

**AVAILABILITY OF PHYSICAL AND INSTRUCTIONAL FACILITIES AND ITS
IMPACT ON STUDENT LEARNING OUTCOME IN PUBLIC SECONDARY
SCHOOLS IN OGUN STATE, NIGERIA**

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Abstract

The study examined the availability of physical and instructional facilities and its impact on student learning outcome in public secondary schools in Ogun State, Nigeria. The study adopted the descriptive survey design. Purposive sampling was used to select four hundred and fifty five students from senior secondary class two in the three senatorial districts in the state. Questionnaires, checklists and achievement tests were used as instrument. The hypotheses were analyzed using Pearson Product Moment Correlation for hypotheses (1) and (2) and Multiple Regression was used to test hypothesis (3). The findings of the study revealed that there was no significant relationship between availability of physical facility and student learning outcome in Mathematics ($r = -.049, P > 0.05$), in English ($r = -.081, P > 0.05$) and students learning outcome in behaviour ($r = .042, P > 0.05$). There was no significant relationship between availability of instructional facilities and students' learning outcome in Mathematics ($r = .039, P > 0.05$), in English ($r = .052, P > 0.05$) and students learning outcome in behaviour ($r = .063, P > 0.05$). The Multiple Regression analysis showed that none of the independent variables significantly contributed to student learning outcome. The study concluded that poor academic achievement could have been worse without the availability of the physical and instructional facilities in the schools, Therefore, the government, other stakeholders and the school management should ensure that physical and instructional facilities are provided in such a way that they are up-to-date and appealing to the students so as to have a visible impact on the students learning outcome.

Keywords: *Availability, facilities, Physical facilities, Instructional facilities, Student learning outcome, Public secondary schools*

Introduction

Education through the schools is the driving force for economic success in any nation through the increase in human capital which in turn brings about increase in labour productivity. The secondary school has a key role to play in impacting on the students in such a way that they become useful to themselves, the society and also qualify to gain entrance into the tertiary institution. This impact can be measured through the students' learning outcome which includes the knowledge, skills and values that are the result of the teaching and learning activity in the school. The Federal Republic of Nigeria (FRN), 2004 specifies the objectives of secondary education in the National Policy on Education as:

- i. preparation for useful living within the society and
- ii. preparation for higher education.

It is expected that the resultant impact of the teaching-learning process will achieve the above objectives which can be measured through the student learning outcome.

Learning outcome states what a student will know or be able to do at the end of an instruction. Its focus is on the students' holistic performance. It is the observable, demonstrable and measurable outcome seen on the students after teaching and learning must have taken place. This is usually measured via examinations and observable behaviours. Through learning the students are able to exhibit certain characteristics that show their learning outcome.

According to Watson (2002), learning outcomes refer to something that a student can do now that he could not do previously. It refers to the changes in people due to learning experience. Also, the University of Warwick (2011) defines learning outcome as the skills and knowledge a student will possess upon successful completion of course.

The school is a training and a learning ground where it is expected that positive values would be inculcated in a student for good academic performance and personal success in life. It covers a broad spectrum of students' characteristics and abilities. Ajayi and Yusuf

(2010) opine that Students' learning outcome is the achievement of students after completion of secondary school system in cognitive, affective and psychomotor domains.

The knowledge, skills, attitudes and values expected from a student refer to the different domains of learning. The knowledge relates to the cognitive domain. The attitudes, values and other perceived behaviours relate to the affective domain. The skills and tasks relates to the psychomotor domain. The learning outcomes expected in a student should be all encompassing such that the cognitive, psychomotor and affective domains are fully captured. The school has the responsibility of ensuring that a holistic education is given to the students if the objective of secondary education must be achieved and if a good performance is the target. A student's learning outcome must be observable, measurable and demonstrable.

The learning outcomes set by the school or teachers help to facilitate the exhibited outcome by the student. Schools are not just to produce students who are knowledgeable in relevant subject matter, but are equally expected to produce students with high moral values and respect for humanity. Students' learning outcome is a potent factor that can be used to rate a school's quality. In fact, it gives direction to the student, the school and all other stakeholders on the next step to take towards achieving success.

The outcome could be good or poor which is reflected in the student's results or grades and observable behaviours, skills, and values that are expressed and demonstrated by the student in a particular course or program of study and general life style. Ajayi and Yusuf (2010) explain that it appears that the poor students' learning outcome manifest in poor students' academic performance in both internal and external examinations. Poor students' learning outcome does the school, the student and the society no good but harm. This is a dangerous phenomenon because poor academic performance do not only manifest in examination failure but also in vices such as being rude to the school authority, cultism, substance abuse, rape, examination malpractice and a host of others.

