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**Influence of Management of Physical Facilities on Quality of
Education in Selected Private Universities in Kenya**



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Influence of Management of Physical Facilities on Quality of Education in Selected Private Universities in Kenya

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Abstract

Purpose: The main purpose of this study was to assess the influence of management of physical facilities on quality of education in selected private universities in Kenya. The study aimed to investigate the deans of schools, heads of department and lecturers' perceptions towards management of physical facilities on quality of education in private universities in Kenya.

Methodology: The study used two types of research instruments, namely; lecturers' Questionnaire; and deans of schools and departmental heads' Interview Guide. Data was analyzed used mixed methods, involving qualitative and quantitative techniques.

Findings: The study revealed that most of the respondents disagreed that there were adequate physical facilities which affected the quality of education in selected private universities in Kenya. Further, there was a significant positive correlation between management of physical facilities and quality of education in private universities.

Unique contribution to theory policy and practice: The study recommends that the managers of private universities should ensure allocation of more funds for construction and maintenance of physical facilities for realization of quality education.

Keywords: *Management, Physical facilities, Quality of education, Private universities, Kenya*



1. Introduction

1.1 Background to the study

Education positively empowers students and improves their character traits as well as physical ability. According to UNESCO (2015), education is considered as the procedure through which all societies deliberately convey skills besides values from generation to generation. This has risen the need for education which, sequentially, has seen a proliferation of many private universities to meet students' demands for higher education. To meet this demand, private universities adopt management of institutional resources strategies which include the management of physical resources.

Thomas and Martin (2015) assert that physical facilities entail physical structures which need to be provided by universities. These include libraries, lecture halls, furniture, play materials and resource centers. This is in line with the Education Acts in most countries which demands of every public or private university provide physical facilities, curriculum support materials, recruitment of university lecturers, supervision and control over private universities (Robert & Elizabeth, 2016). In the Caribbean, Clark (2016) posits that Universal Education Policy was developed by the Education Ministry to develop private universities to fulfill the need for university education and was driven by the belief of the government in a straightforward association between education as does economic growth.

In Mexico, for example, private universities provide physical facilities, curriculum support materials, human resources and time management of institutional resources (Woessmann, 2015). However, how management of resources affects the higher education quality offered in private universities is yet to be fully explored. World Bank (2015) defines the quality of higher education as to how much and well students study as well as how their education benefits them personally and socially. This is measured by completion rates, the number of graduands with quality grades from private universities and performance in co-curricular activities.

Oreopoulos (2014) further posits that one of the main challenges facing education programs is high private university dropout rates. In other words, learners have continued to produce low grades in university tests, reduced number of graduates with quality grades coupled with an increase in students' dropping out from the universities. In the majority of Sub-Saharan African nations, university education policy demands that all students have access to quality education. For instance, in Burkina Faso, a report by Kazianga et al. (2016) indicated that the elementary motivation of the university education act is the trust that availing higher education to every child will build the capacity of each individual to be productive not only to themselves but also to their immediate society, the national and even international community. However, such noble aims of realizing quality education in private universities have not been attained.

1.2 Literature Review

Physical infrastructure includes buildings, land, laboratories in addition to resource centers. It also comprises instruction spaces besides ancillary rooms. Even though information has been

accumulated by different scholars since 1970, much of it has not been summarized for educational planners (Bell & Rhodes, 2016). Beynon (2016) enumerates private university as staffrooms, laboratories offices and classrooms. They also mentioned hostels, workshops, stores, equipment, staff houses libraries and private university spaces. These amenities have had great influences on the worth of higher learning. Rivkin, Hanushek and Kain (2016) in their research in the US, presented the connection between the readiness of physical infrastructure and learners' learning outcomes. They also found out that inadequate facilities and resources in public-private universities result in dismal academic performance among learners. Libraries too play a critical part that contributes towards the quality of higher learning which 19 students access in private universities.

