

Effect of School Plant Provision and Utilisation on Students' Academic Performance in Government Technical Colleges in South West, Nigeria.

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Abstract

This study examined the state of school plant provision and utilisation in Government Technical Colleges in South West, Nigeria. It further investigated the effect of school plant provision and utilization on students' academic performance in the colleges. Two research questions were raised, while one hypothesis guided the study. Descriptive, correlational, and ex-post facto research designs were adopted by the study. Two research instruments comprising test item and checklist were used to gather data through both primary and secondary sources. The test item comprised of a Records Observation Format (ROF) which was used to collect data on students' academic performances in the National Business and Technical Education Board (NABTEB) examinations, while the checklist was administered to 400 Year II students out of a total of 1024 students offering Bricklaying, Blocklaying & Concreting (BBC); Computer Craft Studies (CCS); Furniture Craft Practice (FCP); and Mechanical Engineering Craft (MEC) in the 11 sampled Government Technical Colleges in South West, Nigeria out of a total population of 34 colleges. Data collected were analysed to answer the research questions using the descriptive statistics of mean and simple percentage, while the hypothesis was tested at 0.05 level of significance, using the inferential statistics of Analysis of Variance (ANOVA) and Multiple Regression with the aid of Statistical Package for Social Sciences (SPSS) 21.0. version for windows. The findings of the study were that in the Government Technical Colleges in South West, Nigeria, there was no significant effect of school plant provision and utilisation on students' academic performance ($F_{(2,52)}=.918$; $p=.406 > .05$); and that on a general note, the states of school plant provision and utilisation in the colleges were poor considering the mean percentages of provision adequacies and utilisation optimalities recorded. The findings of this study therefore implied that for the results of examinations of the students to have been averagely good even with the worrisome state of plant in their various colleges except for few of the colleges where renovation of various forms have been done, an adequate provision of school plant would have resulted into much better performance than already seen. This would translate into turning out graduates who could really stand on their own having been properly engaged in practical aspects of their trades which would ensure their competencies for self-reliance.

Keywords: *School Plant, School Plant Provision, School Plant Utilisation, General School Plant, Academic Performance, Government Technical Colleges.*

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I. Introduction

Background

Getting the citizens of a country educated in an all-round manner is crucial to having a society that is dominated by productive youths who possess the ability to contribute meaningfully to the general growth and development of the nation. Learners are endowed with varieties of potentials which when recognised and developed lead to self-actualisation which resultantly have positive impact on the entire society. These potentials however remain inherent within the learners without a proper, well-organised and adequately managed system of education. No nation can develop beyond her system of education because education has been recognized as the key to national development and modernization (Onyebueke, 2014).

Recognising the importance of education as the bedrock of national development has therefore prompted the Nigerian government into providing education in diverse forms, one of which is the technical education. Technical education and training is a type of education which is designed specifically to accommodate both the trainer and the trainee to enable the trainee acquire the basic knowledge, skills, abilities, understanding and attitudes needed for an efficient performance in his or her chosen occupational career for self-reliance and national development (Nwogu & Nwanorou cited in Oviawe, Uwamelye & Uddin, 2017). Technical education could then be summarised as that aspect of education provided at the post-basic and post-

secondary levels to cater for learners' individual potentials as they relate to the combination of the cognitive, affective, and psychomotor domains of learning.

At the secondary school level in Nigeria, technical education is provided in technical colleges. Such colleges are unique in that they are different from the other secondary schools which provide learners with general education. They are rather being run to cater for the diverse potentials possessed by learners which are capable of leading them into economic independence.

Within the context of the Nigerian educational system, the broad goals of technical education as stressed by the Federal Government in the National Policy on Education (2013) entailed the:

"provision of trained manpower in the applied science and technology and business, particularly at craft, advanced craft and technical levels; provision of technical knowledge and vocational skills that are necessary for agriculture, commercial and economic development; and giving training and imparting necessary skills to individuals who shall be self-reliant economically".