Badru (2015) stated that the May/June Senior School Certificate (SSCE), WAEC 2000 to 2012 showed that there was poor performance in Mathematics which is one of the compulsory subjects to pass in other to gain admission into the tertiary institution. Ajayi and

Osalusi (2013) showed the trend of mass failure in May/June West African Senior School Certificate Examinations (WASSCE) between 2003 and 2010 as follows:

Table 1: Trend of mass failure in WASSCE between 2003-2010.

Year	% with at least five credit passes in English and mathematics	% of candidates without at least five credit passes in English and mathematics
2003	19.26	80.74
2004	18.26	81.74
2005	27.53	72.47
2006	15.56	84.44
2007	25.54	74.46
2008	13.76	86.24
2009	25.99	74.01
2010	24.94	75.06
Average %	21.35	78.65

Source: Public Affairs Department of WAEC, Lagos

This failure rate is worrisome due to its ripple effect on the society especially the high failure rate in mathematics and English which are core subjects to pass before entry into the higher institution. There is need to identify the root cause(s) of the repetitive failure in the external examinations by students and to nip the issue in the bud to avoid educational system collapse in Nigeria especially at the secondary school level. There is also need to identify and boost the effectiveness

and efficiency of the factors that contribute to positive students' learning outcome.

Students' learning outcome does not occur in isolation. It is however hinged on many factors, one of which is the students' learning environment. According to Ali, Haider, Munir, Khan and Ahmed (2013), "the educational environment of the school one attends sets the parameters of students' learning outcomes". This is an indicator to the paramount role that the schools play in establishing the students' learning outcome. The school is at the center of the student's learning outcome and therefore has the responsibility of helping the student attain the desired outcome. Citing Akande (1985), Owoeye and Yara (2011) state that learning can occur through ones interaction with one's environment. The school environment is a key factor in the student's attainment of the desired learning outcome and so should be given adequate consideration by ensuring that it meets the right standard or specification for achievement of quality education.

The school environment is defined by the availability of facilities that aid students learning outcome. For the desired learning outcome to take place, it is imperative that the necessary materials and resources needed are put in place. The facilities define the school. Facilities determine to a large extent the smooth functioning of any organization. It helps the students to develop skills that are necessary for problem solving. No school can function optimally without physical and instructional facilities especially in today's world where knowledge hub differentiates the educated from the uneducated, the developed nation from the undeveloped nation. To support the above, Akomolafe and Adesua (2016) state that good student learning outcome should not be expected where physical and instructional facilities are not available.

Some of the physical facilities include: school buildings, sports centres, canteen, medical facilities, toilet facilities, classroom, chairs, laboratories and libraries and some of the instructional facilities include: computers, projectors, writing boards, textbooks, chalks and so on. Hallak (1990) in Owoeye and Yara (2011) states that facilities form one of the potent factors that contribute to academic achievement in the school system and they include: school buildings, classroom, accommodation, libraries, laboratories, furniture, recreational equipment and other instructional materials and also citing Farrant

(1991) and Farombi (1998), Owoeye and Yara (2011) state that facilities facilitates students learning outcome and they include books, audio-visuals, software and hardware educational technology, size of the classroom, chairs, chalkboards and so on. This therefore means that school facilities, both the physical and instructional facilities are paramount to students learning.

The facilities boost the school quality thereby making it possible to achieve the educational objectives for secondary education. Asiabaka (2008) opines that facilities play a pivotal role in the actualization of educational goals and objectives by satisfying the physical and emotional needs of the staff and students of a school. Similarly, Issah, Abubakari and Wuptiga (2016) citing Ayodele (2000) and Vandiever (2011) state that availability of facilities positively impacts on student academic performance.

Physical and instructional facilities are important motivating factors not just to the students alone but the teachers as well. The facilities help to bond the teacher and the student in the teaching and learning process. It is thus the physical and instructional facilities that give impetus to the teaching and learning process since teaching and learning cannot be done effectively if they were absent. Vandiever in Issah et al (2016) states further that a conducive learning environment is blended with physical facilities. It has been said that a child remembers more of what he sees than that by any other sensory organ alone and so the importance of physical and instructional facilities in achieving quality education cannot be overemphasized.

