ASSESSMENT OF SCHOOL FACILITIES UTILIZATION AND STUDENTS ACADEMIC PERFORMANCE IN TECHNICAL AND VOCATIONAL INSTITUTIONS IN NORTHEAST, NIGERIA

Uchechukwu Kizito Ogu, PhD*

Abstract

This paper was designed to study the effect of facilities utilization on the academic performance of technical and vocational students in North East Nigeria. Specifically, it sought to determine among other objectives, the impact of the effective utilization of teaching, learning, welfare/health, sports and recreational facilities on the academic performance of technical and vocational students. In line with the stated objectives, five research questions and five null hypotheses were formulated to guide the study. The study adopted the use of descriptive survey research design with a population of 30 consisting of 6 principals and 24 teachers drawn randomly. An instrument titled Teachers' Utilization of School Facilities and Academic Performance in Vocational Education Questionnaire (TUSFAPVEQ) was used and validated and a reliability index of 0.85 was obtained. Data gathered were analyzed using t-test at 0.05 level of significance. The study found out that internet/ICT facilities, audio-visual aids, library, laboratory, sports and other facilities are not in adequate and sufficient numbers and are not effectively utilized by teachers to enhance teaching and learning. The paper submits that school facilities remain one essential factor for the realization of the goals of secondary education and thus, recommends that both the government and school administrators should make efforts to provide these facilities and also train teachers on how to handle and utilize the facilities.

Keywords: School facilities, facilities utilization, academic performance, technical, vocational education

Introduction

The main purpose of education is to bring about noticeable positive relatively permanent changes in individuals through the acquisition of the right skills, desirable habits, attitudes and values, competencies (both mental and physical), critical, creative and reflective thinking. For this to occur, there has to be adequacy and effective utilization of educational facilities. Where facilities are adequately available, ranges and sets of employability skills would no doubt be noticeable in students.

Facilities in the context of this study refer to human and material resources needed for inculcating skills in students. Human resources include pedagogically trained personnel, workshop attendants and visiting professionals to mention but a few. Material resources on the other hand, include workshops, tools, machines, consumables and other equipment needed in the school for the purpose of enhancing teaching and learning.

The importance of facilities can never be overemphasized. They constitute a strategic factor in organizational functioning. As Oni (1992), noted, they determine to a very large extent the smooth functioning of any social organization or system school inclusive. The availability, adequacy and utilization of both human and material resources are closely correlated with skills acquisition and influence adequacy and high productivity. As Farombi (1998), opined, the wealth of a nation or society could determine the quality of education in that land; emphasizing that a society that is wealthy will establish good schools with quality teachers, learning infrastructures that will ensure that students learn with ease thus bringing about good academic achievement.

Skill acquisition is dependent on resources available for students' consumption and utilization. Lack of skill acquisition may be attributed to lack of qualified human resources. It must be noted that there has been an unprecedented expansion in terms of students' enrolment and number of schools at all levels of education in Nigeria, which has not been matched by the number of human and material resources especially in skill acquisition programmes.

High quality skills training requires qualified instructors, appropriate workshop equipment, adequate supply of materials and practice by the leaners. Functional education cannot be achieved without availability, adequacy and utilization of facilities. This is because facilities constitute a very important resource in the attainment of educational objectives.

Today, most of the school facilities which are supposed to promote and enhance teaching, learning and extra-curricular activities in secondary schools are obsolete and old and therefore pose serious challenges to the 21st Century educational needs of the learners. Others are dilapidated and not suitable to motivate students to learn.

Nwaogu (1985), asserted that no matter the strength of manpower resources in the system, educational processes must require conducive physical accommodation, libraries, furniture and playground. The lack of these instructional facilities can affect negatively the productivity of teachers. Learning takes place better and faster in a school environment with high quality buildings and accommodation than in an environment where they are lacking. Adesina and Ogunsanji (1984), in their recognition of the need for a well-equipped school noted that for effective teaching and learning situations, physical and educational goals should be viewed as being closely interwoven and inter-dependent. Apart from protecting students from sun, rain, heat and cold, the school building represents a learning environment which has a tremendous impact on the learners. Therefore, in order to facilitate this high level of teaching and learning process, there is need for well-planned and organized school facilities. A conducive teaching and learning environment is important to the quality of teachers engaged in the inculcation of desired attributes to the students. It is against this background, that this study examines the effect of facilities utilization on the academic performance of students in secondary schools.