In pursuance of the stated goals, the national policy on education further stated that: "the trainees completing technical college programs shall have three options which include: i) to secure employment at the end of the whole course or after completing one or two modules of employable skills; ii) to set up their own business and become self-employed and be able to employ others; and iii) to pursue further education in advance craft/technical program and in post-secondary (tertiary) technical institutions such as science and technical colleges, polytechnics or colleges of education (technical) and universities" (National Policy on Education, 2013).

Technical and vocational education system in Nigeria is therefore designed to produce competent craftsmen for the different sectors of the economy who are expected after graduation to be able to test, diagnose, service, and carry out repairs as specified in the national curriculum which was adopted by all technical colleges across the country and accredited by the National Board for Technical Education (Olayinka & Oyenuga, 2010).

Considering the highlighted goals of technical education as specifically related to the secondary level of education, it is obvious that there is need for a robust provision of school plant to ensure qualitative and functional education that is based on skills and competencies acquisition for self-reliance or economic independence, human capital building and sustainable development. The realization of the above goals through the acquisition of desirable knowledge skills by the students of technical colleges is premised on a combination of factors which are ingested into the system of education in operation in adequate quantity, as well as of relevant appropriate quality. Educational inputs include but are not limited to financial provisions; human resources; material factors (consumables and non-consumables); physical facilities; and the curriculum.

School plant entails all other resources aside from human resources and money in its monetary state, which are used up in the process of getting learners equipped with the required knowledge and skills. It consists of all the equipment, tools, and consumables that enable effective teaching and learning to take place within the school system. In a nut shell, school plant comprises of one out of the three Ms (Man, Money, and Material). It encompasses all the materials required for functional teaching-learning condition to be attained. According to Briggs and Walson (2018), school plant are vehicles for effective teaching and learning. The education that brings development is that which is well-funded, provided with state-of-the-art facilities and equipment, with well motivated and dedicated manpower to impart the science, vocational and technology-compliant curriculum that is relevant to societal and entrepreneurial needs of individuals (Sanusi & Akpotu, 2015). Also, an efficient utilisation of the available school plant in such a manner that they are in line with students' population without being under-utilised or over-stretched is also important, in order to get the goals of this level of education realised. In line with this, Lawal (2013) opined that maximizing vocational and technical education towards productivity and sustainable development in Nigeria calls for re-branding and re-positioning of the programme to optimally utilise the human and material resources. The implementation of technical and vocational education and training involves adequate classroom and facilities/materials for practical purposes (Ochogba, Johnwest, Isiodu & Igwe, 2017). An adequately provided and utilised school plant will not only enhance good teaching process but also facilitate learning. School plant enhances the safety of students by increasing their performances both in internal and external examinations, as well as in retaining the knowledge and skills acquired over a longer time for effective and efficient application both within and outside the four walls of their classrooms. School plant enhances the quality of instruction both in the short and long run as the quality of education received by students bears directly on the availability or lack of physical facilities which dictates the overall atmosphere in which learning takes place.

Ali, Aliyu and Sunday (2013) asserted that what prevails in most public schools is that school plant which were installed many years ago are still being used and have undergone wear and tear as a result of having been used above their estimated mortal age and as such are begging for both minor and major repairs. On the other hand, some of these plant are lying idle as the materials needed for practical works are not being provided. This presents some school plant as being underutilized which is negatively consequential on the cost of education in general, amounting to wastage. The training environment according to David (2014) should be like

the work environment such that teaching with real materials and real situation can help to encourage the students to learn and enhance quality. Momoh (2012) however observed that government's lack of commitment to technical education and inadequate funding have weakened technical education in Nigeria. A direct consequence of this is that while the standard of technical education institutions is compromised, the ultimate goal of general education is at risk. Meanwhile, an educational system is considered functional when the products of such a system are able to perform relatively good beyond the four walls of their classrooms. Students' academic performances through various evaluation types by means of either internal or external examinations remain a recognised yardstick for measuring learners' attainment of hitherto stated educational goals and objectives. Also, the success or otherwise of any level of education coupled with the effectiveness and efficiency of its inputs reflect to a great extent in the academic performances of its outputs. The academic performances of Government Technical Colleges students in the National Business and Technical Education Board (NABTEB) examinations suggest the functionality or otherwise of this aspect of education. Therefore, students' academic performance, as well as the general state of school plant in technical colleges with regard to their provision and utilisation for the actualisation of the goals of technical education as an engine for accelerating the nation's human capital formation, for the attainment of higher and desirable economic growth and development, should be an issue of great concern to any educational planner.

