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## **Impact of Administrators' work and the Physical Plant on Learning: Perspectives of Lecturers and Students in the University of Cape Coast**

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### **Abstract**

The university administrator plays a critical role in the delivery of quality education in every nation. Their role complements that of the faculty within the university set up to bring about desired results in the educational system. In their line of duty, they interact with lecturers and students alike. Without doubt, the physical environment which comprises the school plant such as lecture theatres, libraries, computer centres, among others may either enhance or distract the learning process. The purpose of this descriptive survey was therefore to examine and ascertain the effect the physical plant and the role of the university administrator on students' learning from the viewpoint of lecturers and students. The study drew on the Strategic Asset Management theory (SAMT) and others to adduce its arguments to interrogate the issues. The outcome showed inter alia, that lecturers and students perceived lecture theatres as the most important component of the physical plant that affects students' learning. Also, lecturers and students viewed the administrators' surveillance roles in maintaining the physical plant in the university as having direct influence on students' learning. Eventually, the study showed no significant variation between the views of the lecturers and students on the effect of the physical plant on learning. In view of these findings, novel recommendations were made to university management boards, directorate of physical and estate development and administrators to put in place efficient and effective mechanisms to safeguard and harness the efficient use of the stock of physical plant that universities are endowed with to enhance students' learning.

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**Keywords:** physical plant; university administrator; lecturers; students; learning

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### **INTRODUCTION**

As espoused in Strategic Asset Management texts, facilities exist as a means to serve the organisation's ends. Teaching spaces exist to support educational institutions' service delivery (student learning) and any approach to their design, refurbishment and construction. Whilst a lot of literature touched on the physical environment and its influence on learning at the basic school, less attention has been devoted to examining the effect of the physical plant and the administrators' role on learning at the university level. In fact, the extent to which the role of the university administrator and the physical environment influence learning would therefore be a matter of significance to this study. Flemming and Storr (1999) attempted to synthesise design variables and their perceived effect on students' learning experience. Whilst their research was primarily aimed at investigating a phenomenological view of benchmarking facilities in which they used students as surrogate building occupiers, they made no attempt to look at the role of the university administrator concurrently with the physical plant and observe the effect on learning. In that study, more energy was devoted to investigating specifically students'

perceptions with regard to the effect of various lecture theatre designs on students' learning. However, they did not investigate the opinions of the academic staff and even limited their research to one type of facility. So long as universities are primarily tasked to provide quality teaching and learning to students, the immeasurable role of the administrator to make this a reality cannot be over underestimated. In the university, administrators provide students services that complement the ones provided by the academic staff. Some of these roles (services) they provide for example may either be designed to directly support or not support students' learning.

In order to effectively perform the functions of the Registrar, particularly relating to administrative support, secretarial services and the custody of records, the Registrar's office is divided into such divisions or offices as the Council approves (UCC Statutes, 2012). The Directorate of Finance in the university of Cape Coast for instance, perform functions such as keeping proper financial records of the University in accordance with accounting standards as prescribed by the Institute of Chartered Accountants (Ghana) and the International Financial

Reporting Standards. It also prepares a budget for the financial year for consideration by Council and advises the Vice-Chancellor and other officers of the University on matters relating to the accounts and funds of the University. The Directorate of Internal Audit does perform the customary functions of an internal auditor, including but not limited to activities such as verification of university assets, recommending and ensuring compliance with laid-down or appropriate cost-control and fraud-control procedures and regulations. The audit section among other things, also works to ensure that financial transactions have obtained the requisite authorisations. The Directorate of Health Services, an umbrella administrative organ of the university, is responsible for the provision of preventive, personal, environmental and public health services at the University and to the University community. It also ensures that in rendering such services, priority is given to members and staff of the University. Another important administrative organ of the university is the Directorate of Physical Development and Estate Management. Its core duty is to be responsible for providing and maintaining the physical infrastructure, including, buildings, plant, machinery, utilities, roads, byways, grounds and gardens of the University whether owned, leased or otherwise controlled or possessed by the University, wherever situated (UCC Statutes, 2012). Perhaps, these services, provided by the administrators may be useful in benchmarking serene learning environment that encourages learning. Universities, per their structure, play a critical role in addressing physical, emotional, social, and environmental factors related to students' health and well-being which affect learning. It is often found that institutions that adopted coordinated approaches to planning and problem-solving to meet students' needs are more likely to position them for success in school and throughout their lifetimes. Administrators play various roles and take concrete steps to support this course (Shirer, & Miller, 2003). The expositions so far give course to believe that the role of the university administrator is as crucial as the physical plant of the university in ensuring optimized student learning in so far as they impact student learning. After all, optimising students' learning experience may be so entrenched in the minds of both academic staff and students.

