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The Effect of School Learning Environment as an Integrated Education Management Strategy on Pupils' Participation in Public Primary Schools in Kenya

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Abstract:
Background*: Education is a form of investment in human capital, which yields economic, social and political benefits by increasing the productivity of the people. It remains the most vital strategy for the development of the society. The purpose of this study was to investigate the effectiveness of integrated education management strategies (IEMS) on pupils' participation on aspects of Enrolment, Retention and Academic Performance (ERAP) in public primary schools of Kakamega County, Kenya through by establishing the effect of school learning environment on ERAP.*
Materials and Methods: *The study period between 1995 and 2018 was divided into 3 periods of 8 years conforming to the Kenyan 8-4-4 system of education spanning over the Free Primary Education (FPE) policy: Period 1 covered 1995 - 2002 for the pre-FPE phase, period 2 from 2003 to 2010 for First FPE phase and period 3 from 2011 to 2018 for the Second FPE phase. From the 12 sub-counties in Kakamega County four (30%) sub-counties were purposively sampled, namely, Lurambi with 66 school, 20 schools were sampled, Shinyalu with 81 schools, 24 schools were sampled, Mumias East with 61, where 18 schools were sampled and Navakholo with 65 schools, where 20 schools were sampled giving a total of 82 (30%) of sample school. The respondents in the study were stratified 82 Head Teachers,164 Teachers, 164 pupils and 4 Sub-County Directors of Education. Qualitative and quantitative data were obtained on demographic indices, enrolments and KCPE performance through questionnaires and interview schedule. Questionnaires were assigned ordinal numerical values on a 5-point Likert scale to measure the respondents' extent to which they agreed or disagreed with a particular question or statement. Interview schedules were used to gather views from SCDE respondents. Descriptive statistics comprised proportions, ratios and percentages, mean and standard deviation. The researcher determined the significance of data and findings through use of inferential statistics of paired t-test at 5% level of confidence. Skewness and Kurtosis indices were used to determine the cluster and spread of the analysed responses.*
Results: *The study found that School Learning Environment (SLE) had negative impact on pupils' participation as a result of inadequate instructional space, limited recreational facilities and inadequate sanitary facilities.*
Conclusion and Recommendation:: *The findings will inform policy makers and implementers on recommended strategies to be incorporated in the education management strategies in Kenya and recommends further study on adequacy of school environment facilities and examine modalities of collaboration between schools and communities in the implementation of an all inclusive education.*
Keywords: *School Environment, Pupils' participation, Enrolment, Retention, Dropout, Public Primary Schools, Kakamega County, Kenya.*

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I. Introduction

The basis for development of human capital is the formal education system of primary, secondary and tertiary training (defines human capital as "the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances"[1,2,3]. Formal education is admittedly a sure approach to achieving economic stability for a nation[4]. This education is delivered at structured levels through firm commitment by various governments[5].

Kenya has committed itself to the above global declarations on education delivery. This has led to continuous improvement of education in Kenya through such policy initiatives like the Sessional Paper No. 1, 2019 by MoE[6]. These policy documents provided guidance in the development of the entire education sector in Kenya. The Government of Kenya has made tremendous effort in conforming to the above commitments

through major education policies, namely, the Free Primary Education policy[7], which followed the passing of the Children's Act.[8]

Ineffective teaching is a direct consequence of poor school learning environment leading to poor academic performance. Physical learning facilities that do not provide adequate ventilation, space for free movement of teachers and pupils, and proper lighting hampers effective teaching and learning[9]. This has a direct bearing on academic performance. In Kenya classrooms are designed to accommodate 50 pupils as per the standard measure. If over 50 pupils are accommodated in one class the class is to be divided into two streams. Also the naturalness, individualization and the level of stimulation are considered vital learner academic achievements (Peter et al., 2015).

Raising the status of schools lagging behind in quantity, quality or usage of sanitation facilities should be a top priority in order to achieve developmental goals. Existence of such poor learning environment discourages enrolment of new pupils and often leads to higher dropout rates. Support facilities such as sanitation, recreation and general school surrounding have an influence on school attractiveness that may affect enrolment, retention as well as academic performance. A school with limited sanitary facilities cannot effectively discharge its mandate since pupils' time is wasted on non academic activities. Indiscipline will be aggravated in such environments.[10] Learning activities are often disrupted and pupils' concentration is limited in poor school environment. Inadequate recreation facilities are an impediment to effective teaching since the co-curricular aspect is hampered.