The Problem

School plant provision and utilisation are essential to enhancing students' academic performances. However, it has been empirically proven through studies such as by Olaniyonu (2005) that there was a dearth of equipment in all areas of technical education surveyed in Oyo state. Ikpe (2010) also identified lack of modern training facilities and equipment as one of the problems of vocational-technical education in Nigeria; while not much studies had been done so far on the state of school plant provision and utilisation in Government Technical Colleges in South West, Nigeria. Could this be the case in the technical colleges today?

Furthermore, the percentage performances of the government technical colleges graduates across the nation in the National Business and Technical Education Board (NABTEB) examinations had fallen below average till November/December 2015 with 14.21 as the percentage of candidates that had five credits and above including Mathematics and English Language (Alemma-Ozioruva and Egbejule, 2016), until few years back when 58.75%, 52.74% and 59.72% had five (5) credits and above (Mathematics and English Language inclusive); in May/June 2017, November/December 2017 and May/June 2018 respectively. Could these performances have resulted from the state of school plant provision and utilisation in the Government Technical Colleges?

The dynamic nature of the 21st century which demands that students should be exposed to technologically advanced facilities that are relevant for higher educational performances coupled with the need to redirect the attention of the government and other stakeholders to focusing more on technical education as an important means of attaining an enduring self-reliance by finding out the present state of school plant provision and utilisation in the government technical colleges in South West, Nigeria in relation to the students' academic performances presented the problem for this study.

Purpose of the Study

The purposes of this study were to:

- 1) find out the state of general school plant provision in the government technical colleges in South West, Nigeria;
- 2) investigate the state of general school plant utilisation in the government technical colleges in South West, Nigeria; and
- 3) examine the effect of school plant provision and utilisation on students' academic performances in the government technical colleges in South West, Nigeria.

Research Questions

The following research questions were raised to guide this study.

- 1) What is the state of provision of school plant meant for general use in the Government Technical Colleges in South West, Nigeria?
- 2) What is the state of utilisation of school plant meant for general use in the Government Technical Colleges in South West, Nigeria?

Research Hypothesis

This study was guided by one null hypothesis as follows:

H₀₁: There is no significant effect of school plant provision and utilisation on students' academic performances in the government technical colleges in South West, Nigeria.

Theoretical Framework

Systems Theory

Systems theory was proposed by the Biologist-Ludwig Von Bertalanffy in 1928. Bertalanffy in 1956 defined a system as a complex of interacting elements which are open to, and interact with their environments (Mele, Pels & Polese, 2010). In addition, systems can acquire qualitatively new properties through emergence, thus they are in a continual evolution. They are also self-regulating, that is, they self-correct through feedback. The goal of systems theory is systematically discovering a system's dynamics, constraints, conditions, and elucidating principles (purpose, measure, methods, tools, and so on) that can be discerned and applied to systems at every level of nesting, and in every field for achieving optimized equifinality.

According to Shawn (2019), systems theory treats an organisation as a system. A system can be either closed or open, but most approaches treat an organisation as an open system. An organisation comprises of parts such as employees, assets, products, resources, and information that form a complex system. It receives resources such as equipment, natural resources, and the work of employees, referred to as inputs. The inputs are transformed called throughputs, and then yield products or services called outputs, which are released into the environment.

Feedback loops according to Shawn are also an important feature of an open system. They provide information to the organisation by connecting the outputs to the inputs. A positive feedback loop identifies outputs that have worked well while a negative feedback loop indicates a problem that should be corrected. Thus, feedback loops are a means of confirming success or signals that corrections to the system need to be made.