Statement of the problem

There appears to be poor students learning outcome in public secondary schools. This seems to have contributed to the incidences of student's drop-out due to failure in examination, repetitions and social vices such as examination malpractice, cultism, drug abuse and a host of others. It appears that many public secondary schools across the country lack basic facilities such as libraries, toilets, classrooms, writing boards, and computers. The dilapidated or non-existence of these basic facilities in secondary schools may have contributed enormously to the mass failure witnessed in external examinations and some miscreant behaviours observed in some students. These concerns

paved way for the decision to investigate the impact of availability of physical and instructional facilities on students' learning outcome.

Hypotheses

The following hypotheses were formulated to give direction to the study:

- H0¹ There is no significant relationship between availability of physical facilities and students' learning outcome.
- H0² There is no significant relationship between availability of instructional facilities and students' learning outcome.
- H0³ Physical and Instructional facilities do not significantly influence students' learning outcome jointly.

Methodology

The research design that was adopted in this study was the descriptive survey design. The population of the study comprised senior secondary school 2 in all the public secondary schools in the three senatorial districts in Ogun State. The senatorial districts are Ogun Central, Ogun East and Ogun West. The population of school for the study was 41 and that of teachers and students were 1,800 and 73,696 respectively and the sample for school was 13 and that of teachers and students were 169 and 455 respectively.

The multi-stage sampling technique was used for the sample of this study. Stratified random sampling was used to select a Local Government from each of the senatorial districts, simple random sampling was used to select schools from the Local Governments, and purposive sampling was used to select four hundred and fifty five students in Senior Secondary Class Two. This study adopted the use of checklist, questionnaire and achievement test as instruments. The title of the instrument for the students was Students' Perception on Physical and Instructional Facilities and Learning Outcome Questionnaire (SPPIFLOQ). An achievement test was also administered to the students. The Pearson Product Moment Correlation coefficient (r) was used to determine the reliability of the instrument. The reliability coefficient for Mathematics achievement test was obtained at .319 while English Language achievement test was obtained at -.240 using the test-re-test. Pearson Product Moment Correlation (PPMC) was used to test hypotheses one and two and Multiple Regression was used to

test hypothesis three. The tests were carried out at 0.05 level of significance.

Result of the Hypotheses

Ho¹: There is no significant relationship between availability of physical facilities and students' learning outcome.

Table 2: Relationship between Availability of Physical Facilities and Students' Learning Outcome in Public Secondary Schools

Variable		Math	English	PFAC	IFAC	LEOCB
Mathematics	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	448				
English	Pearson Correlation	.397**	1			
	Sig. (2-tailed)	.000				
	N	448	448			
PFAC	Pearson Correlation	-.049	-.081	1		
	Sig. (2-tailed)	.301	.088			
	N	448	448	164		
IFAC	Pearson Correlation	.039	.052	-.040	1	
	Sig. (2-tailed)	.407	.276	.397		
	N	448	448	448	164	
LEOCB	Pearson Correlation	.076	.037	.042	.063	1
	Sig. (2-tailed)	.106	.439	.373	.186	
	N	448	448	164	164	448

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

NB: PFAC = Physical facilities, IFAC = instructional facilities, LEOCB = Learning outcome (behaviour)

Result from Table 2 indicated that there was no significant relationship between availability of physical facility and students learning outcome in Mathematics ($r = -.049$, $P > 0.05$), in English ($r = -.081$, $P > 0.05$) and students learning outcome in behaviour ($r = .042$, $P > 0.05$). The null

hypothesis was not rejected. There was no relationship between availability of physical facilities and students' learning outcome.

Ho²: There is no significant relationship between availability of instructional facilities and students' learning outcome.

Table 3: Relationship between Availability of Instructional Facilities and Students Learning Outcome in Public Secondary Schools

Variable	Math	English	PFAC	IFAC	LEOCB	
Mathematics	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	448				
English	Pearson Correlation	.397**	1			
	Sig. (2-tailed)	.000				
	N	448	448			
PFAC	Pearson Correlation	-.049	-.081	1		
	Sig. (2-tailed)	.301	.088			
	N	448	448	164		
IFAC	Pearson Correlation	.039	.052	-.040	1	
	Sig. (2-tailed)	.407	.276	.397		
	N	448	448	448	164	
LEOCB	Pearson Correlation	.076	.037	.042	.063	1
	Sig. (2-tailed)	.106	.439	.373	.186	
	N	448	448	164	164	448

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

Result from Table 3 showed that there was no significant relationship between availability of instructional facilities and students' learning outcome in Mathematics ($r=.039$, $P>0.05$), in English ($r=.052$, $P>0.05$) and students learning outcome in behaviour ($r=.063$, $P>0.05$). The null hypothesis was not rejected. There was no relationship between availability of instructional facilities and students' learning outcome.

