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Impact of Classroom Resources on Academic Performance in Public Primary Schools: Case study of Belgut Sub County

Omondi Nicholas Odongo^{1*} & Dr. Joseph Koskei, PhD¹

¹ Mount Kenya University, P. O. Box 342-01000, Thika, Kenya.

* Author for Correspondence ORCID ID: <https://orcid.org/0009-0000-3935-0276>; Email: omondinicho84@gmail.com

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The significance of class resources regarding primary schools' academic performance cannot be understated. However, the performance of pupils has persistently remained dismal and continues to be on a downward trajectory. Despite the government's concerted efforts to improve conditions in classrooms, furniture, playgrounds, and libraries through initiatives such as the Constituency Development Fund (CDF), how physical resources influence academic performance is yet to be determined. This study aimed to evaluate the influence of class resources on academic performances in public primary schools in Belgut sub-county, Kericho County, Kenya. The production function theory guided the study. The study utilised a descriptive research design. The accessible population comprised 931 individuals, including one sub-county education director, 84 head teachers, and 846 teachers. The sample size was 272 teachers, 84 head teachers, and the sub-county director of education. Teachers were picked using simple random while the head teacher and sub-county director of education were purposefully chosen. The primary data collection methods were structured questionnaires. The qualitative data obtained through interviews was examined using a content analysis approach to identify the underlying meanings and implications expressed by the respondents. The quantitative data was coded, cleaned, and analysed using the Statistical Package for Social Science (SPSS version 24) to produce descriptive statistics. The results show that classrooms impact not only the pupils who use them but also the teachers who wish to improve their skills. The findings indicate that for pupils and teachers to improve their skills and academic performance, the class features must be well managed, developed and maintained so as to use them to the maximum and optimum results. The researcher recommended that stakeholders work together to ensure adequate physical resources are available in schools. Furthermore, there is a need for ICT infrastructure integration to reduce the requirement for class facilities; school administration must ensure that the available class resources are properly utilised through proper management and replacement of outmoded equipment.

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INTRODUCTION

The academic performance of pupils is impacted by many elements, including those that are personal, social, economic, and physical (Los-Santos et al., 2019). As per the research conducted by Budiharso and Tarman (2020), the availability of school facilities can significantly impact the standard of education provided by the institution and ultimately impact student test scores. Additionally, Eric and Ezeugo (2019) state that students' academic achievements are associated with the existence of resources such as laboratories, sports facilities, and libraries within the school.

The research conducted by Limon and Castillo (2016) in the Philippines revealed that the adequateness of the physical facilities is among the most important factors that directly affect students' educational outcomes. This is because it helps in the process that reinforces the skills and knowledge of the students. There are a variety of factors that are present and operate in the process of teaching and learning. It has been shown that students' academic achievement, just as performance, is negatively affected by the inadequacy of school facilities. Based on this, the school administration needs to strongly emphasise developing policies and procedures focused on prioritising providing schools with facilities and the appropriate utilisation or management of available resources.

Limn *et al.* (2022) showed that classroom application of physical resources is necessary for

students' success in all areas of academic study. Learning and teaching can become more engaging when there are a range of learning facilities available. The quality of a learner's external environment, which includes the physical resources available to them, has also been revealed to be related to the quality of their academics.

According to Obiyo (2023), the acquisition of knowledge by students from their instructors involves more than just intellectual discussion between these two entities within the confines of a traditional classroom setting. The learning process has to comprise interaction, discovery, and enquiry of intellectual information in an atmosphere that is extremely favourable to the activity and free from distractions for it to succeed. Consequently, the education sector must do more than merely deploy class resources; it must also build and establish learning facilities that improve school settings, both external and internal, making it possible for students and instructors to engage with one another.

Public schools in rural areas, particularly those lacking physical resources, which include classrooms, restrooms, desks, and libraries, face significant challenges. As a result, these schools have recorded poor performance in national examinations (Okongo et al., 2015). In light of the above, the current study sought to assess the availability of physical resources and their impact on academic performance in public primary

schools in Belgut Sub County, Kericho County, Kenya.

