to retrogressive cultures, pre-marital pregnancies and poverty at household level which renders parents unable to meet their daughters’ needs.

The study conceptualized that wastage among girls in secondary schools was due to school related factors like examinations regulations with high standards to be met. Also economic factors like poverty at household level, likewise exerts pressure on girls education. Other conditions that may force girls to drop are social factors such as lack of sanitary towels. When girls miss these towels they become psychologically upset and restless. Also cultural factors negatively influence girl’s education. Most girls who become pregnant while in school become desperate and therefore sought for refuge in marriage. However it should be noted that such marriages with minors are never successful. It’s therefore important to reverse this trend in order to improve the school retention rate of girls. This study adopted a conceptual framework in order to ensure that the interrelationship between the various variables is well understood. As Mugenda and Mugenda (2003) put it, a conceptual framework is a hypothesized model identifying the concepts under study and their relationships. Figure 1.1 shows the conceptual framework for the study.

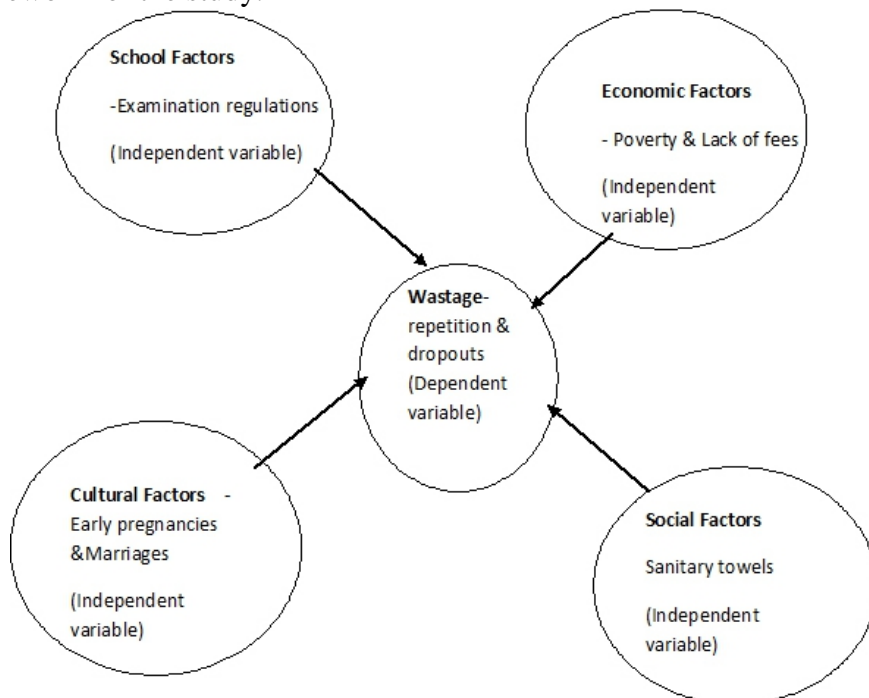


Fig: 1 Factors that influence wastage of girls in secondary schools

From the above diagram, it can be noted that, the effect of school related factors, cultural factors, economic factors and social factors on enrollment leads to wastage which is manifested in form of repeaters and dropouts in our schools.

RESEARCH DESIGN AND METHODOLOGY

Research Design

Orodho (2005) defines research design as the scheme, outline or a plan that is used to generate answers to the research problems. On the other hand Kombo and Tromp (2006), assert that a research design is the ‘glue’ that holds all the elements in the research project together. This study adopted a descriptive survey design. This approach attempts to describe the state of affairs as it exists at present. A survey is an attempt to collect data from members of a population in order to determine the current status of that population with respect to one or more variables (Mugenda and Mugenda, 2003, Orodho 2005). This design was found suitable for this study for it enabled the researchers to collect original data from the many respondents easily. It was also less costly and it took less time to collect a lot of data that was reacquired.

Target Population

The study focused on female students in girls’ schools and co-education schools, head teachers and form three class teachers in public secondary schools in Kisii central district. Kisii central district has eighty-four secondary schools with a total population of 35,821, students. Out of the 84 secondary schools sixty eight (68) are public and (59) are co-education public schools. The remaining nine (9) comprise of; five (5) boys schools and four (4) girls schools. Most of these schools were day schools.