The systems theory is relevant to this study as the educational system itself comprises of a wide range of interacting and interdependent components which all work together for the survival of the system. On a general note, education is an "Input-Process-Output System" that requires adequate and qualitative inputs (such as human, material, and financial resources). These make the process of teaching and learning a reality for the goals of education to be realised.

Specifically, technical education requires among other inputs, an adequately qualitative and quantitative school plant provision for both practical and theoretical instructional process to take place in order to attain the goals for which technical colleges are set up (the output). The actualization or otherwise of the goals of technical education (referred to as equifinality in the systems theory) forms the basis for feedback through which the system is self-regulatory (as proposed in the systems theory). This (self-regulation) is done through the intervention of the system environment which comprises of the entirety of the stakeholders of technical education in the country.

Resource Dependence Theory (RDT)

The resource dependence theory came out of a study into how organisations' external resources affect the behaviour of those organisations. In other words, the theory examines the relationship between organisations and the products they need to operate. Resources come in many forms, such as raw materials, financing, and employees. Acquiring these external resources is an important aspect of the strategic and tactical management for business. It is based on the principle that resources are the key to an organisation's success and that access to and control over these resources are a foundation of power.

Resource dependence theory according to Janse (2020) was propounded by Pfeffer and Salancik in 1970s who authored the book titled "The External Control of Organisations: A Resource Dependence Perspective", in which they discussed where power and dependence come from, and how organisations can use this power to manage dependent organisations. Managers and leaders are always looking for advantages to strengthen their relationships towards other organisations and to strengthen and improve their own organisation. The resource dependence theory does not just refer to the dependency on resources like employees, capital, and raw materials. Managers in organisations understand that their success is linked to customer demand. Their careers thrive when customer demand grows. That makes customers the ultimate resource that businesses are dependent on.

The basic features of Resource Dependence Theory as enumerated by Eikenberry and Kluver (2004) are that an organisation depends on resources; the resources which are multidimensional in nature originate from the organisation's environment which contains other organisations; and that resources are a basis of power. Resource Dependence Theory assumes that organisations require resources to survive, and so must interact with others who control these resources. In this sense, organisations depend on their environments.

This study adopted the Resource Dependence Theory as the school system itself is a social organisation which must interact with other organisations in its environment. The government technical colleges which constitute a substantial part of the school system require adequate and qualitative school plant (referred to as resources by the propounders of this theory) for survival and continuous realisation of the goals of technical education in the nation. Also, the success of the technical colleges is linkable to the demands of the society

(their environment/customer as opined by the theorists), which could only get increased when the resources (school plant) needed for operation are readily at the disposal of the colleges and well utilised, thereby reflecting such success in the products (students) of the colleges in form of commendable academic performance. Thus, government technical colleges and their productivities depend on the provision and utilisation of school plant, the adequacy and optimality of which will serve as the basis of power for the colleges.

Progressive Utilisation Theory (PROUT)

PROUT is a socio-economic theory first mentioned in 1959 and fully outlined in 1962 by the Indian philosopher Prabhat Ranjan Sarkar. The theory was outlined in sixteen numbered aphorism with the last five commonly referred to as the five fundamental principles of PROUT. These five fundamental principles of PROUT include:

- i. no accumulation of wealth without the permission of the society;
- ii. maximum utilisation and rational distribution of the crude, subtle, and causal resources;
- iii. maximum utilisation of the physical, mental and spiritual potentialities of the individual and collective beings;
- iv. a well-balanced adjustment among crude, subtle, and causal utilisation; and
- v. varying utilisations in accordance with time, space, and form; the utilisations according to the author should thus be progressive.

Among other things, 'progressive utilisation' would optimise the use of natural, industrial, and human resources, based on cooperative coordination on a wide basis, ranging from local communities to larger regions and nations; and between the people of diverse geographical areas (Gista In Ugwuanyi, 2013).

