



School Plant Planning for Improved Academic Performance of Business Studies Students in Secondary Schools in Rivers State

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Abstract

This investigation sought to examine how entrepreneurs' restrictive strategic practices are perceived to affect employee–customer relationships, as assessed by postgraduate entrepreneurship education students in Rivers State universities. To achieve this objective, two research questions were formulated and addressed using descriptive statistics, specifically mean and standard deviation. In addition, two null hypotheses were developed and tested at the 0.05 level of significance. The study employed a correlational survey design and was conducted within public secondary schools across Rivers State. The target population comprised 735 business studies teachers drawn from public secondary schools located in all 23 Local Government Areas of the state. Using the Taro Yamane formula, a sample size of 259 respondents was determined, and participants were selected through a stratified random sampling technique. The research instrument underwent appropriate validation procedures and consisted of a self-developed questionnaire derived from relevant literature, titled “School Plant and Academic Performance Questionnaire (SPAPeQ).” Although not standardized, the instrument was structured into two sections: Section A captured respondents' demographic characteristics, while Section B contained two clusters comprising a total of 28 items. Reliability of the instrument was established using Spearman's rank-order correlation, yielding a coefficient of 0.77, indicating acceptable internal consistency. Data analysis for the research questions was conducted using mean and standard deviation, whereas the hypotheses were tested using z-test statistics. A decision benchmark of 2.50 was adopted, whereby mean scores above this threshold were accepted and those below were rejected. Similarly, null hypotheses were retained where the calculated z-value was less than the critical value and rejected otherwise. The findings revealed that instructional resources and classroom infrastructure significantly influence students' academic performance in secondary schools within Rivers State. Consequently, it was recommended that adequate provision of instructional materials—including textbooks, computers, internet access, and other ICT facilities—be ensured to enhance students' academic outcomes.

Original Research Article

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Introduction

In Nigeria, however, the attainment of free and accessible education has led to an astronomical growth of various forms of educational institutions dotting the entire country with almost every town or community having at least a primary school and a secondary school. These establishments are universally recognized as formal settings for children and adolescents to foster their intellectual and social growth within a designated location, often characterized by the building or facilities established on physical premises. The role of the school plant in

achieving general educational objectives is among the most important aspects in its relation to the whole education system. School plant (the overall physical and material resources available in the school) has a significant impact on the quality of teaching-learning process and educational programme. As such, it is a basic aspect of the learning environment. It should be viewed, from a planning point of view, as an essential environment in which learners are nurtured socially, emotionally and academically. According to Ohaka (2020), Lawal (2019)

and Note Reads, 2016; National Open University of Nigeria (2014), an appropriately designed school plant should possess certain structural and environmental characteristics such as: location within a healthy environment conducive for learning, architectural suitability from prevailing climatic conditions, neatness in the physical appearance of the schools that are aesthetically appealing by stimulating the learners and engaging them.

Wordu and Wehiuzo (2018) in view of this opined that school plant is an essential tool in the achievement of secondary school objectives. They went further to affirm that if school plant is effectively and efficiently planned, it will contribute greatly towards high quality development in education. Be that as it may, it is maintained that the actualization of a good school plant management at all level of education globally requires the commitment and relentless efforts the school administrators (Olujide in Wordu & Wehiuzo, 2018). School plants in this instance, includes the school land and all the physical structures on it. It also includes the site, buildings, physical equipment, recreational spaces and books used for the achievement of educational objectives. This is to say however that school plants are the location, fixed structures and moveable materials in school (Oluchukwu in Wordu & Wehiuzo, 2018; Wordu & Wehiuzo, 2018). School plants could be described as infrastructural facilities of education that involves school buildings such as classrooms, assembly halls, laboratories and workshop, libraries among others (Ogbodo in Nweneke, 2016). School plants could also be described as structures that facilitate teaching and learning processes in the school.