Ho³: Physical and instructional facilities do not significantly influence students' learning outcome jointly.

Table 4: Regression Coefficients

Coefficients a		Unstandardized		Standardized	T	Sig.
Model		Coefficients	Std. Error	Coefficients		
		B		Beta		
1	(Constant)	25.017	8.403		2.977	.003
	School	.676	.666	.087	1.015	.311
	IFAC	.070	.047	.116	1.481	.141
	PFAC	.036	.051	.056	.719	.473

a. *Dependent Variable: SLEO*

Results from Table 4, indicated that none of the independent variables significantly contributed to the dependent variable.

Discussion of Findings

The result of hypothesis one showed that there was no significant relationship between availability of physical facilities and students learning outcome. The finding of this study disagreed with Limon (2016) study on the effect of adequacy of school facilities on students' performance and achievement in technology and livelihood education. He observed that insufficient school facilities were negatively impacting students learning outcome. The implication of the finding was that physical facilities do not necessarily impact on students learning outcome. The likely reason for this finding could be because physical facilities when isolated from other possible factors that affect students learning such as teacher quality, parental involvement may not have a significant impact on student learning outcome.

The findings of hypothesis two revealed that there was no significant relationship between availability of instructional facilities and students learning outcome. The findings of the study contradict the findings of Ayeni and Olasunkanmi (2015). They found out that availability of instructional facilities had a positive significant relationship with students learning outcome. The study however concurred with that of Egbona (2002). He found that availability of

instructional materials had no significant relationship with students' academic performance. It however will not be ideal to rule out the place of physical and instructional facilities on students learning outcome. It is likely that the result of this finding could have been different if other factors that affect student learning outcome such as teacher quality, parental involvement were put into consideration.

The result of hypothesis three revealed that there was no joint significant impact of physical and instructional facilities on students' learning outcomes. This is to say that none of the independent variables significantly contributed to the dependent variable. The finding of the study disagreed with Effiong and Igiri (2015) results, that there was a positive impact on the achievement of students exposed to instructional materials during lessons. The result of the study contradicted that of Abdu-Raheem (2016) who concluded that students that were taught with instructional materials had better learning outcomes compared to those taught without. The result was contrary to the study of Ekundayo (2012) that revealed that there was a significant relationship between school facilities and the students' achievement in the affective and psychomotor domain. The finding of the study could not support that of Ayeni and Olanokanmi (2015) who examined the relationship between student learning factors and their learning outcome in Economics and found out that availability of instructional facilities had a positive significant relationship with students learning outcome.

Conclusion

The result of the findings however showed that there was no relationship between the dependent and the independent variables. It has been proven from some other research work that physical and instructional facilities aid in the reinforcement of knowledge, skills and students' behaviour and so should be made available in schools. The poor achievement observed in Mathematics and English Language from the finding of this study could have been worse without the availability of physical and instructional facilities. Where the facilities needed to transmit the ideas, skills and morals are not available, then, it would be an uphill task for the school in achieving success.

The correlation coefficient (r) and the multiple regression analysis indicated that there was no significant relationship between

students learning outcome and the availability of physical and instructional facilities. The reason for this could be because the students were actually not utilizing the available facilities as should be or that the physical and instructional facilities that were available were not appealing to the students. The school administrators, teachers should ensure compliance on the part of the students in the use of the available facilities by the students as this would help to boost the students learning outcome.

In a nutshell, the students learning outcome could have been worse without the availability of the physical and the instructional facilities. However, there could be other factors that would combine with physical and instructional facilities to impact strongly on students learning outcome such as teacher quality and parental involvement. The high failure rate witnessed in examinations cannot be totally isolated from lack of use of the available physical and instructional facilities by the students because they do not appeal to them to utilize to their advantage academically.

Recommendations

From the results and findings of this study, the following recommendations were made:

- i. The government should ensure that physical and instructional facilities are made available in all the public secondary schools in a way that they appeal to the students in Ogun state.
- ii. The schools should encourage the students to make use of the available facilities and also teach them the appropriate manner to make use of them. This will disallow indiscriminate and inappropriate use of the facilities such as the classroom, library, laboratory toilet, classroom board, textbooks etc., and will encourage responsibility and accountability on the part of the student.
- iii. The available facilities –physical and instructional should be up-to-date so as to appeal to the students for utilization.

It is said that when the use of a thing is not known, abuse becomes inevitable. In view of the above statement, students are more likely to benefit from the physical and instructional facilities when they appreciate their importance and use same in the schools. This would

likely have a positive effect on the students which would in turn have a positive spillover effect on the society at large.

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