The relevance of the theory to this study could be based on the second, third, fourth, and fifth among the five principles of PROUT highlighted above in that:

- a) this study sought to find out the state of school plant provision and utilisation in the technical colleges, as the theory encouraged an optimised utilisation of the available resources belonging to agencies within a community, one of which is the school community itself;
- b) the researcher focused on the students' potentialities through the records of their academic performances, as to whether such potentialities have been maximised or not by investigating the effect of school plant provision and utilisation on such academic performances;
- c) this study made relevant suggestions for balanced adjustment having identified the hindrances to effective functionality of technical education based on the state of provision and utilisation of school plant.

The resources meant for instruction in order to attain efficiency and effectiveness in technical education in Nigeria require a wide range of cooperative coordination in terms of provision (by the government and other agencies); maintenance and optimal utilisation (by the colleges administrators, instructors, and students); evaluation (through students' academic performances); and the overall effect on the entire economy (through the domination of the society by productive and self-reliant youths), thereby reducing the rate of unemployment in the country.

II. Materials And Methods

The research designs adopted for this study were descriptive, correlational and ex-post facto designs. The study population included all the 34 government technical colleges in South West, Nigeria which comprised six states namely Ekiti, Lagos, Ogun, Ondo, Osun and Oyo. In the technical colleges, two categories of trades namely the engineering and construction trades were covered. The trade courses under the engineering category are Electrical Installation & Maintenance Works; Motor Vehicle Mechanics; Mechanical Engineering Craft Practice; Fabrication & Welding; Computer Craft Studies; Refrigeration & Air-Conditioning Works; and Instrumentation Mechanics Works. The trade courses under the construction category are Bricklaying, Blocklaying & Concreting; Carpentry & Joinery; Plumbing & Pipe Fitting; Painting & Decorating; and Furniture Craft Practice. Furthermore, all the 2019/2020 year two students in the colleges offering the trades under study which amounted to a total of 1024 formed the study population.

A proportionate random sampling technique was used to select a sample of 11 technical colleges due to unequal number of colleges in the states. Two trade courses each were drawn from the engineering and construction trades to make a total of four trades in all, using simple random sampling technique, which allowed for equal chance for all the trade courses to have been selected. The trade courses selected were Computer Craft Studies; Mechanical Engineering Craft Practice; Bricklaying, Blocklaying & Concreting; and Furniture Craft Practice. Proportionate random sampling technique was further applied to select the students' sample size of 400. The researcher gathered data for this study through both primary and secondary sources. Two instruments which included a test item and a checklists were used to gather data for the study. The test item for which a Records Observation Format (ROF) titled Records Observation Format on Government Technical Colleges Students' May/June NTC Examination Overall Academic Performance was designed by the researcher and used to summarise the data on academic performance for the study. May/June NTC Examination Results for the years

2014 to 2018 thus represented the test item. This provided data on students' academic performance, considering students that had 5 credits and above with or without English Language and Mathematics. The checklist contained a list of the aforementioned ten general school plant, requesting the respondents to check the extent of provision of each of the plant under the response options - Very Well Provided (VWP); Well Provided (WP); Fairly Provided (FP); Rarely Provided (RP); and Not Provided at All (NPA), as well as requesting the respondents to indicate the extent of utilisation of the school plant under the response options - Well Utilised (WU); Fairly Utilised (FU); Rarely Utilised (RU); Over Utilised (OU); and Not Utilised at All (NUA).

Having sought the consent of the colleges authorities, the researcher visited each of the colleges and personally filled the ROFs, while the checklist was responded to by the students of the colleges after adequate explanations had been given by the researcher. Descriptive statistics of mean and simple percentage were used to analyse the data gathered on school plant provision and utilisation while Multiple Regression and Analysis of Variance (ANOVA) were used to test the formulated hypothesis with the aid of Statistical Package for Social Sciences (SPSS) 21.0 version at 0.05 level of significance.