#### **STATEMENT OF THE PROBLEM**

In an era where institutions are calling for increased integration of ICT into teaching and learning, there is a tendency to down play and ignore the significance of the physical plant in the learning process. Again, although lecturers and students are the ultimate beneficiaries of the available stock of the physical plant, little work has been done to seek their views on the specific aspects of the physical environment they deem very vital for student learning. Literature to

ascertain the impact of the administrator's role on students' learning has been insufficient. This situation provided the impetus to drive the current study. The study, among other things, seeks answers therefore to pertinent questions such as "which components of the physical plant, in the views of lecturers and students affect students' learning?", "which roles of the university administrator do lecturers and students view as having direct influence on students' learning?", and "is there a significant variation between the views of the lecturers and students regarding the effect of the physical plant on learning?" These perplexing questions constituted the thrust of the issues which directed the study.

#### **PURPOSE OF THE STUDY**

The purpose of this study was primarily to examine the effect of the physical plant and the administrator's role on learning from the perspectives of lecturers and students in the university of Cape Coast. Specifically, the objective of this study was to find lecturers and students views on which component of the physical plant they considered directly influencing students' learning. It was also to find out lecturers and students views on aspects the administrators' role which directly influence students' learning and the relationship between the views of the lecturers and students regarding the effect of the physical plant on students' learning.

#### **RESEARCH QUESTIONS**

The study was directed by the following questions and hypothesis:

1. Which component of the physical plant do lecturers and students rate as highest in terms of its perceived influence on students' learning?
2. In the view of lecturers and students, what aspects of the university administrator's role are perceived to have effect on students' learning?

#### **HYPOTHESIS**

3.  $H_0$ : There is no significant variation between the views of the lecturers and students regarding the effect of the physical plant on students' learning.

#### **SIGNIFICANCE OF THE STUDY**

The study is important in that its findings would provoke broader stakeholder consultations on ways of ensuring prudent provision and management of physical infrastructure in Ghanaian universities to engender serene environment for learning. The study, via results dissemination, is expected to culminate in institutional propositions to ameliorate administrative practice in our universities. The study material would also serve as rich source of literature for future research on the subject.

## **OVERVIEW OF LITERATURE**

### **The Physical Plant and Learning**

The physical plant embodies the plant facilities provided in the school to facilitate teaching and learning. It includes school building, availability of enough rooms, proper lighting and ventilation, seating and furniture, provision of pure and safe drinking water, availability of play grounds, laboratories, writing boards, enough washrooms, improved teaching learning processes, general cleaning, particularly the cleanliness of class rooms, apt security measures and many more. State of the art school facilities are basic necessities for good education programmes and are very vital for achieving improved students' learning. The phenomena that some schools have surplus facilities and others lack them are sufficient an indicator for discrepancies in academic performance among students in schools.