Unfavourable school surrounding negatively affects pupils' learning and general discipline. Classroom capacity when exceeded led to congestion and overcrowding. This eventually led to lack of free movement by both teachers and pupils. Overcrowded rooms were prone to accidents and low levels of discipline. These factors contribute to poor performance and also impact negatively on enrolment and retention. For schools to achieve desired participation for enhancement of participation, adequate infrastructure that support learning was key.[11]

School environment from the perspective of social environment through organizational structure affects pupils' participation. Often, unpopular leadership style is one of the reasons for division among staff and lack of support for school activities. A divided staff leads to uncoordinated school activities. Such work environment results to school programmes being ineffectively implemented leading to low levels of enrolment, retention and poor academic performance. The Education Act No. 14 of 2013 by clearly defined the organizational structure of school management to address the above issues for better performance[9].

The dependent variable of this study was pupils' participation. Independent variable was School Environment comprising school facilities (instructional, recreation & sanitation spaces), sanitary facilities with conformity to health standards and the management of the respective facilities. School Environment encompasses: facilities which include instructional, recreation sanitation; conformity to health standards, and management of facilities. Results of the study will lead to suggested IEMS based on School Environment.

Conceptual Framework: The conceptual framework for this study is described by use of Figure 1. Pupils' participation included enrolment, retention, dropout and academic performance. School environment included facilities and their managemnet and conformity to health standards. Intervening variables were based on policies, regulations and opinions influenced by political considerations.

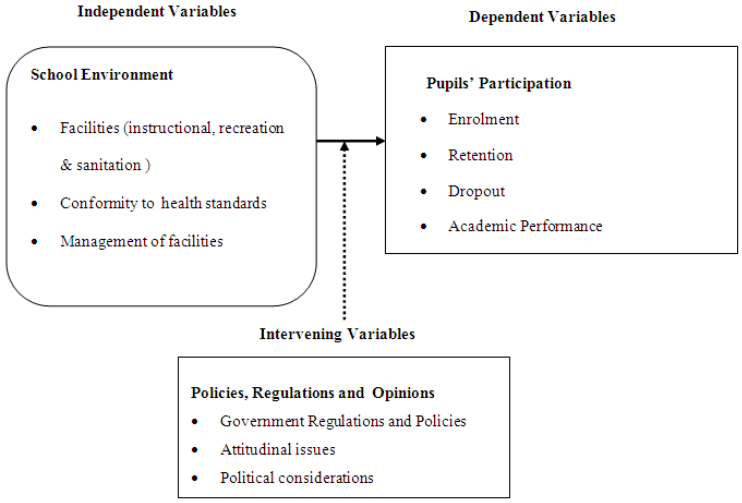
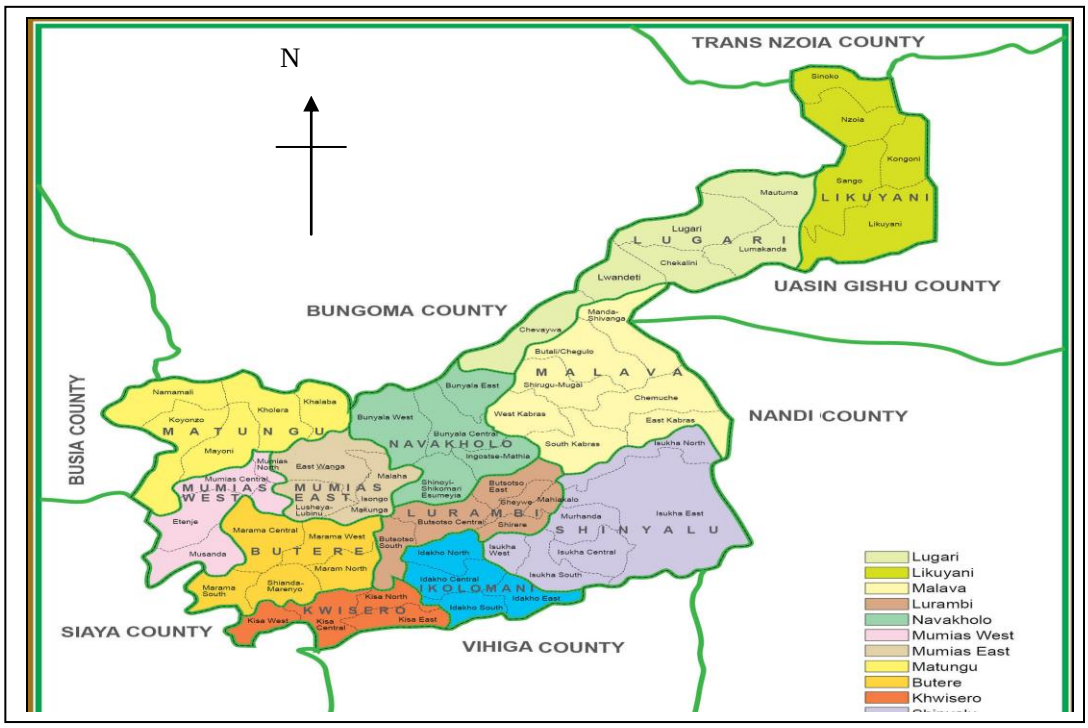