Also, any educational facility both human and material resources which help to facilitate education programme could be considered to be a school plant (Hamdallah, Ozovehe & Olarenwaju, 2013). Adding his voice to this, Castaldi cited in Nweneke (2016) described school plants as those things which enable a skillful teacher to achieve a level of instructional effectiveness that far exceeds what is when they are not provided. Thus, it could be maintained that the quality of education received by the global school child relies solely on the availability or lack of school plants. It is also worthy of note that the availability of adequate and sufficient school plant that is effectively planned and maintained is thus expected to positively in the academic endeavours of the child (Hamdallah, Ozovehe & Olarenwaju, 2013). The school plants are all those moveable and immovable facilities; living and non-living things found within the school precinct which helps to promote effective teaching and learning endeavours (Ohaka, 2020).

Several researchers have conceived of school plant as comprising the entire span of physical and material resources supporting instruction delivery in the school system. According to Amanchukwu and Ololube (2015) quality of the physical environment includes the school location, buildings as well as equipment and all permanent or semi-permanent structures in addition to instructional tools including laboratory apparatuses and writing boards required for successful teaching & learning. By the same Token, Enaowho and Eferakeya as cited in Amanchukwu and Ololube (2015) described school plant as the aggregate of physical infrastructural provisions made for effective teaching and learning. Ojelede even stresses that it encompasses not just the school site in itself, but every structural factor turned into existence purposefully across to vouch for pedagogic efficiency. In a complementary analysis, Udosen (2012) describes school plant as the totality of buildings, equipment, instructional materials and the environment in which teaching and learning are conducted; permanent or semi-permanent facilities. Additionally, Odupurokan (as cited in Udosen, 2012) identifies a well-planned school plant as one of the significant contributing factors to achieving desired educational outcomes beneficial to social, political and economic development. For all components of the school environment to be effectively maintained and function properly in delivering educational service, Allen (2015), Lawson and Gede (2011) and Xaba (2012) are however consistently sustaining this assertion.

Looking at school plant from a more analytical perspective, Yusuf (2008), defines the school plant as the physical representation of the school curriculum arguing that without adequate physical facilities for implementation, there would be no meaningful execution of any planned curriculum. Accordingly, the lack of correct school plant hinders teaching and important learning result occur. Hence, adequate planning, provision and maintenance of school facilities become very necessary as it determines the effective operation of the educational system (Amanchukwu & Ololube, 2015). So we see that the school plant is not just concerned with some basic frameworks, but it also includes laboratory equipment, workshop machines and other system apparatus. It would also include the school site itself—physical land on which structures are built—buildings, furniture items, vehicles, electrical installations (electricity), instructional materials and supplies (e.g. textbooks), water supply facilities and recreational spaces such as playgrounds, grassed areas/ lawns, parks and school farm. Adding to these, note reads (2016) states that providence that will be of great use towards proper operation includes the minimum facilities such as class rooms, staff room, administrative office chat rooms and

special classrooms. Together, these elements are core to building a healthy and supportive system that strengthens teaching practices and positively impacts student learning.

Although academic performance and academic achievement are often used interchangeably in the educational literature (Ohaka & Nnokam, 2018; Afzal & Afzal, 2015), some researchers maintain that they refer to different constructs altogether. According to Yusuf (n.d.) and Bupo (2019), while academic performance is the observable and measurable information collected from student behaviours that are a demonstration of their learning following an instructor-led session at a specific point in time, academic achievement is simply indicative of students' performance on standardized test structures. On the other hand, Ohaka and Nnokam (2018) take an integrated view that indicates little distinction between both factors as they suggest that academic performance can be measured using how students possess higher CGPA/GPA in previous semesters together with their expected academic outputs for ongoing academic session.

Academic performance is generally understood as the determining result of learning encounters supplied to students within formal education environments. According to Ogundokun and Adeyemo (2010), Osokoya describes it as the outcome of instructional activity, while they state that it is also an indicator of what the learners have picked up during teaching–learning activities which in most cases are reflected in results gotten from tests by instructors. From a wider sense, Meenu (2016) states that academic performance is not just a tool used to assess whether institutional goals have been met or not, but in fact plays an important role as a key factor driving individual fortunes and also for national development. Thus, academic performance is the amount to which students meet defined educational goals within teaching institutions such as schools, colleges and universities. It also describes the degree of mastery achieved over prescribed academic activities and/or performance with grades as one of the most common measures of such achievement relative to subjects and or a period of time (Duruji, Azuh & Oviasogie, 2014; Ohaka & Nnokam, 2018).