Study Sample and Sampling Techniques

Sampling is a process of selecting a number of individuals from a population such that the selected group contains elements representative of the characteristics found in the entire group (Orodho, 2005). Stratified random sampling was used in selecting schools. Stratified sampling was used since it would enable the researchers to ensure that certain subgroups in the population were represented in the sample in proportion to their number in the population. Public schools were stratified into two strata based on gender; co-educational public schools and girls’ public schools. In the girls stratum there were 4 girls’ schools. All the four schools were included in the study purposively to increase the representation of girls who were the target group. Table 1 shows division, category and number of schools selected.

Table 1: Number of public schools in Kisii Central District in 2008

Division	public schools	mixed schools	Boys schools	girls schools	selected schools	mixed
Getembe	9	6	1	2	2	
Kegogi	11	9	1	1	3	
Marani	13	11	2	-	3	
Mosocho	13	11	1	1	3	
Kiogoro	7	7	-	-	2	
Keumbu	15	15	-	-	5	
Total	68	59	5	4	18	

Source: DEO's Office Kisii Central district 2008

In the co- educational stratum, 18 schools were selected proportionately from the six administrative divisions of the district. Therefore in this study, 22 public schools which were 35 % of the total public co-education and girls schools in the district participated.

This agrees with Kerlinger (1986) who noted that a sample size of between 10% and 30% will be a good representation of the entire population. The schools were selected using simple random sampling in the co-educational stratum. This is because simple random sampling would give each school an equal chance of being selected. From each of the 22 selected schools, one form three class master and the head teacher were purposively selected to participate in the study. This was because they were responsible for keeping student records and therefore well placed to respond to issues of wastage among students.

Purposive sampling was used to select form three students for this study. The form three classe was selected because it had been in school for long and therefore had an understanding of the challenges that may force a student to drop or repeat a given grade.

Simple random sampling was used to select individual form three students in the selected schools using class registers. In each selected school only 20 % of the form three students participated in the study; for example if a class had 40 students only 8 participated. A total of 355 students participated in the study. Simple random sampling was applied for it would give all the individuals in the population an equal and independent chance of being selected as a member of the sample (Kombo & Tromp, 2006).

Research instruments

This study used questionnaires, interview schedules and document analysis in collecting data. Data collection refers to the gathering of specific information aimed at proving or refuting some facts (Kombo and Tromp, 2006).

i. Questionnaire

This is a research instrument that gathers data over a large sample (Kombo and Tromp, 2006). These questionnaires contained structured questions and unstructured questions or open – ended questions. Structured questions are those questions which are accompanied by a list of all possible alternatives from which respondents select the answer that best describes their situation. On the other hand unstructured questions refer to those questions which give the respondent complete freedom of response. This permits a respondent to respond in his or her own way (Mugenda & Mugenda, 2003).

Interview schedule

This is an oral administration of a questionnaire. It's therefore a face-to-face interaction. The interview schedule was administered to head teachers of selected schools. It was informal to allow collection of more realistic information concerning wastage in schools. All the head teachers in the selected schools were interviewed for twenty minutes each.

ii. Document analysis

The documents analyzed were class registers and returns to the DEOS office from schools. These documents were vital for they helped the researcher to identify those students who were in a given grade and who did not proceed to the next grade- wastage

Data Analysis Techniques

This refers to the examination of coded data critically and making inferences (Kombo & Tromp, 2006). In this study descriptive and inferential statistics were used. Descriptive statistics included frequencies and percentages. Inferential statistic was Chi –square which was computed at 0.05; level of significance. The following four hypotheses were tested: There is no significant relationship between school related factors and wastage rate among girls in secondary schools, there is no significant relationship between economic factors and wastage rate among girls at secondary level, there is no significant relationship between cultural factors and wastage rate among girls at secondary schools and there is no significant relationship between social factors and wastage rate in secondary schools among girls.

Ethical considerations

The researchers sought permission from National Council of Science and Technology to gain access to Universities by applying for a research permit, which was dully issued. The ethical considerations addressed the following aspects: informed consent, voluntary participation, confidentiality

and anonymity, and integrity as regards plagiarism. Informed consent of all participants was sought. Information obtained from participants remained confidential between the researcher and the participants. This was achieved by ensuring that anonymity and confidentiality was strictly adhered to. Adoption of appropriate data analysis techniques was observed so as to improve and enhance on generalizability of the findings.