It is crucial to highlight that despite the efforts made by the government of Kenya to give resources to public elementary schools through the Constituency Development Fund (CDF), the academic achievement of kids remains low. These resources include enhancements to classroom settings, furniture, playgrounds, and libraries, all essential for boosting students' learning experiences. It is, therefore, important to evaluate the effect of class resources on academic achievement in public elementary schools. This research is focused on the lack of literature discussing the relationship between classroom resources and academic resilience. This inquiry will allow for the determination of how the accessibility of classroom resources influences the academic performance of elementary school students.

It is essential to stress the importance of class resources in improving the academic performance of elementary school students. The class resources provided in public elementary schools have a significant impact on the educational experiences of students. Thus, it is vital to inquire into the influence of class resources on academic performance to acquire a better knowledge of the situation and to devise methods to remedy the issue. The study's general objective was to assess the influence of class resources on academic performances in public primary schools in Belgut sub-county, Kericho County, Kenya.

LITERATURE REVIEW

Empirical Review

Extent studies of the classroom setting conducted for research have demonstrated that the physical organisation of the space plays an essential role in teaching and learning. The term "classroom environment" refers to the overall state of the classroom, the physical space within the classroom and the educational resources included within it. The atmosphere in a classroom can influence the performance of both the students and the teachers. Learners, instructors, and the

surrounding physical environment are the constituent parts that make up the learning setting (Lippman, 2010).

According to Likoko et al. (2013), schools with inadequate classrooms force students to hold their lessons outside or under trees. These lessons are often disrupted, postponed, or never held during bad weather. This causes disruptions to the covering of the curriculum, leading to poor academic performance on tests for the pupils.

Ochwada (2021) conducted a study among primary school students in Bungoma, Kenya, exploring the association between the classroom environment and their academic performance. The research findings established that the existence of adequate physical facilities favourably affected the academic performance of pupils. Similarly, Wambua et al. (2018) examined school-based factors that affect the KCSE performance of students in Kenya and identified facilities as a crucial factor. However, their investigation was done in secondary schools, while the current research focuses on primary schools located in Belgut Sub County.

Owoeye and Yara (2011) asserted that the size of the class and the ratio of teacher to student plays a crucial role in class management. According to the outcome of a study done in Botswana's elementary schools, kids who had access to an adequate number of classrooms had higher academic outcomes than their counterparts with less or no access. Owoeye and Yara (2011) stipulate that school buildings are very crucial in regards to the role that play in the system of education. They emphasise that although these facilities do not educate, the usage of these facilities can promote or increase learning. On the other hand, he did not believe that the school building was one of the primary factors that determined the level of academic achievement attained by students because he could not locate any evidence to suggest that a more expensive school building would automatically increase academic achievement.

Sephania et al. (2017) point out that the lack of classrooms makes it difficult to achieve educational goals. He lamented that the schools' physical facilities, such as public-school classrooms, do not have roofs, windows, and doors; some have cracked walls and educational facilities are missing, which frustrates teachers. When school classrooms are dilapidated, they hinder effective teaching and learning and, consequently, poor academic performance.

The classroom is a critical aspect of improving student learning and academic accomplishment. All school facilities must be supplied for pupils to do better in their exams. Classrooms contribute to more effective learning. According to Saeed and Wain (2011), the provision of physical school amenities significantly impacts students' academic achievement. Classrooms, for example, have a substantial positive influence on students' performance and achievement, and therefore the necessity for current study. The classroom is a fundamental factor for improved learning and student academic performance. For students to perform better in their exams, providing all school facilities is mandatory. Classrooms enable the enhancement of effective learning. Saeed and Wain (2011) state that the availability of physical school facilities greatly influences students' academic performance. Classrooms and other school facilities significantly impact student performance and achievement and, therefore, the need for current study.

According to the findings of research conducted by Rizzotto & França (2022) on the association between classroom circumstances and students' academic performance, schools with inadequate classroom conditions had pupils whose academic performance was below average. Classrooms in most schools were too packed, making it difficult for students and instructors to plan and carry out group projects. The overcrowded classrooms had substandard furniture, such as desks, chairs, and tables. The research discovered that classrooms with broken doors and windows resulted in students being easily distracted by external factors. Additionally, all the schools surveyed had

teaching centres to create teaching aids, but the rooms were often overcrowded, making it difficult to prepare materials. This study will concentrate on improving classroom facilities, including desks, chairs, tables, doors, and windows and expanding classroom spaces.