More generally, academic performance can be thought of as a systematic evaluation of the educational outcomes achieved by an individual during a certain timespan — the result of long-term learning activities. A number of influences over students' academic outcomes — either positively or negatively — have been highlighted, not least among which is broader access to online learning platforms. These platforms provide Rivers State University Business Education students with the opportunity to learn independently, resulting in studies that are more flexible and convenient, possibly leading to

academic productivity improvement. According to the US Department of Agriculture (2014), academic performance refers to achievement in a controlled study based on structured environments such as formal education, whereas York, Gibson and Rankin (2015) correlated academic performance with being able to obtain certain outcomes depending upon experiences that are tied back to learning environment. American students are usually taught something over time and then tested on it, with the resulting scores empirically showing how well they did (Bupo, 2019).

Moreover, the environmental makeup of educational facilities within schools is strongly linked to the performance of learners from all areas of study including but not limited to business studies. As a field of study, business studies aims to train students in the practical skills and knowledge that will allow them to be effective participants in the world of work, thus situating it within vocational education at the secondary school level. Okolocha and Nwadiani (2014) explain that the subject involves aspects like typewriting, shorthand, bookkeeping as well as office practice. According to National Policy on Education Nigeria (2010), Home Economics is an effective and practical-oriented subject that covers both theory and practice, thus preparing students for employment as well as entrepreneurship. Business studies not only act as a major course for social sciences at the senior secondary level but also pave way for enhancing manipulative skills, and innovative thinking that aids in academic excellence. Adequate school plant is essential for these outcomes as they provide an enabling environment conducive to effective learning and good academic posture (Epumepu & Igbenedion, 2014). Therefore, available literature indicates that the school plant has a strong influence on secondary school students in business studies (Ohaka & Woryi, 2020).

These identifiable effects carry the potential of either bringing about growth or retardation in the academic performance of business studies students in public secondary schools in Rivers State. Often times, in administrative endeavour in education where adequate school plant planning is the norm, the possibility of attaining more growth and development in academic performance actually abounds (Ohaka & Woryi, 2020). The following can be captured as being the positive effects of school plants (Ohaka & Woryi, 2020); school plant planning helps the school administrators and teachers to put in place effective systems that will contribute immensely in the upbringing of the child for better academic performance, school plant brings about the establishment of safe and healthy classroom learning environment that best suits the educational needs of the students for better academic performance and school

plants leads to the development of effective teaching models and approaches by teachers that are peculiar to the actualization of the academic needs of the students which in turn, aids the acceleration of learning comprehension.

Similarly, the following can be captured as being the benefits of school plants in schools (Udosen, 2012; Oyesola in Oden, 2019; Adesina, 2011); school plant helps to improve secondary school students' performance in achievement test such as WAEC, NECO, JAMB, etc; school plant helps to improve students' attitude to learning, improve attendance and reduce drastically dropout rate among the secondary school students; school plant brings about high retention rate and boost in teaching effectiveness and school plant brings about continuous secure, pleasant and comfortable learning atmosphere for students who tend to be mostly motivated to learn through learning incentives. Adesina, (2011), Ohaka, (2020), Kappel, (n.d) and Kong, (2013) in the same vein, highlighted the following as being the possible positive effects of school plant on the academic performance of secondary students;

- Promote good quality and quantity of instruction as teachers will be made to be fully armed with adequate instructional materials and equipment that can enhance academic performance of students.
- Scaling-up of expected outcomes of education via school plant repositioning in secondary schools facilitates impeccable social, political and economic emancipation, effective teaching and learning process and academic performance of the students.
- It helps to promote competence and professionalism amongst the teachers and students alike as they will be armed with much more potent tools and productive avenues to enhance their intellectual know-how and practical skills relating to their profession.

