

**Topic: Impact of Physical Infrastructure and Learning Material Resources on Schools'  
Learners Performance**

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**ABSTRACT**

UNICEF (1993), states that poor learning environment in the developing countries has been identified as one of the variables that lead to poor learners performance in public schools. The purpose of the present study was to investigate the influence of physical resources on learners' performance in public primary schools in Narok County. Descriptive survey design was used. The study adopted purposive sampling technique since the head teachers, class teachers and zonal Pupils are believed to be having reliable information relevant for this study. Documents from the education offices were also analyzed. The study used two instruments namely Questionnaires and observation schedule. The researcher analyzed the data by use of the Statistical Package for Social Science (SPSS). The study used quantitative techniques (measures of central tendency) and qualitative techniques which are basically descriptive. Pupils waste a lot of time as they wait for each other and at times punished for being late for classes. Majority of the classes were overcrowded and the space between their desks was barely one feet. This is an indication that the schools have inadequate facilities and the high repetitive rate worsens the situations. The study revealed that parents and community finance the largest on physical resources. The study further established that the

classrooms were overcrowded, dusty and very cold during the cold weathers since there were no window panes others were not plastered and others even not painted. The desks were barely one foot which is an indication of inadequate facilities. The study recommends that the Health Officers and Quality Assurance and Standards officers (MOE) should be held accountable for providing necessary information to the ministry of education to help improve the learning environment by providing crucial facilities such as enough latrines and well maintained classrooms. The school management should come up with strategies of lobbying more funds form CDF and other nongovernmental organizations. This would also include looking for donors who may chip in and may provide adequate infrastructures to enhance smooth running of schools and creating a conducive environment for the young pupils in these schools. The NGOs and well-wishers should also offer to help the learners with the basic requirements.

**Key Words:****Introduction**

Physical resources refer to such items like buildings or classrooms, whether or not they can foster a good learning environment, availability of libraries and such equipment like desk (Namaswa, 1989). The learning materials include; textbooks, library facilities and pupils writing materials (MOEST, 2003). Availability of educational materials also has a bearing on educational outcome. Textbooks for example, whether designed for use in activities led by the teacher or independently by the pupils offer the most explicit instructional design formats. Thus, the availability of these materials has implications for immediate quality improvements on the learner's performance (MOEST, 2003).

Douglas (1984) observes that good teachers as they teach keep in mind what they teach and what they teach with. Learning would be passive and boring if learning resources are not incorporated

effectively, organized and exploited in the learning process. It is the proper organizations of the learning resources and the use of appropriate teaching and learning strategies which will enhance the acquisition of the subject content.

Eshiwani (1988) indicates that most schools which perform poorly spend less money on the purchases of teaching resources. Availability of adequate relevant textbooks makes the teaching task easy, Kathuri (1986) concurs with this and reports that textbooks availability has been shown to be consistently related to achievement in *less* industrialized countries.

The existing studies however, suggests that most of the teaching and learning materials in SSA are outdated and in many cases unavailable. It is reports that two to three pupils are forced to share one book in the classroom (AW & Muliro, 2001). Access to materials available on the internet is cumbersome and the delay in down loading is frustrating to teachers and pupils alike. Cases have been reported where books were available in principle but management problems prevented them from being distributed at all (World Bank, 2001). It is common to see a teacher rely heavily on a textbook while students spend more time copying notes from the chalkboard than absorbing what they are being taught.

UNICEF (1993) states that poor learning environment in the developing countries has been identified as one of the variables that lead to poor learners performance in public schools. A study conducted by Heynemann and Loxiely (1983) in Brazil, China, Botswana and Uganda showed that a school library has a significant effect on the learners' academic performance.

According to Wamai (1991) over enrollment in government and government aided schools is usually done with the full knowledge of the MOEST. Increasing enrolment without at the same time expanded the physical, facilities results in the over-stretching of resources and consequently affects the level of performance depending on how

much in each school enrolments strains the existing facilities.

Maengwe (1985) noted that overcrowding in classrooms affected learning negatively. According to Southworth and Lofthouse (1990) a sound physical environment reflected in the school amenities, decorative order and immediate surrounding had a positive advantage to pupils' progress and achievement.

Luthans (1989) notes that clean and conducive working conditions attractive. It makes the teachers elated and comfortable, since it raises their status in the society and hence it improves their professional productivity. A study done by Mungunyu, (2008) on the impact of work conditions in Embakasi Division revealed that the physical facilities were inadequate, teachers were dissatisfied with the high teacher pupil ratio which was as high as 200:1 in some school. Mugunyu further argues that work load make teachers unable to prepare adequately and teach effectively. He further note that, the Ministry of Education is not committed to improving working conditions of teachers and that it has affected their classroom performance and will continue to impact negatively if not promptly addressed. The Universal Primary Education (LLP.E) is now the single most important education goal in nearly all low-income countries or developing countries as Kenya. (Hyde,2005). Efforts to attain UPE goals are usually accompanied by increase in resource flows with the support of international donor partners.