Statement of the problem

Ayeduso (2001) and Fagbemi (1997), discovered that inadequate workshop facilities, insufficient hand tools and materials the ineffective utilization of the facilities are some of the factors contributing to ineffective teaching in vocational and technical education. These factors particularly the ineffective utilization of facilities where available has resulted in poor performance of students in this important aspect of Nigeria's educational system. Where facilities are available but not utilized effectively, learning will not be enhanced in students, as a result their interest in the subjects wans and their performance affected. It is based on the above that this study sought to assess the relationship between the effective utilization of school facilities and students' academic performance in Technical and vocational institutions in North East Nigeria.

Research questions

The following questions were formulated to guide this study:

1. What is the effect of the utilization of teaching facilities on the academic performance of vocational education students in the North East zone of Nigeria?
2. What is the effect of the utilization of learning facilities on the academic performance of vocational education students in the North East zone of Nigeria?
3. What is the impact of the utilization of welfare/health facilities on the academic performance of vocational education students in the North East zone of Nigeria?
4. What is the effect of the utilization of sports facilities on the academic performance of vocational education students in the North East zone of Nigeria?
5. What is the effect of recreational facilities utilization on students' academic performance in vocational education in the North East zone of Nigeria?

Research hypotheses

For the purpose of this research, the following null hypotheses were formulated at 0.05 level of significance:

$H_0$1: There is no significant relationship between teachers' utilization of teaching facilities and academic performance of vocational education students.

$H_0$2: There is no significant relationship between teachers' utilization of learning facilities and the academic performance of vocational education systems.

$H_0$3: There is no significant relationship between teachers' utilization of welfare/health facilities and students' academic performance in vocational education.

$H_0$4: There is no significant relationship between teachers' utilization of sports facilities and students' academic performance in vocational education.

$H_0$5: There is no significant relationship between teachers' utilization of recreational facilities and students' academic performance in vocational education.

Literature review

According to Osaigbovo and Osaigbovo (2021), school facilities refer to the school sites, buildings, equipment and other material resources provided in the school for effective teaching and learning operations. They comprise of location, weather, lighting, ventilation, floor, space per pupil, health and safety conditions, play areas, cafeteria and library.

For Ogbodo (2004), school facilities are synonymous with educational facilities which includes buildings such as classrooms, assembly halls, libraries, laboratories, workshop and instructional, materials. Similarly, Ehiametalor (2001) says school facilities include the site, the building and other infrastructures. He goes further to say that school facility embraces permanent and semi-permanent structures which includes items such as machines, laboratory equipment, the chalk board and office assistances tools such as brooms and cleaning materials.

According to Abraham (2003), school facilities mean all physical facilities and equipment within the school, which are used by members of the school community. All the physical structures in the school fall within this category. Facilities are plants (buildings) equipment, materials (Ehiemetalor, 2001). Whereas, school buildings according to Broome (2003) include classroom, dormitories, libraries and laboratory buildings, staff rooms, teachers,, quarters, examination halls and administrative buildings; educational equipment include such items as machines, audio-visual materials, chalkboards, cleaners' tools and workshop equipment.