Figure 1 Relationships Between Integrated Education Management Strategies on Pupils' Participation in Public Primary Schools

II. Material and Methods

Research Design: This study required collection of both qualitative and quantitative data. According to Kothari (2005), qualitative methods provide greater in-depth of understanding about a limited number of subjects, while quantitative methods give a less in-depth understanding, but cover a wider scope of subjects. By using mixed approach, one obtains a more comprehensive research.[13] This study employed a descriptive survey research design. On the other hand the purpose of descriptive research as determining and reporting the status of issues specifies a minimum threshold of 30%.[14]

Study Area: The study area was carried out in Kakamega County in western Kenya (Figure 2). Kakamega County is divided into 12 Sub-counties: Lugari, Likuyani, Malava, Lurambi, Navakholo, Mumias East, Mumias West, Matungu, Butere, Khwisero, Shinyalu and Ikolomani sub-counties. Out of twelve sub-counties in Kakamega County the researcher selected four sub-counties using simple random sampling. This represents the required minimum of 30% of the sampled sub-counties in Kakamega County[14] .



Source: https://Kakamega.go.ke/download/map-of-Kakamega-County/

Figure 2 Map of Kakamega County

Target Population: This study targeted 273 public primary schools in the four selected sub-counties of Kakamega County, which represented 30.4% of public primary schools in Kakamega County as at 2017. The target population in each sub-County was the Sub-County Director of Education, Head Teachers of sampled schools, two (2) Teachers from each sampled school and two (2) pupils from each of the selected public primary schools.

Sampling Techniques and Sample Size: Reserachers [12,14] have recommended 30% as minimum sample from the target population. Four sub-counties were selected from Kakamega county with a total of 12 sub-counties. This represents a minimum of 30 % of sub-counties selected[14]. The target population of 273 public primary schools in the four selected sub-counties represented 30.4% of the 898 public primary schools in Kakamega County. The distribution of sample size in each sub-county was based on the total number of schools in each sub-county to constitute the 82 schools.

For example, Shinyalu sample size was based on the 81 public primary schools in Shinyalu;

$$\text{Sample size} = \frac{81}{273} x 82 = 24 \quad \text{.....} \quad (1)$$

The proportionate distribution of sample size by sub-county is as shown in Table 1.

Table 1 Proportionate Distribution of Sample Size by Sub-County

Sub-county	Number of Schools	Sample Size
Lurambi	66	20
Shinyalu	81	24
Mumias East	61	18
Navakholo	65	20
Total	273	82

Similarly the sample size for Navakholo with 65 schools was 20, Lurambi with 66 schools was 20 and Mumias East with 61 schools was 18.

Validity and Reliability: Before the actual data was collected, the researcher conducted a pilot study in five public primary schools in Kanduyi sub-county of the Bungoma County. The purpose of the pilot study was to enable the researcher ascertain the reliability and validity of the research instruments, and to familiarize with the administration of the data collection tools and therefore improve on the instruments and procedures if necessary. Validity[15], is the degree to which a test measures what it purports to measure. ‘’All assessments of validity are subjective opinions based on the judgment of the researcher’’ A research instrument is regarded as being valid if its content is relevant and appropriate to set research objectives [16,17]. The pilot study helped to improve face validity of the instruments (Table 2).