Teachers become greatly demoralized because teacher recruitment does not keep pace with the rapidly increasing enrollments in primary schools in Kenya. Teachers have to cope with much increased workload with the introduction of Free Primary Education while the resource to deal with the increase is very much limited. Hyde (2005) noted that teachers are demotivated as they strive to cope up with the overload with no additional change of the work environment. Lack of decent housing both in rural and town schools, work overload, larger classes are the pathetic results of U.P.E policy which has

lowered the quality of education in Kenya and tremendously impacted negatively on teachers' academic performance. Teachers' trade unions and teachers complain bitterly that a lot of resources are being used for financing the ever increasing enrollment at the expense of teachers' motivation.

### **Statement of the problem**

According to Wamai (1991) over enrollment in government and government aided schools is usually done with the full knowledge of the MOEST. Increasing enrolment without at the same time expanded the physical, facilities results in the over-stretching of resources and consequently affects the level of performance depending on how much in each school enrolments strains the existing facilities. Maengwe (1985) noted that overcrowding in classrooms affected learning negatively. According to Southworth and Lofthouse (1990) a sound physical environment reflected in the school amenities, decorative order and immediate surrounding had a positive advantage to pupils' progress and achievement. Therefore the research will investigate the impact of physical resources on learners' performance in primary schools of Narok County.

### **Purpose of the study**

The purpose was to investigate the influence of physical resources on learners' performance of public primary schools in Narok County

### **Objective of the study**

The objective of this study was-

To establish the influence of physical resources on learners' performance in Kenya Certificate of Primary Education in Narok County

### **Research Question**

What is the influence of physical resources on school performance in Kenya Certificate of Primary Education in Narok County?

## **Research Methodology**

This study used descriptive survey design which is appropriate because it facilitates data gathering by administering questionnaires from a sample of individuals (Orodho & Kosibo, 2002).

The target population in this study consisted of forty five (45) public primary schools in Mau Division of Narok North District with a population of 16,058 which includes teachers, pupils and Head teacher (DEO's Office –Mau Division, 2013). A sample is a smaller group of the population selected for study- Researchers suggest that for descriptive research and correlation studies, 30 percent of cases (population) are the minimum (Mulusa, 1988).

The study used two instruments namely Questionnaires and observation schedule. The questionnaires were both structured and closed to guide responses and also give room for more information.

Observation schedule - This instrument was used in collecting information by way of own investigation, observation without interviewing respondents (Orodho, 2008). In this study, observation schedule was used to collect information about physical infrastructure

Validity is the degree to which the empirical measure or several measures of the concept, accurately measure the concept (Orodho, 2008). For this study, the questionnaires and observation schedules were presented to independent experts for examination and approval. The recommendations were incorporated in the final instruments.

The researcher sought clearance from Narok North District Education Office. The ethical standard was adhered to requiring, the purpose of study to be explained to respondents and the respondents consent sought. The research instruments were administered in person.

The researcher analyzed the data by use of the Statistical Package for Social Science (SPSS). The study used quantitative techniques (measures of central tendency) and qualitative techniques which are basically descriptive. The qualitative data was first coded using 3 likert scale; 1, 2, 3 and then analyzed.

## **Theoretical Framework**

This study is guided by the Production Function Model which was advanced by Mace in 1979. This theory states that the output of education system in terms of graduation and completion rate depends on various variable inputs. It further explains that learners performance of education system is closely related to the quality and quantity of inputs. The theory however did not explore the relationship between learner's performance and wastages especially in public primary schools and their performance thereof.

### Data Analysis, Interpretation and Discussion

#### Schools Performance in 2013 KCPE

Performance	Below 250 marks	251-300 marks	301-400 marks	Above 400 marks
Number of schools	26	19	Nil	Nil
Percentage	57.78	42,22	0	0

SOURCE: AEO's office, MAU division

### Physical Infrastructure on Pupils Performance Rate

#### The Pupils Latrine Ratio

The table below gives the pupils latrine ratio; the findings were as follows;

**Table 4:14; The pupils latrine ratio**

Pupils Latrine Ratio	Frequency	Percentage
Boys: Less than 30; 1	0	0
30; 1	3	21
More than 30:1	11	79
Total	14	100

From the table 4.14, it was established that majority of the respondents indicated that

the pupils latrine ratio was more than 30:1 as shown by 79 percent while as only 21 percent indicated that the pupils latrine ratio was exactly in the ratio of 30:1, in general! the schools in Mao division did not have adequate latrines, Pupils waste a lot of time as they wait for each other and at times punished for being late for classes. Majority of the schools in this region fails to reach the ministry of education threshold of 30:1,