Broome (2003), provides a much more comprehensive list of educational facilities and grouped them into two namely:

1. School Building(Anatomy): These are tangible structures, which serves as shelter for educational activities. They include among others, classrooms, laboratories, workshops, teachers,, common rooms/offices, toilets, rest rooms, reading rooms, dispensaries, libraries, hostels/dormitories, dining halls, assembly hall, staff quarters.
2. Equipment (Physiology): School equipment refers to facilities or outputs such as machine and tools, which ease the operation of academic activities. Various equipment's are required in:
    a. Classrooms: For example, desks, chairs, blackboards, cupboards, shelves, dusting dusters, wash hand basins, napkins, teaching aids.
    b. Laboratories: For example, physics, chemistry, biology, agricultural science, languages, geography.
    c. Workshop: For example, woodwork, metal works machineries, electronics/electrical, business studies.

d. Sports/games: For example, football, table tennis, volley ball, net ball, hockey, tourniquet, Short put, high jump stands/crossbars, javelin, hurdles, trophies, jersey, bells, notice boards, electric generator, typewriters, photosetting machines, computers

School facilities have been defined by Ani (2007) as the location of the school buildings, the equipment in the school and other material resources provided in the school for the purpose of enhancing teaching and learning processes. To him school facilities include the fixed and mobile structures and materials in the school such as the classroom buildings, laboratories and laboratory equipment, the school furniture, the chalkboards, tools and machines, the chalk, audio and visual aids.

School facilities can also be taken to mean the site where the school programmes and activities take place or the environment where the school curriculum is implemented. Thus Obi & Ezegbe (2002), defined school facilities as the space interpretation of the school curriculum. In other words, school facilities can be said to be physical expression of the school programmes and activities. It is a consciously designed and controlled environment with the sole aim of promoting teaching and learning activities within the school. It is putting together of facilities to protect the physical well-being of the individuals associated with the school. School facilities are the operational inputs of every instructional programme. The school is like a manufacturing organization where plants and equipment must be in a top operational shape to produce result. Efficiency in the production function depends on the quantity and quality of the facilities. Since the facilities are used in one way or the other in the day-to-day business of the school, there is need for its proper management. Teachers and students are affected and impact by their environments.

Khan and Iqbal (2012) opined that adequate and quality school facilities are the basic ingredients needed for quality education and for achieving the intended goals and objectives of education. Non-availability of these facilities make teaching unproductive and the needed learning will not be achieved. Similarly, Castaldi cited in Peretemode (2001) averred that educational facilities are those things which enable a skillful teacher to achieve a level of instructional effectiveness that far exceeds what is possible when they are not provided. It becomes imperative therefore that school facilities are not only provided but also effectively utilized for the success of the entire educational system.

According to Osuyi et al, (2021), there are three major components of school facilities namely:

1. Infrastructural facilities;
2. Instructional facilities;
3. School physical environment.

Infrastructural facilities include buildings such as administrative block, (which comprises the principals,, office, vice principal and staff rooms, classroom) laboratory, stores, sick-bay, records office, school shop, library, music room, cafeteria, intro technology laboratory, security post, staff quarters,, and school farm as well as storage house, electricity, water supply, sport field.

Instructional facilities are teaching materials and equipment, that comprises laboratory equipment, introductory technological equipment, wall clock, puzzles, television, radio VCD plates and players, piano, flute, chalkboard, cardboards, duster, apparatus for science practical, models, picture charts.

Government policy on school facilities vary, while in some schools, parents buy the textbooks needed for studies, and in some schools, government buys or provides the textbooks and give them free to students. Library books are bought from public funds (taxes). Whatever the government policies maybe, it is the responsibility of the school head (principal or headmaster as the case may be) to put the furniture, equipment, buildings and playing grounds in good condition. The constituents of school physical environment include building and scrape parking lot, playground, sport field, agricultural farm, fire extinguisher, school bus, car park and sand bath. Also, school facilities include mechanical material like technological machines, generator, photocopier machines, computer machines, and plumbing materials

like water taps, bore hole – electrical telecommunication like speakers, radios, network system, security and fire suppression systems.

Research method

The descriptive survey research was adopted for the study. According to Check and Schutt (2012), survey research is a collection of information from a sample of individuals through their responses to questions. Ponto (2015), says it allows for a variety of methods to recruit participants, collect data and utilize various methods of instrumentation.