In scoring the checklist, school plant provision response options were scored in the order: Very Well Provided (VWP) - 5; Well Provided (WP) - 4; Fairly Provided (FP) - 3; Rarely Provided (RP) - 2; and Not Provided At All (NPA) – 1. The response options VWP and WP were further categorised as the components of Adequate Plant Provision (APP), the response options FP and RP were categorised as the components of Inadequate Plant Provision (IPP), while the response option NPA was the component of Plant Not Provided (PNP). The average percentage of each category thus represented the school plant provision index. In a related manner, school plant utilisation response options were also scored in the order: Well Utilised (WU) - 5; Fairly Utilised (FU) - 4; Rarely Utilised (RU) - 3; Over Utilised (OU) - 2; and Not Utilised At All (NUA) - 1. The response option WU was further categorised as the component of Optimum Plant Utilisation (OPU), while the response options FU, RU, OU, and NUA were categorised as the components of Non-Optimum Plant Utilisation (NOPU), the average percentage of each category represented the school plant utilisation index.

III. Results

Analyses of Research Questions

Research Question 1

What is the state of provision of school plant meant for general use in Government Technical Colleges in South West, Nigeria?

Table 1: Descriptive Statistical Analysis on General School Plant Provision in Government Technical Colleges in South West, Nigeria

Plant	Mean Percentage Provision						
	VWP	WP	APP	FP	RP	IPP	NPA (PNP)
Lecture Rooms	51.5	22.3	73.8	23.0	2.0	25.0	1.3
Libraries	20.1	30.4	50.5	12.6	15.6	28.2	21.4
Workshops	55.0	13.6	68.6	11.6	10.8	22.4	9.0
Laboratories	38.0	16.1	54.1	17.4	11.3	28.7	17.1
ICT Rooms	23.3	23.5	46.8	26.5	12.0	38.5	14.8
Health Centres	10.8	6.0	16.8	22.4	17.6	40.0	43.2
Rest Rooms	8.8	12.1	20.9	17.4	16.4	33.8	45.3
Cafeterias	15.8	19.3	35.1	16.5	7.6	24.1	40.7
Power Generators	26.8	12.8	39.6	12.5	16.6	29.1	31.4
Boreholes	28.8	12.4	41.2	21.5	8.1	29.6	29.3
Mean Percentage Provision			44.73			29.93	25.34

Table 1 revealed the mean percentage state of provision of school plant meant for general use in the government technical colleges in South West, Nigeria. 73.8% of lecture rooms was adequately provided, inadequate provision of lecture rooms was 25%, while 1.3% of lecture rooms was not provided at all in the colleges. 50.5% adequate libraries provision was made to the colleges, 28.2% libraries provision was inadequate, while 21.4% libraries provision was not made to the colleges at all. 68.6% of workshops was adequately provided to the colleges, inadequate provision of workshops to the colleges was 22.4%, while 9% of workshops was not provided to the colleges. 54.1% of laboratories was adequately provided to the colleges, 28.7% was inadequately provided to the colleges, while 17.1% laboratories was not provided at all. 46.8% of ICT rooms was adequately provided to the colleges, 46.8% of ICT rooms was inadequately provided, while 14.8% ICT rooms was not provided at all. 16.8% of health centres was adequately provided to the colleges, 40% inadequate provision of health centres was made to the colleges, while there was 43.2% of no provision of health centres at all in the colleges. 20.9% of rest rooms was adequately provided to the colleges, 33.8% inadequate provision of rest rooms was made to the colleges, while 45.3% of rest rooms was not provided at all.

35.1% of cafeterias was adequately provided to the colleges, 24.1% of cafeterias was inadequately provided, while 40.7% of cafeterias was not provided to the colleges at all. 39.6% of power generators was adequately provided to the colleges, 29.1% inadequate provision of power generators was made to the colleges, while 31.4% of power generators was not provided to the colleges at all. 41.2% of boreholes was adequately provided to the colleges, 29.6% of inadequate provision of boreholes was made to the colleges, while there was 29.3% of no provision of boreholes to the colleges. The grand mean adequate percentage provision index of general school plant in the government technical colleges in South West, Nigeria was 44.73, the grand mean inadequate percentage provision index was 29.93, while the plant not provided to the colleges had a grand mean of 25.34%.