Table 2 Distribution of Items in Questionnaires and Interview Schedule

Category of Respondent	Number of Items in Questionnaire	
	Before Pilot Study	After Pilot Study
SCDE	9	11
Head Teachers	10	9
Teachers	8	8
Pupils	10	8
Total	37	36

The content validity index CVI = 0.97, was computed as follows [27]:

$$CVI = \frac{K}{N} = \frac{36}{37} = 0.97 \quad \text{.....} \quad (2)$$

Where CVI = content validity index, K = total number of items in the questionnaire after adjustment and N = total number of items in the questionnaires before adjustment.

Reliability refers to the consistency or stability in the measurements[12]. Pearson product moment correlation is most often used because of its precision[18]. Pearson product moment correlation (r) was used to determine the correlation coefficient as shown in Table 3.

Table 3 Computation of Pearson Product Moment Correlation Coefficient

Items	Head Teachers (X)	Teachers (Y)	XY	X^2	Y^2
Homework	3.957	3.968	15.7014	15.6578	15.7450
Follow up Activities	3.694	3.768	13.9190	13.6456	14.1978
Co-curricular activities	3.869	3.779	14.6210	14.9692	14.2808
Sum	11.520	11.515	44.2413	44.2726	44.2240

The Pearson Product Moment correlation coefficient, r, was computed by use of Equation 3:

$$r = \frac{n(\Sigma XY) - (\Sigma X)(\Sigma Y)}{\sqrt{\left(n(\Sigma X^2) - (\Sigma X)^2\right)\left(n(\Sigma Y^2) - (\Sigma Y)^2\right)}} \quad \text{.....} \quad (3)$$

where, r = Pearson Moment Correlation Coefficient[19], n = number of paired scores, X = scores of Head Teachers, Y = Scores of Teachers, XY = product of the two paired scores. Substitution of values for X and Y from Table 3 gives r = 0.7879 which satisfies the minimum requirement of r = 0.7.

Data Collection Procedure: The researcher personally administered the questionnaires and the interview schedule to the relevant respondents by visiting the selected schools. The respondents were assured that strict confidentiality would be maintained in dealing with their responses. This study made use of descriptive findings which provided interpretations and analyses of responses. The researcher used questionnaires and interview schedules. Ethical considerations are mandatory to be observed by researchers since they provide protection of participants' rights by ensuring anonymity and confidentiality [20,21] has justified why it is highly unethical for the researcher to share confidential information regarding the study with anyone else who is not associated with the study. The researcher observed highest integrity with regard to originality and quality.

Class Enrolment Statistics: The study analysed class enrolment statistics of pupils from class 1 to class 8 based on three phases: the Pre-FPE phase; the First-FPE phase and the Second-FPE phase (Table 4).

Table 4 Class Enrolment Statistics

	Pre-FPE Phase		First-FPE Phase		Second-FPE Phase	
Class	Year	Enrolment	Year	Enrolment	Year	Enrolment
1	1995	73	2003	78	2011	93
2	1996	59	2004	75	2012	93
3	1997	57	2005	63	2013	91
4	1998	51	2006	61	2014	85
5	1999	47	2007	61	2015	83
6	2000	45	2008	54	2016	79
7	2001	43	2009	63	2017	72
8	2002	43	2010	57	2018	72
Mean		52		64		84

Source: Researcher, 2020.

III. Results

The aspects covered on school environment included instructional space, recreational and sanitary facilities. Qualitative analyses of Head Teachers', teachers' and pupils' views were carried out on how School Environment influenced pupils' participation were analysed. On the adequacy of instructional space both Head Teachers and Teachers were asked separately and their views on satisfaction analysed. Descriptive statistics on instructional space by Teachers was analyzed. The adequacy of instructional space was analysed through descriptive statistics for track, field and pitches. A qualitative analysis on adequacy of sanitary facilities was analysed against standard requirements for both boys and girls. An analysis of the provided sanitary facilities was carried out in one purposively selected school from each sub-county to independently establish the existing situation on the ground.

Impact of Instructional Space on Pupils' Participation: Views on impact of instructional space, which is dedicated for learning activities such as classroom, workshop, library and laboratory, on pupils' participation were sought from Head Teachers, Teachers and Pupils. The results of their responses are shown in Table 5.