Lyons (2012) documented that learning is a complex activity that supremely tests students' motivation, physical condition, teaching resources, their skills of teaching and curriculum. All these play a vital role in a child's development. He further concluded that there was an explicit relationship between the physical characteristics of school buildings and educational outcomes. School facilities can be flexible enough to accommodate changing learning patterns and methods. Fuller and Dellagnelo (1999) revealed that physical learning environments or the places in which formal learning occurs, range from relatively modern and well-equipped buildings to open-air gathering places. The quality of school facilities seems to have an indirect effect on learning, an effect that is hard to measure. Some author argued that "extant empirical evidence is inconclusive as to whether the condition of school buildings is related to higher students' achievement after taking into account student's background". In the literature, some studies have reported that students were more likely to prosper when their environment was conducive to learning.

### **Strategic Asset Management Theory (SAMT)**

There is a significant amount of literature available regarding the technical aspects of learning environment design, with a number of Australian Universities. The literature appears to be informed by space design theory which has its roots in architecture, building and psychology (Owu, 1991). However, it does not appear that the design-based literature has considered students' learning in a systematic and comprehensive manner. The educational perspective taken by researchers such as Lang (1996), Bligh (1972), Blackett and Stanfield (1994), appeared to offer a greater insight into the pedagogy/place nexus, especially in view of the increasing use of information technology in the delivery of tertiary education. The last point raises

the obvious question of whether teaching spaces in universities will be made redundant by the use of information technology, as is claimed by IT's more enthusiastic proponents. The new technologies, while being taken up enthusiastically, appear to complement rather than to supplant their place-based equivalents. Evangelistic prediction of the demise of universities, shopping centres and office buildings appears to deny the fundamental social nature of human beings. The study of teaching spaces in an effort to improve them would still appear to be a fruitful occupation. Studies seeking user input have been carried out in the United States for decades (Owu 1991; Babey 1991). Certainly there is demonstrable worth in such an approach and not just from the perspective of teaching and learning. For example Owu (1991) cites an example at Massachusetts Institute of Technology whereby upgrading one lecture theatre and installing the latest audiovisual equipment reduced seat numbers but increased comfort and led to the space being in high demand.

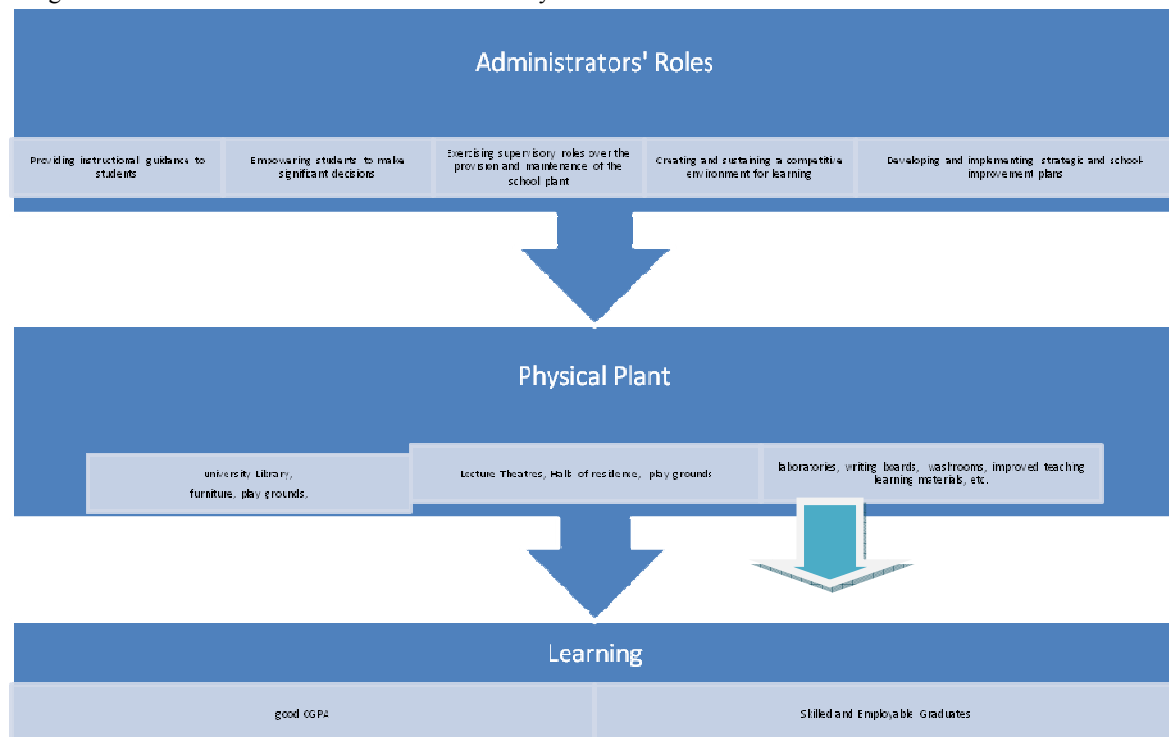
### **The Concept of Administration in Higher Education**