Suleman and Hussain (2014) suggest that the physical arrangement of classrooms is important in creating a learning environment that positively supports effective teaching and learning. Physical classroom facilities' quality significantly affects academic performance because desks, tables, chalk, chairs, and blackboards are all essential to successful teaching and learning. Without these facilities, it is difficult to achieve fruitful teaching and learning. In well-equipped and comfortable classrooms, students learn better and achieve higher academic performance. However, instructional technology is also critical to the teaching and learning, making it more successful and interesting. It is, therefore, necessary to incorporate instructional technology into classrooms to create an effective and comfortable learning environment. The findings of underdeveloped nations, particularly Pakistan, do not adequately use educational technology while instructing students. These countries utilise instructional materials because teachers are either unqualified or untrained and, therefore, unable to effectively use educational technologies. In addition, educational technologies in schools are either inadequate or of low quality, further contributing to the problem. The layout of classrooms should be such that it is easy to make efficient use of technology, and educators should receive training on how to implement this technology.

Asad et al. (2015) also emphasise the importance of selecting appropriate educational equipment and instructional spaces for learning instead of just teaching. The presence of audio-visual aids in the classroom, for instance, charts, maps, radios, graphs, multimedia, globes, overhead projectors, mock-ups, computers, and the internet, should encourage better learning and make the classroom atmosphere more conducive. Alternatively, the

utilisation of these technologies in teaching and learning is frequently insufficient owing to inefficient classroom organisation and surroundings that are not favourable to learning.

Theoretical Framework

The production function model of education will serve as the study's theoretical framework. This model posits that a school can be likened to a firm or an organisation that receives inputs, such as students, resources, and teachers, and then converts these inputs into educational outputs, which are in the form of graduates. Notable authorities, including James Coleman (1966), have used this model in their research. Coleman et al. (1966) applied the production function model to examine the impact of various factors on educational achievement, specifically concerning poor and minority students in the United States. From the study, it was revealed that race and socioeconomic status were key factors in educational segregation, with children from underprivileged backgrounds attending schools with inadequate resources.

The model used to measure academic achievement is the production function model of education. It defines education as a service that transforms inputs, such as individuals and resources, into students with different quality attributes who can participate effectively in society. The process involves teaching and learning, guided by teachers' qualifications, experience, and school resources. Academic achievement is measured by test scores, grades, and competence in various assignments.

However, the production function model has some limitations, including the assumption that the years of schooling produce the same amount of student achievement across all countries, which is not the case. Previous studies have shown that the model only measures the time spent in school and does not consider the learning environment, providing an incomplete picture of student outcomes.

To address this limitation, the current study will be conducted in Kericho County and focus on

public primary schools with similar characteristics regarding students' socioeconomic, entry behaviour, and geographical backgrounds. The study will examine the availability and use of class resources, especially the teaching and learning process, which develops students into persons with different but quality attributes. The production function model clearly explains how available physical resources are utilised in the study. Hence, it is an appropriate theoretical framework for this research.

RESEARCH METHODOLOGY

The research was conducted using the pragmatist paradigm, which is a deconstructive approach that supports the application of mixed methods in carrying out research. The pragmatic philosophical approach allowed the researcher to adopt a descriptive research design. This was a suitable design for it enables the researcher to undertake an in-depth study of the impact of physical resources on public primary schools' academic performance in Belgut sub-county, Kericho County, Kenya. The target population comprised of 84 head teachers, 846 teachers, and the County director of education in Belgut Sub-County. Using Yamane (1969) formula a sample of 272 teachers was obtained which was picked using simple random, however, the entire number of head teacher and the County director of education were selected purposive sampling.

In this study, a questionnaire and an interview schedule were used to collect data. The questionnaires collected general information on resource management from teachers and head teachers. On the other hand, the head teachers' interview guide sought opinions from head teachers and the County Director of Education on the availability of resources. The content validity of the research instrument was examined through discussions with supervisors, departmental professors, and colleagues about the instrument's items. The tools were piloted for this study with 30 respondents from the neighbouring Bureti sub-county who share similar characteristics with the study population. Cronbach's alpha coefficient was adopted to examine the reliability of the data

collection instruments, which was facilitated by using SPSS. The instruments are reliable if the coefficient value is 0.7 or higher. The data was collected using the drop-and-pick technique, after which it was edited, coded, and categorised and fed into the Statistical Package for the Social Sciences (SPSS) for analysis. Inferential statistics, such as regression and correlation analysis, were also used to determine relationships between variables. Tables, charts, and graphs were used to represent the data and summarise the main findings in a written report. A high degree of

professional and ethical conduct was maintained throughout the research study to protect the privacy and confidentiality of the respondents.