A questionnaire titled Teachers' Utilization of School Facilities and Academic Performance in Vocational Education Questionnaire (TUSFAPVEQ) adopted for data collection. The population of the study comprises of 6 principals and 24 teachers randomly selected from technical and vocational schools in 5 of the 6 states of the North East zone of Nigeria. 30 questionnaires were administered with the help of research assistants and all 30 were retrieved giving a 100% of return. The questionnaire consisted of 50 items distributed into five (5) sections; A, B, C, D, E, to collect data on teachers' utilization of teaching, learning, welfare/health, sports and school recreational facilities. Each section consisted of five (10) items which were close-ended on 4-point Likert's scale of Strongly Agree (SA) with 4 points; Agree (A) with 3 points; Disagree (D) with 2 points and Strongly Disagree (SD) with 1 point.

Results and discussion

Table 1: Response rate of the respondents

No of questionnaire administered	**No of questionnaire retrieved**
30	**30**

The researcher was able to retrieve 30 of the 30 questionnaires administered which indicates a high response rate.

Table 2: Demographic information of the respondents

S/N	Bio-data	Category	Frequency	Percentage
1.	Status	Principals	6	20.0%
		Teachers	24	80.0%
2.	Gender	Male	25	83.3%
		Female	5	16.7%
3.	Qualifications	Master degree	12	40.0%
		Bachelor degree	15	50.0%
		NCE	3	10.0%
4.	Years of experience	1-5	3	10.0%
		6-10	7	23.3%
		11-15	6	20.0%
		16-20	4	13.3%
		21 years and above	10	33.4%

The table above shows that 6 people representing 20% of the respondents are principals of schools while 24 people representing 80% of the respondents are teachers. Similarly, 25 people representing 83.3% of the respondents are male while there are 5 female teachers representing 16.7% of the respondents.

In addition, 12 people or 40% of the respondents hold a Master degree, while 15(50%) and 3(10%) hold bachelor degree and NCE respectively. On the issue of years of experience, 3(10%) have worked for between 1 and 5 years, 7(23%) have worked for between 6 and 10 years while 6(20%) have worked for

between 11 and 15 years. Similarly, 4(13.3%) and 10(33.3%) have worked for between 16 and 20 years and 20 years and above respectively.

Table 3: Summary of T-test on the opinion of principals and teachers on the effect of teaching facilities utilization on students' academic performance in North East Nigeria

Variables	N	Mean	S.D	T-cal	DF	Prob.	T-critical
Teachers	**24**	**36.3073**	**6.34249**				
				1.414	**598**		**.158**	**1.96**
Principals	**6**	**34.4583**	**4.32364**				
Total	**30**						

The table above shows that the t-calculated value (1.414) is less than the t-critical value (1.96) at 598 degree of freedom at 0.05 level of significance. The observed level of significance P (.158) is greater than 0.05. This means that there is no significant difference in the opinion of teachers and principals on the effect of teaching facilities utilization on students' academic performance in North East Nigeria. Therefore, the null hypothesis is retained.

Table 4: Summary of T-test on the opinion of principals and teachers on the effect of learning facilities utilization on students' academic performance in North East Nigeria

Variables	N	Mean	S.D	T-cal	DF	Prob.	T-critical
Teachers	**24**	**37.5729**	**8.28041**				
			.286	**598**	**.775**	**1.96**	
Principals	**6**	**37.0833**	**8.60643**				
Total	**30**						

The result of the T-test above shows that the t-calculated value (.286) is less than the t-critical value of (1.96) at 598 degree of freedom at 0.05 level of significance. The observed level of significance P (.775) is greater than 0.05. This means that there is no significant difference in the opinions of respondents on the effect of learning facilities utilization on academic performance in technical and vocational schools in North East Nigeria. The null hypothesis is therefore retained.