Summary of the findings

Introduction

This section deals with data analysis, presentation and interpretation of the findings .The data collected was analyzed and presented according to research objectives and hypotheses. This data was broken down into; school related factors, economic factors, cultural factors, social factors, wastage in secondary schools among girls and finally strategies to alleviate wastage among girls in secondary schools.

School Related Factors influencing wastage of girls

The researchers intended to find out whether there was a relationship between school related factors like repetition, poor performance among others and wastage among girls in secondary school. To achieve this, the hypothesis of this objective was tested using chi-square at 0.05 levels of significance. In this case school related factors were compared with wastage among girls in secondary school. The result was as shown in Table 3.

Table 3 Chi-Square Results showing the relationship between school-related factors and wastage of girl

	Students			Class Teachers		
	Value	df	Asymp. Sig (2- sided)	Value	df	Asymp. Sig (2- sided)
Pearson Chi-Square	144.002(a)	15	.000	17.420(a)	8	0.026
Likelihood Ratio	110.283	15	.003	8.262	8	0.048
Linear- by- linear Association	2.467	1	.031	4.13	2	
N of valid cases	355			22		

: H₀₁: There is no significant relationship between school related factors and wastage rate among girls at secondary level.

A chi-square test conducted comparing the school related factors (examination regulations) and wastage rate among girls indicated that there was a significant relationship. The students results were; $(x^2) = 144.002$; $df = 15$; $P = 0.00$ while class teachers results were: $(x^2) = 17.420$ $df = 8$; $P = 0.026$. This therefore implies that from both respondents there was a significant relationship between school related factors and wastage rate among girls at secondary level as indicated in Table 3 above. This is because

in both cases; $P= 0.00$ and 0.026 which was less than 0.05 levels of significance. Therefore the null hypothesis was rejected and the alternative hypothesis adopted.

This meant that girls dropped out due to school related factors like examination regulations, chronic absenteeism, low standards of education and poor sanitation. This was supported by 48.2% of the students who strongly agreed while 36.4% of the class teachers agreed. One of the objectives of this study was to establish whether school factors led to wastage of girls at secondary level. The findings indicate that poor performing students had to repeat their former classes and that it was not automatic that girls who performed poorly and repeated had to dropout.

Economic factors influencing wastage among girls

This study sought to find out whether economic factors had direct impact on girls wastage in secondary schools. Therefore achi-square test comparing economic factors and wastage among girls in secondary schools was conducted. The hypothesis of this objective was tested using the chi-square at 0.05 levels of significance and the result were as shown in Table 4

Table 4 Chi-Square Results showing the relationship between economic factors and wastage of girls

	Students			Class Teachers		
	Value	df	Asymp. Sig (2- sided)	Value	df	Asymp. Sig (2- sided)
Pearson Chi-Square	342.116(a)	20	.000	20.101(a)	9	0.017
Likelihood Ratio	126.348	20	.001	7.336	9	0.032
Linear- by- linear Association	4.818	1	.012	2.741	1	
N of valid cases	355			22		

H₀₂: There is no significant relationship between economic factors and wastage rate among girls at secondary level

A chi-square test was calculated comparing the frequency of economic factors and wastage among girls. It was hypothesized that no significant relationship existed between economic factors and wastage among girls. A significant relationship was found (χ^2) = 342.116, df 20, $P = 0.00$ from students. The class teachers chi -square results were (χ^2) = 20.101, df = 9, $P = 0.017$ as shown in Table 4. The result showed that in both cases the P value 0.000 and 0.017 was less than 0.05 . Therefore there was a significant relationship between economic factors as poverty, cost of education, tuition fees and the rate of wastage among girls in secondary schools. Therefore the researcher rejected the null hypothesis and accepted the alternative hypothesis. This was supported by 47.6% of the students and 40.9% of the class teachers who also strongly agreed. Economic factors

influenced wastage among girls in secondary schools. Poverty at household level and lacks of fees were the major cause of dropout among girls in secondary schools.