RESEARCH FINDINGS

The classroom environment is among numerous factors that impact students' and pupils' academic performance. First the researcher sought to find out the influence of teaching aids and equipment on teaching and learning. The findings are reflected in Table 1 below.

Table 1: Lack of proper teaching aids and equipment has a detrimental influence on teaching and learning.

	Frequency	Per cent
Strongly Agree	28	38.9
Agree	42	58.3
Undecided	2	2.8
Total	72	100.0

From the findings of the data collected, 58.3% of the respondents agreed that the lack of proper teaching aid equipment has a negative influence on the teaching and learning of students; they were represented by 42 respondents. This was closely supported by 38.9% who strongly agreed with the statement in question, with a frequency of 28 respondents. Only 2 people were undecided if lack of equipment has any influence on the performance of students. This was represented by 2.8% of the sample population.

Physical Organisation of the Space and Its Influence on Teaching and Learning

The classroom arrangement is intended to enhance teacher-student contact while reducing distractions. A well-designed classroom encourages constructive teacher-student interaction, facilitates seamless transitions, and deters disruptive conduct. The researcher sought to find how the organisation and space organisation affect the performance of pupils in their daily duties. The findings are reflected in Table 2 below.

Table 2: The physical organisation of the space plays an essential role in the process of teaching and learning.

	Frequency	Per cent
Strongly Agree	28	38.9
Agree	44	61.1
Total	72	100.0

The findings from the school heads indicate that 61.1% agreed that the physical organisation of space has an essential role in learning and teaching. This was represented by 44 respondents of the sampled size. 28 respondents of the head teachers strongly agree that physical organisation and space do play an important role in the teaching

and learning process; they represented 38.9% of the sampled population.

Classrooms Condition and Its Influence in Effective Teaching and Learning

Children realise that serious issues that matter are not worth taking seriously in poorly managed classrooms. You will find that no effort or self-

control is required. In other words, inefficient classroom management hinders children's social and emotional development. The researcher purposed to investigate how school classrooms in

poor conditions hinder effective teaching and learning and, consequently, low academic performance. The findings from teachers are reflected in *Table 3* below.

Table 3: School classrooms in poor conditions hinder effective teaching and learning, consequently low academic performance.

	Frequency	Per cent
Strongly Agree	114	47.6
Agree	105	44.0
Undecided	20	8.3
Total	249	100.0

The teachers did record that classrooms in poor conditions hinder the teaching and learning process, thus, low academic performance, with a response rate of 114 teachers strongly agreeing to the statement. They represented 47.6% of the sampled population and were closely followed by 44%, who agreed to the statement with a frequency of 105 respondents. 8.3% of the sampled population did record not being undecided, with a frequency of 20 respondents.

Quality of Physical Classroom Facilities Their Impact on Academic Performance

Student achievement is significantly influenced by the availability and efficient utilisation of school facilities, yet insufficient facilities can result in underachievement. The researcher purposed to examine how the quality of physical classroom facilities significantly affects academic performance, with desks, chalkboards, chairs, chalk, and tables essential to teaching and learning success. The findings are reflected in *Table 4* below.

Table 4: The quality of physical classroom facilities significantly affects academic performance, with desks, chairs, tables, chalk, and chalkboards essential to successful teaching and learning.

	Frequency	Per cent
Strongly Agree	157	65.5
Agree	82	34.5
Total	249	100.0

The findings indicated that 65.5% of the respondents did record that they strongly agree that quality of facilities within a classroom do significantly affect the performance of pupils, 34.5% of the teachers did record to agree that lack of quality facilities within the classroom does affect the performance and successful learning of students within the class.

Relationship between Classroom and Performance

The researcher sought to find out using inferential statistics if there is any impact or relationship between classrooms and students' performance. The findings are indicated in *Table 5* below.

Table 5: Relationship between Classroom Resources and Academic Performance

	Value	Approximate Significance
Nominal by Phi	1.237	.000
Nominal Cramer's V	.714	.000
Contingency Coefficient	.778	.000
N of Valid Cases	72	

The findings indicated a $P=0.000$, which is less than 0.05 significant value. This indicates that classrooms do have an impact on the performance of pupils in schools. This simply means that improvement in classrooms is going to improve the performance of pupils in the school.