Administration is a social process concerned with identifying, maintaining, motivating, controlling and unifying formally and informally organised human and material resources within an integrate system designed specifically to achieve predetermined objectives. Administration has to do with getting things done with the accomplishment of defined objectives. At the village level, communal labour is often employed in other to get things done. Administration, according to Enaohwo and Eferakeya (1989) can be defined as the process by which goals are achieved through collective and cooperative human effort in a suitable environment. In a school situation, the administrator may be regarded as disciplinarian, and a manager whose work affects student learning. They may also be described as the executive heads of an organisation because of the ways of making decisions and implementing policies and programmes which directly or indirectly affect students learning. Additionally, the administrator is a coordinator, who has to organise activities in such a way that things are done smoothly, quickly and efficiently. However, in most of these settings, the administrator has to perform certain functions in coordinating the efforts of the people in the organization. In achieving its primary goals, the administrator must demonstrate certain abilities in making decision in initiating goals, in inspiring effort, action, in understanding and analyzing problems and finding solutions to them. The administrator uses a body of knowledge as a basis for deriving answers or approached to specific situations.

While similarly considering aspects of the university administrators' role lecturers and students perceive as

influencing students' learning, it again delved into there was a significant difference between views of lecturers and students with regard to the effect of physical plant on learning. It also investigated lecturers and students views on the effect of administrators' role and the physical plant on learning. More generically, the design variables users considered to be important were lecture theatres and tutorial rooms. The results and analysis were used to provide facilities managers in the University of South Australia with important information regarding which design variables the users consider are more closely

aligned to students' learning experience and where emphasis can be placed to optimise user satisfaction and best support service delivery. The effect of the physical environment and the roles played by administrators are the independent variables of this study whereas student learning served as the dependent variable. A model of relationships among the variables mentioned is diagrammatically shown in Figure 1.



**Figure 1.** A hypothesized relationships among administrators' roles, the physical plant and learning

The model shows that administrators play numerous roles in the university. However, it seems as if the only aspect of their roles which affect the physical plant is their core surveillance roles in the provision and maintenance of the school plant. The effective and efficient use of the school plant by students would enhance learning. Also, aspects of the roles played by administrators have what could be described as long-term effect on students' learning. If the administrator's role and the school plant positively affect learning, then we can be sure that the university system would produce highly qualified and skilled man-power graduates who would contribute to the growth of the economy.

**METHODOLOGY**

**Design**

The research was essentially a case study of the University of Cape Coast. The study employed the descriptive survey design to examine the current

situation (Neuman & Lawrence, 2000) as far as the two independent variables (role of the administrator and the school plant) affect student learning in the university of Cape Coast.

**Population**

The target population of the study comprised lecturers and students from all faculties and schools in the university of Cape Coast for the 2012/2013 academic year. The accessible population from which the sampling frame was obtained was approximately eight thousand eight hundred and ninety two (8892) subjects from three schools/faculties within the university (UCC 44<sup>th</sup> Congregation Basic Statistics, 2012).