A study done in Scotland by Avery (2015) showed the existence of a variety of community and education libraries for use. Avery (2015) also found that private universities that have well-equipped libraries posted remarkable educational outcomes unlike their counterparts with no such facilities. This concurs with the point that trained librarians enhance instruction through management of pertinent resources related to curriculum execution, provide various reading resources in addition to helping private university communities to grow appropriate skills for maximizing the use of information. However, increased enrolment in private universities, has strained physical facilities and hence higher education quality has been lowered. In a system of education, the cost for physical facilities is secondary to the cost for salaries and remuneration for university lecturers. In order to explain the huge cost for new furniture and construction and their maintenance, re-modeling, repair and replacement forces private university management and planners to avail physical equipment that are reasonably affordable. This is credited to the notion that physical equipment is connected to more learning opportunities and achievement (Beynon, 2016).

In a number of Sub-Saharan nations of African, for example, Nigeria and Ghana, the situation is similar, where the physical state of most universities affects student performance. Corroborating these arguments, Earthman, Cash and Van Berkum (2015) established that 11th-grade students in above standard buildings had better scores as determined by the Comprehensive Test of Basic Skills than their equivalents attending class in inferior facilities did. The results are thus a pointer that air conditioning, state of classroom furniture, of state of laboratories, accommodations locker, acoustic levels and wall colors are interrelated with learner success at a substantial degree when controlling for the socio-economic standing of learners.

In a study conducted to establish competencies needed by principals and implications on pre-service education, Onyango (2015) asserts that planning for physical materials, must entail identification of the resources required, conduction of priority testing on quality standards and determination of the itemized price and the utilization of the materials. Researches based upon cost-per-student however, show that smaller private universities are as financially effective as their larger counterparts. Verspoor (2015) asserts that higher education systems that promote smaller private universities have also discovered that sharing of student assistance services like

laboratories, libraries, and play areas have significantly reduced the building and operational expenses.

2. Purpose and Objectives of the Study

The purpose of this study was to establish the influence of management of physical facilities on quality of education in selected private universities in Kenya. The study had three fold objectives;

- a) To establish the perceptions that lecturers hold towards the management of physical facilities on quality of education in selected private universities in Kenya.
- b) To determine the perceptions that deans of schools have towards management of physical facilities on quality of education in selected private universities in Kenya.
- c) To find out the perceptions that heads of departments hold towards management of physical facilities on quality of education in selected private universities in Kenya.

3. Research Design and Methodology

This study used a mixed methodology involving quantitative and qualitative methods. A report by Commission for University Education (2024) shows that Kenya has 34 registered private universities. The target population for this study comprised 173 deans of schools, 510 heads of departments (15 departments from each private university) and 1156 lecturers in the sampled departments totaling 1839 participants. The researcher employed Yamane (1967) formula to determine the study sample and to compute the size of the sample for the study where 297 respondents formed the sample size selected using purposive sampling. The study tools that were engaged to collect data included questionnaires (A questionnaire was adopted by the researcher to gather information from lecturers) and an interview guide (The research employed open-ended questions in structured interviews to gather qualitative data from deans of schools and departmental heads with respect to a number of questions on the research objectives). Data analysis began by identifying common themes. Using descriptive statistics such as frequencies and percentages, quantitative data were analyzed. Inferential analysis was also undertaken using Pearson's Product Moment Correlation Analysis by applying the Statistical Packages for Social Science (SPSS Version 23) software.

4. Results and Discussion

4.1 Descriptive Statistics

The study sought to examine how private universities manage physical resources and how it affects quality of education. Descriptive data were collected from lecturers and summarized. Results are presented in Table 1.