A good number of challenges can be identified both in the national and global arena as constituting hindrances to the attainment of effective school plant for better academic performance of public secondary school students. While some of these challenges may be consequent upon some local and international factors, they can also be considered as being intrinsic and extrinsic. The intrinsic challenges are internal in nature as they tend to emanate from the internal school system and can also be contained by the internal school stakeholders. The extrinsic challenges comes from external sources like the government agencies, the society, immediate external environment of the school among others and they tend to in most cases, escalate beyond the containment capacity of the internal

school stakeholders especially the school administrators (Ohaka & Woryi, 2020).

Statement of the Problem

School plant provision is aimed primarily at providing a conducive, orderly and enabling environment for an effective teaching-learning process, teacher professionalism and improved academic achievement of students. We want authorities associated with these places to keep them well-stocked, and all major players to share responsibility for how these facilities are used. Good school plants, designed and kept up - are one of the mainstays to making a healthy and stimulating educational environment where teaching-learning can develop.

However, the current state of school plants of most secondary schools is increasingly becoming a matter of grave concern especially in Rivers State where there are glaring gaps between availability and functionality of essential facilities. And even where elements like classroom blocks and instructional materials exist, they are not optimized for use in any meaningful sense, thereby diminishing the potential benefits on students' academic performance. Due to the significant role of school plants in enhancing effective education, such lapses have an increasingly damaging effect on the entire educational system. Teachers are often forced to teach much of the content with no resources, and students must learn in overcrowded classrooms without basic necessities like seats or surfaces to write on. Thus the present study is being undertaken, in response to these challenges, to critically examine as these features of school plants—especially instructional resources and classroom infrastructure- affect students' performance academically in public secondary schools.

Purpose of the Study

The general aim of the study is to determine the effects of school plant on business studies students' academic performance in public secondary schools in rivers state. In specific terms, the study seeks to;

1. Determine the extent to which instructional resources influence the academic performance of students in Business studies in Public secondary schools in Rivers State.
2. Determine the extent to which classroom blocks influence the academic performance of students in Business studies in Public secondary schools in Rivers State.

Research Questions

The following research questions were raised to guide the question;

1. To what extent do instructional resources influence the academic performance of students in Business studies in Public secondary schools in Rivers State?
2. To what extent do classroom blocks influence the academic performance of students in Business studies in Public secondary schools in Rivers State?

Hypotheses

The following hypotheses will be tested at 0.05 levels of significance;

1. There is no significant relationship in the mean responses of the urban and rural business studies teachers in public secondary schools in Rivers State on the extent to which instructional resources influence the academic performance of students in Business studies in Public secondary schools in Rivers State.
2. There is no significant relationship in the mean responses of the male and female business studies teachers in public secondary schools in Rivers State on the extent to which classroom blocks influence the academic performance of students in Business studies in Public secondary schools in Rivers State.

Methods

A correlational research design was used in this study. The population targeted was 735 teachers of business studies and the teachers in public secondary schools across the 23 Local Government Areas of Rivers State, Nigeria (Ibara, 2019). Using the Taro Yamane sampling formula to determine a

sample size of 259 respondents with an adequate representation while using scale-based on stratified random sampling technique. Two experts in business education and measurement and evaluation validated the research instrument for content and face validity. Data was collected via a self-developed structured questionnaire based on literatures related to the theme, called School Plant and Academic Performance Questionnaire (SPAPeQ). While the instrument itself was not standardized, it operated as a non-cognitive measure of perceived school plant variables and their perceived contribution to academic performance. The instrument was divided in two parts; Part A obtained the demographic characteristics of respondents while part B contained 15 items arranged into two clusters. A total of 259 questionnaires were distributed next to 250 retrieval and then the second phase was carried out while administering the questionnaire in which a total of 191 questionnaires were administered and successful valid responses collected from them (130). The instrument's reliability was established using Spearman's rank-order correlation, yielding a coefficient of 0.78 indicating acceptable consistency. Analysis of data for the research questions was carried out using mean and standard deviation but null hypotheses were tested applying z test statistics. Decision rules: z-values greater than a criterion mean of 2.50 were accepted and those less rejected (the same for the null hypotheses, retained if z-value < critical value).