Table 5 Views on Impact of Instructional Space on Pupils' Participation

	Head Teachers		Teachers		Pupils	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Strongly Disagree	7	12.5	20	16.9	15	12.7
Disagree	20	35.7	28	23.7	38	32.2
Undecided	3	5.4	17	14.4	5	4.2
Agree	8	14.3	25	21.2	43	36.4
Strongly Agree	8	14.3	13	11.0	16	13.7
Total	46	82.1	103	87.3	117	99.2
Missing in System	10	17.9	15	12.7	1	0.8
Total	56	100.0	117	100.0	118	100.0

A larger proportion of Head Teachers 27 (48.2%) disagreed and strongly disagreed with satisfaction of adequacy of instructional space, 3(5.4%) were undecided and 16(28.6%) agreed and strongly agreed that they were satisfied with the space. Thus according to Head Teachers, instructional space has a negative impact on pupils' participation. The influence of school environment on pupils' participation has been discussed by several researchers and authors who have argued that lack of educational facilities, such as infrastructure, is the major hindrance to implementation of educational programmes in schools, particularly in developing countries[22] .

Research indicated that schools in developing countries, such as Kenya, provide very limited instructional space and in some schools there is no suitable buildings at all[23].

A large proportion of Teachers 48(40.6%) disagreed and strongly disagreed that they are satisfied with the instructional space. A total of 17 (14.4%) of the teachers were undecided while 38(32.2%) agreed and strongly agreed that they were satisfied with the instructional space. More Head Teachers (48.2%) than Teachers (40.6%) disagreed and strongly disagreed that they were satisfied with the instructional space. An almost equal proportion of Head Teachers (28.6%) and Teachers (32.2%) agreed and strongly agreed that they were satisfied with the instructional space.

A large proportion of pupils 53(44.9%) disagreed and strongly disagreed that they were satisfied with instructional space against 59 (50%) who agreed and strongly agreed that instructional space was adequate.

When pupils were asked whether school environment affected dropout, majority (50%) either agreed or strongly agreed that drop out was as a result of school environment. A large proportion of pupils (44%) however, disagreed and strongly disagreed that drop outs were as a result of school environment. This seems to reflect lack of choice by pupils based on school environment.

Factors affecting low academic achievement of pupils in Kemp Methodist Junior High School in Aburi, Eastern Region of Ghana[24] identified influence of school environments on pupils' participation. Head Teachers and Teachers were asked whether the instructional space was adequate. Results of their responses are shown in Table 6.

Table 6 Views on Adequacy of Instructional Space

Pupil: Classroom size	Head Teachers		Teachers	
	Frequency	Percent	Frequency	Percent
1:0.5 square meters	7	12.5	23	19.5
1:2 square meters	28	50.0	30	25.4
1:less than 0.5 square meters	20	35.7	30	25.4
1: more than 2 square metres	0	0.0	30	25.4
Total	55	98.2	113	95.8
Missing in System	1	1.8	5	4.2
Total	56	100.0	118	100.0

Computation of the pupil to classroom size was based on the number of pupils accommodated in one classroom. For example, a classroom size of 8m by 6m has an area of 48 square metres. If such a classroom accommodates 96 pupils then the pupil: classroom size will be 96 pupils: 48 square metres which translates to a ratio of 1 pupil: 0.5 square metres or 1: 0.5 square metres. A majority of the Head Teachers 28(50.0%) reported that the space available was 1:2 square meters, 20(35.7%) reported a space of 1: less than 0.5 square meters and only 7(12.5%) reported a space of 1:0.5 square meters (Table 6). Equal proportion of Teachers 30(25.4%) reported that the classes were 1:2 square meters, 1: less than 0.5 square meters and 1: more than 2 square meters. Only 23(19.5%) indicated that their classes were 1:0.5 square meters.

The Ministry of Education specifies a standard classroom of 6m x 8m to hold a maximum of 50 pupils. This gives a pupil: area ratio of 1: 0.96 square metres. For a pupil : size ratio of less than 1:0.5 the number of pupils in a standard class room size is about 100 pupils.

Descriptive statistics on instructional space by Head Teachers are presented in Table 7.