Table 1: Management of Physical Resources in Private Universities

Physical Resources	SA	A	U	D	SD
	%	%	%	%	%
Well-stocked library	39.5	5.5	6.8	40.0	8.2
Spacious lecture halls and study areas	41.5	18.6	5.7	30.7	3.5
Safe playgrounds for indoor and outdoor activities	34.1	17.3	4.1	39.1	5.4
Laboratories not well equipped	33.2	11.4	5.9	43.2	6.3
Furniture not enough to cater for all students	39.1	8.2	3.6	40.0	9.1
Health centers well-stocked with drugs and testing kits	35.8	7.1	5.5	44.4	7.2
Provision of adequate disability-friendly facilities	31.9	6.3	3.6	50.7	7.5

Table 1 shows that 40.0% of the lecturers disagreed with the view that there is a well-stocked library provided by private universities to support learning while 39.5% strongly agreed, 8.2% strongly disagreed, 6.8% were undecided whereas 5.5% were in agreement. However, during the interviews, the Deans of Schools and Heads of Departments disagreed with the lecturers. They stated that most of the university libraries are well-stocked with updated books and other learning materials. On their part, the Heads of Departments expressed similar views as the Deans of Schools that they usually ensure that resource centers and libraries are well-stocked with important curriculum support materials. Head of Department, HoD3, stated;

In my university, all the libraries have critical teaching and learning materials. The libraries have suitable instructional resources for students' use. This has made it easy for them to master with minimal difficulty.

Despite the contradicting views among lecturers, Deans of Schools and Heads of Departments, these findings underscore the vitality of libraries which are well-stocked with suitable, relevant and appropriate instructional resources. Avery (2015) established that private universities in Scotland that have well-equipped libraries posted remarkable educational outcomes unlike their counterparts with no such facilities. This implies that provision of libraries well-stocked with teaching and learning materials plays a significant function in the provision of quality education. In other words, ensuring that libraries are well-stocked, private universities enhance instruction by providing various reading resources in addition to helping university communities to grow appropriate skills for maximizing the use of information.

A fair proportion of the lecturers (41.5%) strongly agreed with the view that, in private universities, spacious lecture halls and study areas are provided to enhance learning while 30.7% disagreed, 18.6% agreed. On the contrary, only 5.7% were undecided while 3.5% strongly disagreed. During the interviews, the Deans of Schools however, did not agree with the opinions expressed by majority of the lecturers that lecture halls are not spacious to avoid overcrowding.

Both quantitative and qualitative findings point to the significance of conducive, spacious and well-ventilated lecture halls in the realization of quality education offered to students in private universities. This supports the assertions of Beynon (2016) that management of private universities bear the responsibility of providing adequate classrooms that can cater to the number of students without congestion are availed for successful teaching and learning process. These findings affirm the fact that effective management of physical resources by ensuring that there are spacious and conducive lecture halls forms the basis for realization of quality education offered in private universities.

The study showed that 44.5% of the lecturers strongly agreed with the view that safe playgrounds for different types of indoor and outdoor activities are provided in private universities whereas 34.1% strongly agreed and 17.3% agreed. To some extent, the interviewees concurred with majority of the lecturers that, due to lack of enough expansion, many private universities are not able to set up spacious and safe playgrounds for outdoor activities.

This indicates that availability of safe playgrounds cannot be wished away due to their contributions to quality of education in private universities. This is consistent with the assertions of Verspoor (2015) that management of physical resources such as ensuring provision of safe playgrounds for students' outdoor activities is key for their cognitive growth and development and eventual success in their academic activities.

Further, 43.2% of the lecturers strongly disagreed with the opinion that many laboratories provided in private universities are not equipped with the necessary apparatus to enhance learning whereas 33.2% strongly agreed as did 11.4% who agreed. On the contrary, 6.3% disagreed strongly. In the same token, most of the lecturers (40.0%) disagreed with the view that furniture provided in private universities is not enough to cater for all students whereas 39.1% strongly agreed, 9.1% strongly disagreed and whereas 8.2% agreed. Deans of Schools and HoDs, however, noted that the laboratories in private universities are well equipped. Just as indicated earlier, though contradictory, these views point to the significant role of well-equipped laboratories and comfortable furniture in realization of quality education in private universities.