The response to interview question, "Does the kind of classroom affect the performance of learners?" showed 100% agreement the type of classroom resource affect the learner's performance. The respondents from HT 3 were,

Yes, the classroom is the learning environment of students. A learning environment that is noisy, cold, dirty, without roof, hot, with no furniture offer a negative intrinsic motivation to the learner which will have negative effect the learning process. The government of Kenya have assisted us to build new classes with the support of parents' support. Therefore, we are not badly in term of classroom.

Therefore, the availability and classroom environment do affect the learning process. Other respondents pointed the size of the classroom also had an influence on the learning process. This affect the number of students to be taught per class as well as the mobility in the class. Similar concern was also on the availability and quality of furniture used in the classroom affect the learning process.

In response to, "What effect doe quality and quantity of furniture have of the teaching and learning process?" the results revealed that the condition was above average in majority of 69% of the school as respondents. However, 31% pointed that the chairs were not comfortable for learning purpose and the stakeholder should consider improving the quality and quantity of chairs. The response from HT 9;

The chairs are above average, however, were always repair the broken furniture at the beginning of the term. We have to pay the repairman from the fee payment to ensure the student get better chairs. Even though the desks are substandard, it still assists the

students to learn. We advocate to the government to improve allocation for activity fee so that we can purchase lockable table and comfortable chairs.

The results from interview schedule indicated that physical environment and availability of classroom contributed to efficiency and effectiveness of teaching. The head teachers further indicated that the quality of the classroom physical resources is associated with financial allocation to the institution. Hence, government, non-government organization and private organization should increase funding to schools to facilitate higher academic performance. This result conquers with the results obtained from inferential statistics.

DISCUSSION

A classroom in a school is a crucial setting to foster creativity and the desire for knowledge. Offers support for teaching and learning throughout the institution. The classroom environment in the school has a positive effect on the students' academic performance because it encourages mental growth by providing a conducive learning environment. The lack of adequate teaching tools and equipment, according to 58.3% of responding principals, generally makes it difficult for students to learn and teach. The same view was agreed upon by Budiharso and Tarman (2020) who found that available facilities in school had positive significant impact on the education.

Despite the conflicting effects of class size, the study finds that students may report less teacher interaction and satisfaction in large classes. Since teacher contact was found to be the most important driver of all subjective educational outcomes, it brings to our attention serious problems. A cumulative percentage of 100% agreed that physical space and organisation of that space play an essential role in the learning and teaching process. All those involved in the study agreed that classroom management can hinder the development of skills and performance for pupils and teachers in various ways.

In poorly organised classrooms, children learn that serious issues are not worth taking seriously. They learn that self-discipline and hard work are not required. In other words, inappropriate classroom management delays children's social and emotional development. 91.6% of the teachers who took part in the study did record that they agree school classrooms in poor conditions do hinder students and teachers from performing at their best level. Similarly, Okongo *et al.*, (2015) found that classrooms, restrooms, desks, and libraries, face significant challenges.

The physical environment of the classroom influences student performance. Limn *et al.* (2022) also revealed that classroom application of physical resource significantly affected the success of students in all areas of academic study. Facility structural features (poor lighting, noise, air quality, and heating) can affect learning. Classroom symbols such as objects and decorations also affect student performance. A cumulative percentage of 100% did record that quality materials within a classroom, such as desks and lockers, help improve the performance of students and teachers during their academic work.

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that it was evident that classrooms, furniture, playgrounds, and Libraries impact not only the pupils who use them but also the teachers who wish to improve their skills. The findings indicate that for pupils and teachers to improve their skills and academic performance respectively; the features have to be well managed, developed and maintained to use them to the maximum and optimum results.

The study recommended that the stakeholders must work together to ensure adequate class resources are available in schools. Furthermore, there is a need for ICT infrastructure integration to reduce the requirement for class facilities.

Furthermore, physical resources are underutilised, resulting in poor student performance in KCSE exams. As a result, the school administration must

ensure that the available class resources are properly utilised through proper management and replacement of outmoded equipment. To improve student performance in KCSE tests, it is necessary to standardise the allocation of monies to assist infrastructure development among schools in Belgut sub-county.

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