**Sample and Sampling Procedure**

Multi-stage sampling technique was used due to the large elements within the population. Firstly, purposive sampling technique was used to select 789

regular students and the 100 lecturers who teach regular programmes in the university of Cape Coast. This procedure helped the researchers to deal decisively with the problem of unavailability of respondents for the sandwich and distance education programmes. Secondly, the faculties and schools were put into eight clusters comprising school of Agriculture, Faculty of Arts, Faculty of Education, School of Biological Sciences, Faculty of Physical Sciences, School of Medical Sciences, Faculty of Social Sciences, and School of Business. Simple random procedure was then used to select three clusters (School of Agriculture, Faculty of Education and School of Biological Sciences). Proportionate quotas were assigned to the selected clusters to allow for fair representation of views from students. From here, simple random procedure (the lottery method) was employed to obtain the final elements within cluster for inclusion. For the lecturers, disproportionate quotas were assigned to the eight clusters from which 100 of them were chosen. In all, 889 participants comprising lecturers and students were selected for inclusion. Eventually, 875(98.4%) respondents completed and returned the questionnaire. Of this number, 96 were lecturers whereas 779 were students.

The study developed an eighteen (18) item questionnaire for the collection and analysis of data. The first section of the questionnaire showed the biographic data of respondents. Closed - ended questionnaires were administered to both lecturers and students to first ascertain the status of available facilities in the university. Then, items were also provided to elicit respondents' rating on the components of the school plant in terms of their perceived effect on students' learning. Items were also carved to respondents to rank in order of preference, aspects of the university administrator's role they perceived as affecting students' learning.

The study used both quantitative and qualitative techniques in the analysis. The quantitative treatment of descriptive data facilitated its conversion into frequencies, percentages and means that were subjected to meaningful discussion and interpretation. The analysis made use of tables to simplify the process. The *t*-test, an inferential statistical tool was used to compare the mean score responses of lecturers and students on the effect of the physical plant on learning.

## RESULTS AND DISCUSSION

Although many forms of analysis were appropriate for this type of study, a simple descriptive statistical approach was adopted, consistent with the approach by Flemming and Storr (1999) to analyse research questions 1 and 2.

### Research Question 1

*Which component of the physical plant do lecturers and students rate as highest in terms of its perceived influence on students' learning?*

A number of learning facilities which comprise the physical plant in the university was presented to respondents for them to rate the one they perceive to influence student learning. Among these facilities included libraries, equipped lecture theatres, computer laboratories, overhead projectors, halls of residence for students, recreational facilities, car park, shuttle buses, open-air gathering spaces, and health facilities among others. On this issue, 579(74.3%) students and 77(80.2%) lecturers giving an overall majority of 656(74.9%) respondents rated the lecture theatres as the component of the physical plant which contributes immensely to student learning. The only rated component of the physical plant that was perceived to contribute less to learning was the ceiling height with 11(11.4%) lecturers and 27(3.5%) students ranking it low. It is readily apparent that the perceived importance attributed to each component does not differ greatly between the two groups. Lecturers and students consistently rated lecture theatres as more important in terms of the rankings. This outcome is inconsistent with the research undertaken by Babey (1991) where there were face value differences between responses of lecturers compared to their students. It is true that the majority of student – lecturer interaction takes place in either the lecture theatre or the tutorial room. Despite the fact that the student does a tremendous amount of learning outside of these environments, one would have expected them to rate some of the other places where they learn high and yet this was not so. They seemed to rather place less premium, in terms of their ranking on the other components as if a great deal of their learning is done only in the lecture theatres and not elsewhere. For the lecturers, they could be it understood that since perhaps their teaching is performed in the lecture theatres or tutorial rooms, these environments constitutes the best and critical place for student learning.