In the same token, 44.4% of the lecturers disagreed with the view that private universities ensure that health centers are well-stocked with drugs and testing kits whereas 35.8% strongly agreed. However, 7.2% strongly disagreed while 7.1% agreed. During the interviews, Deans of Schools and Heads of Departments supported the views expressed by majority of the lecturers that private universities have inadequate supply of drugs to take care of students and staff in cases of emergency. Only 31.9% of the lecturers strongly agreed with the view that, in private universities, there is provision of adequate disability-friendly facilities to enhance the learning of special interest

students whereas 6.3% agreed. Slightly more than half (50.7%) disagreed with 7.5% agreeing. However, on their part, the interviewees responded on the contrary by stating that, despite financial constraints, private universities have attempted to provide disability-friendly facilities. Dean of School, DoS8, stated;

In my university, we have ensured that, amid challenges which border on resources, there are disability-friendly facilities and that lecture halls are designed to suit the needs of all learners with disabilities.

These views were supported by the Heads of Departments who stated that there are concerted efforts to ensure that private universities have disability-friendly facilities. Despite these contradicting views from respondents, these findings underscore the vitality of provision of disability-friendly facilities in achievement of quality education in private universities.

4.2 Inferential Statistics

To delve deeper into the correlation between management of physical resources and quality of education in private universities

Table 2: Relationship between Levels of Adequacy of Physical Resources and Quality of Education

		X₂	B	C	D
X₂	Pearson Correlation	1	.745**	.800**	.623*
	Sig. (2-tailed)		.009	.003	.041
	N	11	11	11	11
B	Pearson Correlation	.745**	1	.668*	.762**
	Sig. (2-tailed)	.009		.025	.006
	N	11	11	11	11
C	Pearson Correlation	.800**	.668*	1	.492
	Sig. (2-tailed)	.003	.025		.125
	N	11	11	11	11
D	Pearson Correlation	.623*	.762**	.492	1
	Sig. (2-tailed)	.041	.006	.125	
	N	11	11	11	11

*. Correlation is significant at the 0.05 level (2-tailed).

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

Key

X₂-Levels of Adequacy of Physical Resources**B**-Students Graduating with First-and second-Class Divisions**C**-Students' Completion Rates (%)**D**-Frequency of Participation in Co-Curricular Activities

Table 2 presents the results of the Pearson Product Moment Correlation Test Analysis, which generated correlation coefficients were $r_1 = 0.745$, $r_2 = 0.800$ and $r_3 = 0.623$ with corresponding p-values of 0.009, 0.003 and 0.041 respectively, thus showing a significant positive correlation between management of physical resources and quality of education in private universities. These findings align with Abagi's (2012) research, which produced a significant p-value of $0.03 < 0.05$. Abagi observed that insufficient and poorly managed facilities contribute to lower academic performance in educational institutions. Moreover, these results are consistent with the assertions made by the World Bank (2015) and Onyango (2015), highlighting the global inadequacy of physical and material resources in learning institutions.

Furthermore, these findings support Asiabaka (2008) study on the effective management of educational institutions, emphasizing the absence of government policies on minimum standards for physical facilities, resulting in educational disparities. Some institutions boast well-equipped facilities, while others lack basic amenities or possess poorly maintained resources. This aligns with Mang'uu, Maithya and Kimani (2021) assertion that successful teaching and learning are contingent upon the presence of appropriate resources like fully-equipped laboratories and comprehensive libraries. Such resources contribute to academic achievement, particularly in national examinations. Theoretically, these results support both education production function theory and resource-based theory, highlighting the interconnectedness between sufficient physical resources and the quality of education within private universities. This suggest that provision of suitable physical facilities, even at a low level, is essential to the realization of quality education in private universities. In other words, there is provision of high-quality education in private universities where there is adequate provision of physical facilities such as well-stocked libraries, conducive and spacious classrooms or equipped laboratories.

5. Conclusions and Recommendations

5.1 Conclusion

Due to financial constraints, research findings revealed significant obstacles faced by private universities in delivering pertinent, suitable, and contemporary instructional materials, or any form of educational resources. The adequacy and condition of facilities within private universities present a persistent challenge, as indicated by research findings. Only a minority boast conducive and spacious lecture halls, well-stocked libraries, safe and well-maintained playgrounds, and comfortable furniture for both students and lecturers. Additionally, the availability of conducive faculty offices, spacious dining halls, and well-ventilated toilets remains limited across many institutions. This deficiency hampers the overall learning experience, hindering student engagement and faculty productivity.