Results

Research Question 1: To what extent do instructional resources influence the academic performance of students in Business studies in Public secondary schools in Rivers State?

Table 1: Mean and Standard Deviation scores of the respondents on the extent to which instructional resources influence the academic performance of students in Business studies in Public secondary schools in Rivers State.

S/N	Questionnaire Items	URBAN (N: 138)			RURAL (N: 112)		
		X	SD	RMK	X	SD	RMK
1.	Improves students' performance in achievement tests	3.74	.31	VHE	3.89	.07	VHE
2.	Improves students' learning outcomes for improved academic performance	3.67	.34	VHE	3.91	.64	VHE
3.	Improves teaching effectiveness for better academic performance	3.72	.23	VHE	3.79	.21	VHE
4.	Improves the level of retention of lesson contents in students	3.29	.21	VHE	3.18	.15	VHE
5.	Promotes quality of instruction for better academic performance	3.17	.96	VHE	3.00	.37	VHE
6.	Promotes professional competence in teachers which results in students' improved academic performance	2.91	.54	VHE	3.08	.22	VHE
Total Mean/SD		20.50	2.59		20.85	1.66	
Grand Mean/SD		3.42	0.43	VHE	3.48	0.28	VHE

Source: Field Survey, (2020)

The result indicated in table 1 shows the extent instructional resources influence academic performance of students of business studies in public secondary schools, Rivers State. From the analysis of responses, it is evident that teachers exhibited a high consensus across all the assessment items, demonstrating a uniform perception regarding the significance of these resources. The results highlight the importance of school plant — which necessarily includes instructional materials, that is to say, textbooks and other learning material — on students’

learning outcomes. This means that accessibility as well as effective utilization of instructional resources greatly improved students’ performance in business studies at secondary school level.

Research Question 2: To what extent do classroom blocks influence the academic performance of students in Business studies in Public secondary schools in Rivers State?

Table 1: Mean and Standard Deviation scores of the respondents on the extent do classroom blocks influence the academic performance of students in Business studies in Public secondary schools in Rivers State

S/N.	Questionnaire Items	URBAN (N: 138)		RURAL (N: 112)			
		X	SD	RMK	X	SD	RMK
1.	Provides the avenue for the enhancement of effective teaching and learning to thrive.	3.13	.12	VHE	3.64	.23	VHE
2.	Provides a safe learning environment for teaching and learning to thrive.	3.16	.25	VHE	3.71	.33	VHE
3.	Provides a system of social interaction amongst students where collaborative learning can take place.	3.67	.36	VHE	3.09	.38	VHE
4.	It provides a positive motivation for teaching and learning.	3.37	.82	VHE	3.54	1.32	VHE
5.	Provides a formal meeting point for the productive exchange of ideas between teachers and students	3.70	.25	VHE	3.55	1.32	VHE
•	Total Mean/SD	17.03	1.80		17.53	3.58	
•	Grand Mean/SD	3.41	0.36	VHE	3.51	0.72	VHE

Source: Field Survey, (2020)

The data in table 1 shows the extent of effect instructional resources have on the academic performance of business studies students in Rivers State public secondary schools. These responses show that across all items evaluated, teachers overwhelmingly and strongly agreed they are perceived as important, suggesting a consensus on their significance. These responses form a distinctive pattern that clearly indicates instructional resources as a basic component of the school plant are critical in influencing students’ learning outcomes. For this reason, their availability and most effective use are essential

components that can enhance the academic performance of secondary school students in business studies.

Hypotheses

Hypothesis 1: There is no notable disparity in the average responses of urban and rural business studies educators in public secondary schools in Rivers State regarding the impact of instructional resources on the academic performance of students in Business studies within these institutions.