Cultural Factors influencing educational Wastage among Girls

The researchers also sought to establish how cultural factors influenced wastage among girls in secondary schools. A chi-square test was conducted and the results were as shown in Table 6

Table 5 Chi-Square Results showing the relationship between cultural factors and wastage of girls

	Students			Class Teachers		
	Value	df	Asymp. Sig (2- sided)	Value	df	Asymp. Sig (2- sided)
Pearson Chi-Square	206.514(a)	16	.000	20.705(a)	12	0.391
Likelihood Ratio	189.713	16	.006	5.431	12	0.113
Linear- by- linear Association	3.272	1	.044	1.671	1	
N of valid cases	355			22		

H₀₃: There is no significant relationship between cultural factors and wastage rate among girls in secondary schools.

To test the hypothesis for this objective; a chi-square test was calculated comparing frequencies of cultural factors and wastage rate among girls in secondary schools. From the students data the results were: $\chi^2 = 206.514$; $df = 16$ $P = 0.00$. The class teachers results were: $(\chi^2) = 20.705$ $df = 12$, $P = 0.391$; this is shown in table 5. This therefore implied that the students' results showed that there was a significant relationship between cultural factors and wastage among girls in secondary school. This is because $P = 0.00$ and therefore less than 0.05 levels of significance.

Therefore the null hypothesis was rejected and the alternative hypothesis adopted. This was supported by 43.9% of students who strongly agreed that cultural factors such as earlier marriages and pregnancies and gender discrimination led to dropout among girls. On the other hand the result of class teachers indicated that there was no significant relationship between cultural factors and wastage among girls at secondary level and hence the null hypothesis was accepted. $P = 0.391$ and therefore more than 0.05 significant levels. This is supported by 50% of the class teachers who disagreed.

The study investigated the effects of cultural factors on wastage among girls at secondary schools in Kisii district. The study established that most girls in secondary schools became pregnant while in school and

consequently dropped out of school. Also girls do not necessarily dropout in order to be married.

Social factors influencing educational wastage among girls in secondary schools

In assessing the impact of social factors in determining girls’ wastage in secondary schools; the researcher conducted achi-square test at, 0.05 level of significance comparing social factors with wastage among girls in secondary schools. The chi-square test results were as shown in Table 6

Table 6 Chi-Square Results showing the relationship between social factors and wastage of girls

	Students			Class Teachers		
	Value	df	Asymp. Sig (2- sided)	Value	df	Asymp. Sig (2- sided)
Pearson Chi-Square	229.379(a)	12	.000	23.67(a)	8	0.003
Likelihood Ratio	192.637	12	.003	4.743	8	0.203
Linear- by- linear Association	4.885	1	.018	2.467	1	
N of valid cases	355			22		

H₀₄: There is no significant relationship between social factors and wastage rate in secondary schools among girls

A chi-square test was calculated comparing the frequency of social factors and wastage rate among girls at secondary levels. The results from students were $(\chi^2) = 229.379^a$ $df = 12$, $P = 0.00$ while the class teachers results were: $(\chi^2) = 23.67$ $df = 8$ and $P = 0.003$. This is illustrated in table 6 above. This result shows that P value was less than 0.05 levels of significance in both cases. This thus implies that there was a significant relationship between social factors such as sanitary towels, availability of enough toilets, classes and which influenced wastage rate among girls in secondary schools. Therefore the null hypothesis was rejected and the alternative hypothesis adopted. This is supported by the students’ high percentage of strongly agreeing 47.3% and class teachers agreeing by 54.5%. This study also sought to establish the role of social factors in influencing educational wastage among girls in secondary schools .This study revealed that girls who lacked sanitary towels became stigmatized and shameful during their menstrual periods and as result of that they were forced to absentee themselves from class in boarding schools or schools in case of day schools to avoid such shame.

Recommendations

From the findings it's suggested that the following measures should be taken to alleviate wastage among girls in secondary schools.

The government should come up with modalities of ensuring that students are not forced to repeat through ensuring that all those students in form 3 register for examinations all of them or else a school loses its examination centre.

The government should put up a mechanism for monitoring and ensuring that girls who receive government funds such as bursaries and constituency development funds should be awarded enough money to cover all school monies to avoid being sent home for other school levies.

The government should sponsor school programmes to sensitize girls on issues of sex education and those who are found to have impregnated school girls should be imprisoned.

The government should come up with a programme of supplying sanitary towels to all girls in school right from upper primary to secondary school to reduce incidences of absenteeism

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