### Research Question 2

*In the view of lecturers and students, what aspects of the university administrator's role are perceived to have effect on students' learning?*

In order to interrogate issues here, the researchers used respondents' views on aspects of the administrators' roles they perceived to have effect on student learning. Respondents were requested to either agree or disagree with six carefully worded statements that sought opinions about the administrators' roles in terms of its perceived effect on learning. Tables 1 and 2 depict respondents' views on the subject which were scored on a five-point

likert scale ranging from strongly disagree to strongly agree.

Table 1: Lecturers' Views about Aspects of the Administrator's Roles that Affect Students' Learning

Items	S A	RESPONSES					Mean	
		A N(%)	U	D N(%)	S D N(%)	N(%)		
Verification of assets in various departments.		20(20.8%)		9(9.4%)	5(5.2%)	50(52.0%)	12(12.5%)	2.7
Ensuring cost-control and fraud-control measures.		9(9.4%)		16(16.6%)	10(10.4%)	35(36.5%)	26(27.1%)	2.4
Providing security, health and environmental services.		41(42.7%)		33(34.4%)	2(2.0%)	14(14.6%)	6(6.3%)	3.9
Supervising subordinates working under them.		2(2.0%)		4(4.2%)	10(10.5%)	39(40.6%)	41(42.7%)	1.8
Exercising surveillance role in maintaining the physical plant.		49(51.0%)		38(39.6%)	0(0%)	6(6.3%)	3(3.1%)	4.3
Developing and implementing strategic faculty/school plant		25(26.0%)		29(30.2%)	12(12.6%)	30(31.2%)	0(0%)	3.5

Source: Field Survey, 2013; Students (N=96)

Table 1 shows clearly the opinions of lecturers regarding aspects of the administrators role they perceive to affect learning. As the table depicts, 87(90.6%) intimated that administrators' surveillance role in maintaining the physical plant in the university was one aspect of administrators' role that affect students' learning. However, 9(9.4%) of them disagreed with the statement. The mean rating of 4.3 for this item shows that almost all of the lecturers view the administrators' surveillance role as critical to student learning. On the issue of provision of security, health and environmental services, a majority 74(76.7%) of them agreed that role of the administrator affected learning. The item yielded 3.9 which suggests that the majority was of that opinion though 20(20.9%) of them disagreed with the statement. Exercising the control function is what lecturers consider to affect learning. Organisations are established to achieve specific goals and the goals

are expected to be attained as specified in terms of place, time, quantity, and quality. The finding concurs with the study by Shirer and Miller (2003) which explained that once an organization formulates its objectives and prepares an action plan, which prescribes the course of action to be followed, and starts its operation, then it is necessary to check or verify whether things are going as planned, to exercise authority over those who are responsible for the various functions, and to curb or restrain those who deviate from the determined course of action. In this sense, control is a continuous activity which the administrator exercises daily. The next table displays the results of students on the subject scored on a five-point likert scale ranging from strongly disagree to strongly agree.

Table 2: Students' Views about Aspects of the Administrator's Roles that Affect their Learning

Items	S A	RESPONSES					Mean	
		A N(%)	U	D N(%)	S D N(%)	N(%)		
Verification of assets in various departments.		55(7.0%)		57(7.4%)	265(34.0%)	150(19.3%)	252(32.3%)	2.3
Ensuring cost-control and fraud-control.		62(8.0%)		75(9.6%)	101(13.0%)	284(36.4%)	257(33.0%)	2.2
Providing security, health and environmental services		166(21.3%)		139(17.8%)	91(11.6%)	193(24.7%)	190(24.4%)	2.8
Supervising subordinates working under them.		90(11.5%)		148(19.0%)	205(26.3%)	166(21.4%)	170(21.8%)	2.7
Exercising surveillance role in maintaining the physical plant.		412(52.9%)		265(34.0%)	76(9.8%)	20(2.6%)	6(0.7%)	4.4
Developing and implementing strategic faculty/school plans.		88(11.3)		91(11.6%)	79(10.2%)	361(46.3%)	160(20.6%)	2.4

Source: Field Survey, 2013; Students (N=779)