Table 7 Descriptive statistics on Instructional Space

Descriptive Statistics									
	N	Min.	Max.	Mean	Std. Dev.	Skewness		Kurtosis	
Respondents						Statistic	Std. Error	Statistic	Std. Error
Head Teachers:									
School environment has positive impact on indoor air quality	54	1.00	5.00	3.6970	1.104	-1.427	0.409	1.536	0.798
School environment has positive impact on good visual comfort	56	1.00	5.00	3.6471	1.152	-1.015	0.403	0.567	0.788
Teachers:									
School environment has positive impact on indoor air quality	115	1.00	5.00	3.6571	1.089	-0.591	0.287	-0.734	0.768
School environment has positive impact on good visual comfort	113	1.00	5.00	3.5588	1.214	-0.631	0.291	-0.732	0.776

The mean scores indicated that the Head Teachers felt that school environment had a more positive impact on indoor air quality (M=3.70 SD=1.10) than good visual comfort (M=3.65 SD=1.15). The distribution was negatively skewed indicating that a majority of the scores fell on the right of the mean and a few to the tail to the left towards the smaller values. This suggests that a larger proportion of the Head Teachers strongly agreed and agreed than strongly disagreed and disagreed that school environment has a positive impact on indoor air quality and good visual comfort.

Mean Scores for Teachers on the effect of school environment on indoor air quality and good visual comfort were computed. The mean for the responses by Teachers on the impact on indoor air quality (*M*=3.66, *SD*=1.08) was higher compared to mean score for impact on good visual comfort (M=3.65, SD = 1.21). The scores were negatively skewed indicating that majority of data values fell to the right of the mean and clustered at the upper end of the distribution with the tail to the left towards the smaller values. This suggested that most teachers strongly agreed and agreed than strongly disagreed and disagree that school environment has positive impact on indoor air quality and good visual comfort for pupils in public primary school in Kakamega county. Mean score for pupils' responses on influence of school environment on academic performance was (M=3.61, SD=1.180) with skewness of -0.964 and kurtosis of 0.008.The Sub-County Directors of Education (SCDE) were asked for their views on whether school environment had a positive impact on pupils' participation through enhanced enrolment, retention and academic performance. From the responses, it was observed that all the four respondents agreed that school environment had a positive impact on pupils' participation. One of the respondents said, *"The Ministry of Education has increased the FPE fund and also put up modern school structures, thus enhancing pupils' participation".* The other respondent simply said, *"Yes, it plays a major role in pupils' participation as learners interact with those they meet".* The third respondent said, *"The school environment has been strongly supported by the Government, thus having a positive impact on pupils' participation",* while the fourth respondent said, *"Environment has a positive impact to all the above; enrolment, retention and pupils' performance".*

Impact of Recreational Space on Pupils' Participation: Views on impact of recreational space on pupils' participation were sought from Teachers (Table 8).

Table 8 Descriptive Statistics for Adequacy of Recreational Space

Descriptive Statistics									
	N	Min.	Max.	Mean	Std. Dev.	Skewness		Kurtosis	
Adequacy of Recreational Space	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Recreational space for track and field is adequate	117	1.00	5.00	3.2535	1.54659	-0.272	0.285	-1.510	0.563
recreational space for pitches are adequate	114	1.00	5.00	3.0725	1.50801	0.006	0.289	-1.591	0.570

The mean for track and field was higher (M=3.25 SD=1.55) than that of space for pitches (M=3.07 SD=1.51) which suggests that space for track and field was more adequate than space for pitches.

Impact of Sanitary Facilities on Pupils' Participation: Views on impact of Sanitary Facilities on pupils' participation were sought from Teachers. The results of their responses are shown in Table 9.

Table 9 Adequacy of Sanitary Facilities

Sanitary facilities are adequate:		
Response	Frequency	Percent
Highly inadequate	23	19.5
Inadequate	75	63.6
Adequate	20	16.9
Total	118	100.0

A large proportion of Teachers 75(63.6%) reported that sanitary facilities were inadequate, 23(19.5%) reported the facilities were highly inadequate and 20(16.9%) responded that the facilities were adequate in their schools. The recommended number of toilets for boys and girls based on Church World Service (2017) are shown in Table 10.

Table 10 Number of Toilets Required for Boys and Girls

Number of Learners	Recommended Number of Closets for Girls*
First 30 learners	4 closets (holes)
Next 270 learners	1 extra hole for every thirty learners
Every additional learners above 270	1 closet per fifty learners

***Remarks:** For case of boys, one third to be closets and the rest urinals

Table 10 gives guidelines on provision of sanitary facilities based on girls, where the first 30 girls require 4 holes. Similarly 30 boys will require 1 hole and 3 urinals. Up to 270 learners every thirty girls will require an extra hole but beyond 270 learners every 50 girls will require 1 extra hole. The equivalent provision for boys is based on ratio of one of the closets for girls to be closets for boys and the rest urinals.