Table 4: Summary of z-test analysis on the extent to which instructional resources influence the academic performance of students in Business studies in Public secondary schools in Rivers State

Groups	N	Mean	SD	Df	P. value	Std error	z-cal.	z-crit.	Decision	Remark
Urban	138	3.42	0.43							
				248	0.05	0.32	0.44	1.980	Reject	Significant
Rural	112	3.48	0.28							

Source: Research Data (2020)

As presented in Table 2, the computed z-value of 0.44 is lower than the critical value of z at 1.980 for p=0.05 significance level. It is on this basis that the null hypothesis is rejected indicating the presence of statistically significant difference in the mean responses of urban and rural business studies teachers in public secondary schools Rivers State. This result means that there is a significant divergence of partners' perception regarding the extent to which instructional resources impact on students'

academic performance in business studies between these two environments.

Hypothesis 2: The average responses of urban and rural business studies teachers in public secondary schools in Rivers State regarding the impact of classroom blocks on students' academic performance in Business studies show no significant difference.

Table 4: Summary of z-test analysis on the extent to which classroom blocks influence the academic performance of students in Business studies in Public secondary schools in Rivers State

Groups	N	Mean	SD	Df	P. value	Std error	z-cal.	z-crit.	Decision	Remark
Urban	138	3.41	0.36							
				248	0.05	0.79	0.36	1.980	Reject	Significant
Rural	112	3.51	0.72							

Source: Research Data (2020)

The result presented in table 2 shows that the calculated z-value of 0.36 is less than the given critical value of 1.980 at a level of significance of 0.05 From this comparison, the null hypothesis can be rejected and it implies that there is statistically significant difference in the mean response of urban/rural business studies teachers in public secondary schools in Rivers State. The lesser means reflect the perception that there is a difference between the two groups in terms of how far classroom blocks affect students' academic performance in business studies.

Discussion

Table 1: Influence of instructional resources on the academic performance of business studies students in public secondary schools in Rivers State. The analysis reflected a strong level of agreement from teachers across all the items, suggesting that there was some consensus among respondents about the importance of instructional materials in the teaching-learning process This indicates that instructional materials, which have been identified as a crucial element of school plant influences on students' academic achievement in business studies. The finding

aligns with the position of Wordu and Wehiuzo (2018) who highlighted instructional resources as an essential factor in promoting attainment of educational goals.

Likewise, the results further support that with efficiency in giving and handing instructional resources, it considerably increases academic performance. The consistency among responses illustrates how fundamental such materials have become to boosting student achievement. According to Kong (2013), well-structured school plant facilities similarly assist both teachers and students in the development of competence and professionalism by giving them access with adequate materials for tools, enabling environment, means to acquire knowledge and

Conclusion

The school plant is a basic factor in the achievement of good results of the teaching-learning process, as it serves as the structural basis on which all didactic activities are founded. It includes important aspects such as where the classrooms are, their size and layout, how the instruction is organized + supplemental facilities (labs, sanitation

units) and instructional equipment. All these elements combine to determine the learning environment, which has a positive or negative influence on both teacher and learner and exert powerful influence in [2] teaching/learning processes of [3]. Consequently, school plant planning is popularly accepted as a keystone for educational advancement adding to the smooth execution of academic programmes and institutional activities. Good planning not only enables the realization of various educational purposes but also guarantees a safety net, environment suitable for physical security, mental health of learners and instructors. Therefore, it is the duty of school planners to plan and arrange facilities in a way that makes maximum use of space. School planners must also look for scopes of future expansion considering possible increase in Student Enrollment (Lawal, 2019).

Recommendations

Based on the findings of the study, the following are recommended for further policy actions;

- 1) There should be the adequate provision of instructional resources for students such as; textbooks, computers and accessories, internet and other ICT facilities so as to accentuate the academic performance of students in public secondary schools.
- 2) Regular and adequate supervision and inspection of school plants such as the classroom blocks, libraries, laboratories, among others by school authorities and other regulatory agencies so as to ensure the continuous protection and preservation of school facilities.
- 3) School administrators should spell out adequate policies that tend to place restrictions on school staff who may intend to convert school plants into personal use or even mal-handle them.

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