Research Question 2

What is the state of utilisation of school plant meant for general use in Government Technical Colleges in South West, Nigeria?

Table 2: Descriptive Statistical Analysis on General School Plant Utilisation in Government Technical Colleges in South West, Nigeria

Plant	Mean Percentage Utilisation					
	WU (OPU)	FU	RU	OU	NUA	NOPU
Lecture Rooms	61.5	10.1	5.6	17.5	5.3	38.5
Libraries	30.9	13.4	15.9	13.2	26.3	68.8
Workshops	26.1	12.9	4.1	30.2	26.6	73.8
Laboratories	29.8	14.9	3.5	26.8	25.0	70.2
ICT Rooms	23.4	18.0	5.1	24.6	28.9	76.6
Health Centres	5.8	14.4	11.8	6.8	61.2	94.2
Rest Rooms	11.9	13.9	9.6	6.1	58.5	88.1
Cafeterias	21.4	22.4	2.6	10.2	43.4	78.6
Power Generators	22.8	19.9	13.8	6.1	37.3	77.1
Boreholes	22.3	14.4	5.1	17.0	41.3	77.8
Percentage Average Utilisation	25.59					74.37

Table 2 showed the mean percentage state of general school plant utilisation in Government Technical Colleges in South West, Nigeria. Lecture rooms were optimally utilised by a mean of 61.5% while there was 38.5% mean non-optimum utilisation of lecture rooms across the six states in South West, Nigeria. Libraries had mean optimum utilisation and non-optimum utilisation percentages of 30.9 and 68.8 respectively. The mean optimum and non-optimum utilisation percentages of workshops were 26.1 and 73.8 respectively. Laboratories were optimally utilised on the average by 29.8% while there was a mean non-optimum utilisation of laboratories by 70.2%. ICT rooms were of an average optimum utilisation of 23.4% and non-optimum utilisation of 76.6% on the average. Health centres had optimum utilisation of 5.8%, while there was a non-optimum utilisation of health centres by 94.2%, both on the average. Rest rooms were of mean optimum utilisation and non-optimum utilisation of 11.9% and 88.1% respectively. Cafeterias, power generators and boheholes were of mean optimum utilisation percentages of 21.4, 22.8 and 22.3 respectively, while their mean non-optimum utilisation percentages were 78.6, 77.1 and 77.8 respectively. The grand mean state of utilisation of general school plant revealed an optimum utilisation of 25.59% and non-optimum utilisation of 74.37%.

Testing of Research Hypothesis

H₀₁: There is no significant influence of school plant provision and utilisation on students' academic performance in Government Technical Colleges in South West, Nigeria.

Table 3: Summary of Multiple Regression Analysis on the Influence of School Plant Provision and Utilisation on Students' Academic Performance in Government Technical Colleges in South West, Nigeria.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.185 ^a	.034	-.003	109.91077

a. Predictors: (Constant), School_Plant_Utilisation, School_Plant_Provision

Table 3a: ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	22169.775	2	11084.887	.918	.406 ^b
Residual	628179.607	52	12080.377		
Total	650349.382	54			

a. Dependent Variable: Academic_Performance

b. Predictors: (Constant), School_Plant_Utilisation, School_Plant_Provision

Table 3b: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error				Beta	Tolerance
1 (Constant)	92.184	52.256		1.764	.084		
School_Plant_Provision	-33.376	26.328	-.274	-1.268	.211	.397	2.517
School_Plant_Utilisation	47.811	37.203	.278	1.285	.204	.397	2.517

Tables 3a and 3b presented the results of the multiple regression that was calculated to predict the effect of school plant provision and utilisation on students' academic performance. A non-significant regression coefficient was found ($F(2, 52)=.918, p>.05$), with R^2 of .034. This presupposed that only 34% of the variance in the academic performances of the students of government technical colleges in South West, Nigeria was as a result of school plant provision and utilisation. Also, from table 3b, the beta value for school plant provision under the standardized coefficients ($\beta=-.274, p>.05$) showed that school plant provision did not have effect on students' academic performance, while there was also an insignificant infinitesimal effect of school plant utilisation on students' academic performance with the beta value ($\beta=.278, p>.05$). Therefore, the null hypothesis which states that there is no significant effect of school plant provision and utilisation on students' academic performance in government technical colleges in South West, Nigeria was accepted.