Table 5: Summary of T-test on the opinion of principals and teachers on the effect of health facilities utilization on students' academic performance in North East Nigeria

Variables	N	Mean	S.D	T-cal	DF	Prob.	T-critical
Teachers	**24**	**30.3368**	**9.05852**				
				.763	**598**	**.100**	**1.96**
Principals	**6**	**28.9148**	**8**	**4.61488**			
Total	**30**						

The result from the T-test above shows that the t-calculated value (.763) is less than the t-critical value (1.96) at 598 degree of freedom at 0,05 level of significance. The observed level of significance P (.100) is greater than 0.05. This means that there is no significant difference in the view of respondents on the effect of provision of welfare/health facilities utilization on academic performance of technical and vocational students in North East Nigeria. Therefore, the null hypothesis is retained.

Table 6: Summary of T-test on the opinion of principals and teachers on the effect of sports facilities utilization on students' academic performance in North East Nigeria

Variables	N	Mean	S.D	T-cal	DF	Prob.	T-critical
Teachers	**24**	**32.1858**	**9.99262**				
			1.321	**998**	**.187**	**1.96**	
Principals	**6**	**29.45837.56410**					
Total	**30**						

The result from the T-test shows that the t-critical value (1.321) is less than the t-critical value (1.96) at 598 degree of freedom at 0.05 level of significance. The observed level of significance P (.187) is greater than 0.05. This means that there is no significant difference in the opinions of respondents on the effect of provision of sports facilities utilization on academic performance of students of technical and vocational in North East Nigeria. Therefore, the null hypothesis is retained.

Table 7: Summary of T-test on the opinion of principals and teachers on the effect of recreational facilities utilization on students' academic performance in North East Nigeria

Variables	N	Mean	S.D	T-cal	DF	Prob.	T-critical
Teachers	**24**	**32.7691**	**8.52837**				
				2.500	**598**		**.013**
Principals	**1.96**						
	6	**36.1250**	**3.77995**				
Total	**30**						

The result from the T-test shows that the t-critical value (2.500) is less than the t-critical value (1.96) at 598 degree of freedom at 0.05 level of significance. The observed level of significance P (.013) is greater than 0.05. This means that there is no significant difference in the opinions of respondents on the effect of provision of recreational facilities utilization on academic performance of students of technical and vocational in North East Nigeria. Therefore, the null hypothesis is rejected.

Conclusion and recommendations

School facilities are effective and important tools for educational development in general and have been proven to have positive impact on students' academic performance. However, the government have not demonstrated enough positive attitude towards the provision of school facilities as studies such as Ojiri (2022) have shown. The findings of this research show that most schools have insufficient teaching and learning facilities and where the facilities are even available, they are not effectively utilized by teachers who are supposed to use them to facilitate learning in students. This.is not because teachers do not want to use the facilities and resource materials to teach but because in some cases, they do not know how to effectively utilize them.

It is on the basis of the above that the following recommendations are made:

1. Government and school administrators urgently need to upgrade teaching facilities to meet up with modern demands of technical and vocational education. Digital facilities should as projectors, flip charts, slide pictures, models should be provided while school administrators should ensure the maintenance of the facilities.
2. School administrators should organize training and re-training workshops for teachers on the effective utilization of the facilities. This is because it is one thing to provide facilities and another to know how to utilize them.

3. School administrators should ensure comprehensive assessment and regular supervision of school facilities in order to determine areas of needs.
4. There should be provision of safe structures, adequate salutary facilities, a balanced visual and thermal environment, sufficient shelter space for work and play, pleasant surroundings, friendly atmosphere and an inspiring environment to enhance the teaching-learning process.
5. There should be proper scheduling of school facilities to allow for accessibility to the community or other public users during school hours without interfering with academic programmes. This will eliminate the burden of duplication of such facilities as conference halls, gymnasium, library, theatre, football field, tennis court, swimming pool and other sporting facilities, thereby integrating the collective effort towards cost effectiveness and enhancing healthy school-community harmonious relationship.

Uchechukwu Kizito Ogu, PhD*
Department Of Educational Foundations,
College Of Education, Zing, Taraba State
ucheogu14@gmail.com, +2348036638947)

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