Based on Table 10 the recommended number of toilets for a public primary school with a pupil population of 800 girls and 700 boys is shown in Table 11 for illustrative purposes.

Table 11 Illustration on Number of Toilets Required for a Sample School

Number of Learners	Recommended Number of Closets	
	Girls	Boys
First 30 learners	4 Closets (holes)	1 Closet (hole) 3 Urinals
Next 270 learners	270/30 = 9 toilets	3 Closets (toilets) 6 Urinals
Every additional learners above 270	(800-270)/50 = 11 toilets	4 Closets (Toilets) 7 Urinals
Total Number of Closets (Toilets)	24	8
Total Number of Urinals	-	16

The above illustration shows that a sample school with 800 girls and 700 boys will require 24 closets (holes) for girls and boys will require 8 closets (holes) and 16 urinals (Table 11).

In order to make an independent assessment the researcher carried out an analysis of a randomly selected school from each of the four counties (Table 12).

Table 12 Assessment of Adequacy of Toilets in Selected Schools

School No.	Gender	Number of Pupils	Number of Closets (Holes)		(Available/Required) (%)	Remarks
			Required	Available		
School No. 1	Boys	712	8 (Toilets)	5	62.50 %	Inadequate
			16 (Urinals)	5	31.25 %	Highly inadequate
	Girls	750	23	12	52.17 %	Inadequate
	Total	**1,462**				
School No. 2	Boys	690	8 (Toilets)	4	50.00 %	Inadequate
			16 (Urinals)	6	37.50 %	Highly inadequate
	Girls	811	24	12	50.00 %	Inadequate
	Total	**1,501**				
School No. 3	Boys	698	8 (Toilets)	4	50.00 %	Inadequate
			16 (Urinals)	5	31.25 %	Highly inadequate
	Girls	809	24	6	25.00 %	Highly inadequate
	Total	**1507**				
School No. 4	Boys	713	8(Toilets)	5	62.5 %	Inadequate
			16 (Urinals)	6	37.5 %	Highly inadequate
	Girls	798	24	8	33.33%	Highly inadequate
	Total	**1,511**				

Key: Above 75 % (Adequate), 50-74 % Inadequate, Less than 50 % (Highly inadequate)

It can be seen from Table 12 that sanitary facilities in most of the sampled schools were highly inadequate and inadequate. It was further observed that the existing sanitary facilities were not in good condition. Some of the toilets were full and most of the toilets were pit latrines that could not be emptied. Most schools opted to excavate new pit latrines, but land was limited.

As to whether school environment enhanced pupils' participation, the findings of this study showed that school environment had a negative effect on school participation. The findings showed that instructional spaces were highly inadequate falling far short of the recommended number of pupils per unit area of classroom. Recreational spaces were either unavailable or grossly inadequate and sanitary facilities fell below the required number of holes for both boys and girls.

These findings are in line with the findings researchers[25] who reported that in some public primary schools the sanitation infrastructure was highly inadequate or lacking to the extent of schools being closed down by the Ministry of Health. This is confirmed by the results from views by Teachers. It was argued[26] that a

situation where school environment has inadequate facilities does not enhance pupils' participation since it leads to time wasting, low discipline among pupils and general unruly behaviour by pupils as they must compete for the limited sanitary facilities.

This study brought out an important aspect on recreation facilities, where it was found that recreational facilities were highly inadequate or unavailable, and even where they were provided they were limited to track and field event facilities. Indoor recreational facilities were generally unavailable. This leads to missed opportunity for pupils to develop and excel in such sports like Chess, Badminton, Table Tennis and Squash.

IV. Conclusion

The study found that all the three aspects of school environment investigated had a negative effect on pupils' participation. These were instructional space, recreational facilities and sanitary facilities. Learning space was inadequate leading to high congestions in classrooms. In most schools the space provided was 1 pupil to 0.5 square metres against the recommended space provision of 1 pupil to 0.96 square metres. Recreational facilities provided were inadequate for the number of pupils in schools. The study found that the recreational space provided was mostly for track and field events but indoor sports facilities were unavailable. Sanitary facilities were highly inadequate and even the limited facilities provided were in deplorable conditions. There was hardly any running water at the ablution areas.

V. Recommendation

It is recommended that the Ministry of Education should institute a capacity building exercise for school management committees to write fundable proposals with a view of soliciting for support from donors and other philanthropists who will partner to improve, expand or put up new facilities in public primary schools.

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