IV. Discussion

Going by the state of general school plant provision in the government technical colleges in South West, Nigeria, the grand average percentage provision of the plant meant for general use by the students was 44.73% which was below average as inadequate plant provision and plant not provided both summed up to 55.27%. This study findings therefore agreed with the findings of the studies conducted by Anaele, Amadi and Obed (2016), Agbonghale and Adavbiele (2018), and Asukwo (2018) which all revealed inadequacy of school plant provision in River state, Delta state, and Akwa Ibom state technical colleges respectively.

As revealed by the findings of this study, the grand mean state of general school plant utilisation in the government technical colleges in South West, Nigeria was of 25.59% optimum utilisation which could be considered as being very low while the mean non-optimum utilisation was 74.37%. This showed that the state of utilisation of school plant in the government technical colleges in South West, Nigeria could be said to be poor on a general note. This could have resulted from the complaints by the students which were gotten from informal discussions with them by the researcher in the course of explaining the intention behind the study as applicable to what was expected from the students regarding the response options provided in the checklist under school plant utilisation as premised on both the students accessibility to and the frequency of their usage of the plant provided, coupled with the students' population. Such complaints included inadequate practical lessons they are exposed to as compared with the theories which limited their usage of the plant to which they have access; while some of the plant are not accessible by the students, thus lying idle.

Logically, adequate provision and efficient utilisation of school plant give room for proper acquisition of skills and knowledge as it avails a learner the opportunity to explore better and discover the rudiments of the learning contents he engages in while he does not dwell much in imagination. However, the finding of this study revealed that there was no significant effect of school plant provision and utilisation on students' academic performance in the Government Technical Colleges in South West, Nigeria. It was found out by the researcher through informal discussions with the principals/vice principals of the technical colleges that most of the students engage in apprenticeship outside the school where they usually have access to the equipment/machines used for practicals in their various trades of study. This might have been the cause of no effect of school plant provision and utilisation on students' academic performance in the technical colleges.

V. Conclusion

Conclusion could be reached by this study that most of the school plant meant for general use by the students of the Government Technical Colleges in South West, Nigeria were fairly provided on the average but inadequate. The utilisation of the provided school plant was non-optimum, as most of the school plant were over-utilised by the students on one hand while some were lying idle on the other hand, resulting into inefficiency. The academic performances of the students were not influenced by the state of school plant provision and utilisation in the colleges as shown by this study finding and personally observed by the researcher that the records of academic performances through the years in some of the colleges were very good despite the dilapidated state of plant in the schools.

By implication, the state of school plant provision in government technical colleges is considered worrisome as most of the required plant/equipment which are needed for the attainment of the goals for which the colleges were established are absent, thereby inhibiting the proper implementation of the technical aspect of secondary education in South West specifically, and in Nigeria as a country. The products of these colleges are negatively affected by such situation as they tend to graduate without having a full grasp of what is obtainable in reality with regard to their chosen careers, thus constituting part of the unproductive youths in the society.

For the results of examinations of the students to have been averagely good even with the state of plant/equipment in their various colleges except for few of the colleges where renovation of various forms have been done, it implied that an adequate provision of school plant would have resulted into much better performance than already seen. This would translate into turning out graduates who could really stand on their own having been properly engaged in practical aspects of their trades which would ensure their competencies for self-reliance. The demands of the 21st century which revolve around survival of the fittest cannot be met with the condition of school plant in government technical colleges as the world shifts away day-in-day-out from being certificate-based only to requiring an individual's innovative ability, creativity, and expertise.

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