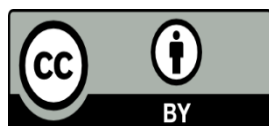
5.2 Recommendation

Managers of private universities bear the responsibility of prioritizing funds for the construction and upkeep of physical infrastructure to foster an environment conducive to quality education. Adequate allocation for construction funds allows for the creation of modern classrooms, laboratories, libraries, and recreational spaces, enhancing the overall learning experience. Furthermore, maintenance funds ensure that these facilities remain functional and safe, promoting a conducive atmosphere for academic pursuits. Investing in physical infrastructure not only demonstrates a commitment to educational excellence but also contributes to attracting and retaining talented faculty and students, thereby enriching the university community and its educational outcomes.

REFERENCES

- Abagi, J. (2015). *Resource Utilization in Public Universities in Kenya*. Accra: Association of African Universities.
- Asiabaka, I. P. (2008) The Need for Effective Facility Management in Schools in Nigeria. *New York Science Journal*, 1, 10-20. <http://www.sciencepub.org>
- Avery, C. (2015). *And with a light touch: Learning about reading, writing and teaching with first graders*. Portsmouth: Heinemann.
- Bell, K. M. & Rhodes, Y. P. (2016). *Mapping the Missing Link: Planning and Financing Secondary Education Development in Sub Saharan Africa*. Paper presented at the Second Regional Conference on Secondary Education in Africa. Dakar.
- Beyon, J. (2016). *Facility Matters: The Perception of Academic Deans Regarding the Role of Facilities in Higher Education*. UNESCO
- Clark, D. (2016). Selective schools and academic achievement. *The B.E. Journal of Economic Analysis and Policy*, 1-40
- Earthman, G. I., & Lemasters, L. (2015). *Review of research on the relationship between school buildings, student achievement, and student behavior*. Paper presented at the Annual Meeting of the Council of Educational Facility Planners, International, Tarpon Springs, FL. (ERIC Document Reproduction No. ED 416 666)
- Kazianga, H., Levy, D., Linden, L. & Sloan, L. (2016). The Effects of “Girl-Friendly” Schools: Evidence from the BRIGHT School Construction Program in Burkina Faso. *American Economic Journal: Applied Economics*, 5(3), 41–62
- Mang’uu, N., Maithya, P., & Kimani, M. (2021). Effects of Availability of Teaching and Learning Resources on Teacher Performance in Public Secondary Schools in Kitui County, Kenya. *European Journal of Education Studies*, 8, 10.46827/ejes.v8i9.3908.

- Onyango, G. A. (2015). *Competencies Needed by Secondary School Headteachers and Implications on Pre-service Education*. Unpublished Ph.D. Thesis. Nairobi: Kenyatta University.
- Oreopoulos, P. (2014). Estimating Average and Local Average Treatment Effects of Education When Compulsory Schooling Laws Really Matter, *American Economic Review* 96, 152-175.
- Rivkin, S. G., Hanushek, E.A. & Kain, J. F. (2016). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417-458.
- Robert, M. & Elizabeth, I. R. (2016). *Who Gained from the Introduction of Free Universal Secondary Education in England and Wales?* Discussion Paper No. 9827
- Thomas, H., & Martin, J. (2015). *Managing Resources for School Improvement: Creating a Cost-Effective School*. London. Routledge.
- United Nations Educational, Scientific and Cultural Organization (2015). *Education for All Global Monitoring Report 2015*. Geneva.
- Verspoor, A. (2015). *At the Crossroads: Choices for Secondary Education in Sub-Saharan Africa*; Washington D.C.: World Bank.
- Woessmann, L. (2015). Families, Schools, and Secondary-School Learning: Evidence for Mexico, Argentina and Colombia in an International Perspective. *World Bank Policy Research Paper* 3537.
- World Bank (2015). *Expanding Opportunities and Building Competencies for Young People: A New Agenda for Secondary Education*. Washington DC: World Bank



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