### **The Pupils classroom Ratio**

Pupils class room ratio was also another area investigated in this study; the findings were as follows;

#### **The pupils classroom Ratio**

Pupils Classroom Ratio	Frequency	Percentage
Less Than 40:1	2	14
40:1	3	21
More Than 40:1	9	64
Total	14	100

From the table 4.13 majority of the respondents indicated that the ratio was more than 40:1 as shown by 64 percent, 21 percent indicated that the ratio was exactly 40:1 while as only 14 percent indicated that their school ratio was less than 4:1 majority of these classes were fairly done, some did not have windows, others were not plastered and others even not painted. This shows that the learning environment was not conducive and this large ratio lead to congestion in class where by the students did not have the suitable learning environment

### **Physical facilities assessment**

On the schools physical facility assessment on public Health Officers and Quality Assurance and Standards officers (MOE) the study established the following;

#### **Physical facilities assessment**

Physical Facilities assessment	Frequency	Percentage
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Always	6	53
Rarely	8	57
Not at all	0	0
Total	14	100

From the table 4.16 majority of the respondents indicated that the physical facility was rarely done as shown by 57 percent and only 43 percent who indicated that it was always done. This shows that Health Officers and Quality Assurance and Standards officers (MOE) have been sleeping in their job and these are the reports that they could be presenting to the ministry to facilitate increase in these schools funding school physical resources

The research further investigated who finances the physical resources; the findings were as indicated in the table.

The research further wanted to verify whether the schools provided sanitary towels to girls in schools, the table below shows how the respondents' responses as the table below shows

#### **Financing Schools' physical resources**

Physical Resources Are Finance	Frequency	Percentage
Parents/Community	7	50
of Education	3	21
Donor agencies & churches	4	29
Total	14	100

In the table above the majority of the respondents indicated that parents and community finances the largest on physical resources as shown by 50 -percent, 29 percent show that donor agencies and churches also played a fundamental role in the financing of physical resources and finally 21

percent of the respondents indicated the ministry of education.

The study further established that the classrooms were overcrowded, dusty and very cold during the cold weathers since there were no window panes. The desks were barely one foot which is an indication of inadequate facilities. High repetitive rate for example 15 pupils repeating a class worsens the situation. Stress caused by the repetition may force some pupils to drop out of schools or they perform poorly in exams due to stress

### **Summary, Conclusion and Recommendations**

From the study it was established that the pupils latrine ratio was more than 30:1 as in general the schools in Mau division did not have adequate latrines. Pupils waste a lot of time as they wait for each other and at times punished for being late for classes. Majority of the schools in this region fails to reach the ministry of education threshold of 30:1

Class room ratio was more than 40:1 Majority of these classes were fairly done, some did not have windows, others were not plastered and others even not painted. This shows that the learning environment was not conducive and this large ratio lead to congestion in classes where *by* the students did not have the suitable learning environment Health Officers and Quality Assurance and Standards officers (MOE) had been sleeping in their job and these are the reports that they could be presenting to the ministry to facilitate increase in these schools fending.

The study revealed that parents and community finance the largest on physical resources. The study further established that the classrooms were overcrowded, dusty and very cold during the cold weathers since there were no window panes. The desks were barely one foot which is an indication

of inadequate facilities. High repetitive rate for example 15 pupils repeating a class worsens the situation. Stress caused by the repetition may force some pupils to drop out of schools or they perform poorly in exams due to stress.

From the study it was established that majority of the respondents indicated that they always wait for other pupils in order to access the latrines as shown by 76 percent, 20 percent indicated that they rarely wait for other pupils and only 4 percent indicated not at all. Pupils waste a lot of time as they wait for each other and at times punished for being late for classes. Majority of the schools in this region fails to reach the ministry of education threshold of 30:1. The school management should come up with strategies of lobbying more funds from County Development Fund and other nongovernmental organizations. This would also include looking for donors who may chip in and may provide adequate infrastructures to enhance smooth running of schools and creating a conducive environment for the young pupils in these schools

It further established that there is high repetitive level in these schools meaning that majority of the students did not achieve the pass mark to move to the next class. These large numbers of pupils also cause their respective classes to be overcrowded. Majority of the classes were overcrowded and the space between their desks was barely one foot. This is an indication that the schools have inadequate facilities and the high repetitive rate worsens the situations.

### **5.3 Conclusion**

The study further concludes that schools in Mau division did not have adequate latrines. Pupils waste a lot of time as they wait for each other and at times punished for being late for classes. Classrooms were overcrowded; dusty -very cold the cold weathers since there were no window panes. The desks were barely foot high which is an indication of inadequate facilities.

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