Table 2 shows dissenting views by students regarding aspects of the administrators role they perceive to affect their learning. As the table shows, 677(86.9%) agreed that administrators’ surveillance role in maintaining the physical plant in the university was in their view, an aspect of administrators’ role that affect learning. However, 26(3.3%) of them did not agree with the statement. A mean rating of 4.4 obtained shows that almost all of the lecturers view administrators’ surveillance role as critical to student learning. On the issue of provision of security, health and environmental services, 305(39.1%) of them agreed that that role of the administrator affect learning. The item yielded 2.8 suggesting that the majority 396(50.7%) virtually disagreed with the statement even though of that number, 91(11.6%) was categorically undecided. On the contrary, 383(49.1%) of them disagreed with the statement. Here again, the control function of the administrator is perceived by students to affect their learning (Shirer et al., 2003).

**Hypothesis**

*H<sub>0</sub>. There is no significant variation between the views of the lecturers and students regarding the effect of the physical plant on students’ learning.*

The study, employing Table 3, attempted to find out if there was a significant difference between lecturers’ and students’ responses regarding the perceived effect of the physical plant on learning.

Table 3: T-test Analysis of Lecturers’ and Students’ Responses on the Effect of the Physical Plant on Learning

Category	Group Statistics					
	N	M	Std. Dev.	Std. Error	t	Sig.
1 (Lecturers)	96	3.1	6.42	1.12	6.47	0.16
2 (Students)	77	4.2	4.03	0.67		
	9					

Source: Field Survey, 2013;  $\alpha = 0.05$ ;  $p < \alpha = *$

The study adopted a significance level of 5% and using a two tailed test with infinite degrees of freedom (>800), the results presented in Table 3 is further analysed. It can be gleaned from the table that the mean rating (response) of category 1 (M = 3.1) respondents is less than the mean rating of participants in category 2 (M = 4.2). This difference is not significant at the 0.05 alpha level ( $t(870) = 6.47$ ,  $p = 0.16$ , suggesting that there is no significant difference in the responses of the two category of participants regarding their views on the effect of the physical plant on learning. In other words, the conclusion is made on the null hypothesis since  $p$  – value is greater than  $\alpha$  ( $0.16 > 0.05$ ). An analysis of the opinions between lecturers and students revealed similar findings all through the items they were presented with.

**CONCLUSIONS**

It is important to note that the physical plant in any learning environment either negatively or positively impacts student learning. Administrators’ supervisory role over the provision and maintenance of the physical plant does also greatly affect student learning. It has come to the fore that students like lecturers perceive the physical plant as having the capacity to influence students’ learning. The reality that sometimes some schools have surplus facilities and others lack them explains to a large extent, the discrepancies in academic performance among students. As has been documented, learning is a complex activity that requires all the necessary facilities to for smooth delivery of academic information. Administrators, per their cut out roles can help facilitate learning or may also contribute in eroding the gains recorded by the faculty in the university set up.

**Implications for Administrative Practice**

1. Management of the university should set aside an appreciable percentage of proceeds from their internally generated funds (IGF) to fund projects aimed at building up the physical infrastructure especially lecture theatres on our campuses. In this regard, the universities could also link up with benevolent organizations for sponsorship.
2. Management should put in place workable mechanisms to preserve, protect and maintain the existing infrastructure in a sustainable manner to ensure their longevity on our campuses.
3. University management should not hesitate to bring on board lecturers’ and students’ views in the design of physical facilities that affect learning since they are the final benefactors of these facilities. Seeking their views afford them the opportunity to share their experiences and provide some direction on the way forward to improve learning.
4. The study has shed light on the importance of leadership to student learning in the university. Evidence from this study buttresses the assertion that effective administrative leadership is crucially beneficial for student learning. Therefore, the office of the registrar should, as a matter of priority, organise periodic leadership seminars and orientation for administrators (both junior and senior ones) to endow them to play the critical role they are supposed to play in ensuring a congenial ethos for student learning.

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