

Relationship Between Learning Environment and Secondary School Students' Academic Performance in Nasarawa North Senatorial District of Nasarawa State-Nigeria

***¹Lega Asoloko Ezekeil, ²Agi Kabiru Musa & ³Charles Long'an Dalla**

^{*1&2}Department of Educational Foundations, Federal University of Lafia. **Email:** legaezekiel@gmail.com ^{*1} agikabirumusa@gmail.com²

Department of Science Education, Federal University of Lafia. **Email:** longancd49@gmail.com³

Abstract

This study examined the relationship between learning environment and academic performance of secondary school students in Nasarawa North Senatorial District of Nasarawa State. The design for the study was correlational research design. The population for the study comprised of all public secondary schools SS2 students in the study area. Through random sampling technique, 384 students were selected for the study. The instrument for data collection was a questionnaire. The instrument was validated and validity index of 0.88 was obtained. A pilot study was carried out and reliability coefficient of 0.74 was obtained. Mean and standard deviation were used to answer the research questions, while chi square statistics was used to resolve the hypotheses at 0.05 level of significance. The findings revealed that there is a significant relationship between facilities in the learning environment and students' academic performance in public senior secondary schools in Nasarawa North Senatorial District of Nasarawa State. It was further revealed that there is a significant relationship between students' attitude to learning in learning environment and their academic performance in public senior secondary schools. It was concluded that students' academic performance in Nasarawa North Senatorial District depends on the state of learning environment. Recommendations were made that the government should inject more funds into the educational system for the procurement of teaching and learning facilities such as building of modern classrooms, laboratories, libraries and furniture among other recommendations.

Keywords: Relationship, Learning, Environment, Academic Performance

Introduction

Education is the bedrock of the development of any nation. It is on this premise that government invest heavily in the education of her citizens. Secondary education, a sub set of the educational level, is very necessary in

human capital formation. It is the very base from which tertiary institutions draw their major students for admission into their different programme. It therefore presupposes that the provision of qualitative education is the basis for the attainment of the goals of secondary education. However, to attain this goals the learning environment must take a proper outlook for the furtherance of the overall educational objectives.

Many scholars have argued that learning environment are variables that can affect students' academic achievement, including performance in examination. Crowe (2023) stated that learning environment encompasses learning resources and technology, means of teaching, modes of teaching, and connections to society and global contexts. The term also includes human behavioural and cultural dimensions, including the vital role of emotion in learning. Contemporary learners deserve learning spaces that meet them individual and collective needs. To meet this challenge, educational leaders must provide physical and cultural environments that are empowering and engaging (Li et al., 2021). Learning environments vary from classroom to classroom and context to context each with unique elements. Learning environment is composed of some components that influence the students' learning curve. These components according to Omar and Awang (2023) includes people, teaching materials, technical tool and learning resources, curriculum, training and instruction, and physical environment/learning space. The people are the individuals that affect the student directly or indirectly through connection or relationship which can contribute to students' growth and success in their career aspect. The teaching materials, technical tools, and learning resources are the teaching materials highly advanced tools or others instructional resources that are aligned with the curriculum as a part of student learning support. The curriculum, training, and instruction are the core foundations of the learning process, they influence one another and play vital roles to facilitate the flow of knowledge and delivery of instructional content/curriculum. The physical environment/learning space refers to the physical setting of the learner's environment which should evoke positive responses and hold the interests of those who inhabit it (Omar and Awang, 2023). They also identified some important factors that may affect learning process to include Intellectual factor which refers to the individual mental level. Learning factors are factors owing to faulty methods of work or study, and narrowness of experimental background which may affect the learning process. Physical factors include health, physical development, nutrition, visual and physical defects, and glandular abnormality. Mental factors are

attitudes like interest, cheerfulness, and open mindedness that are important in the development of personality. Personal factors, such as instincts and emotions, and social factors, such as cooperation and rivalry, are directly related to a complex psychology of motivation. The teacher as an individual personality is an important factor in the learning environment. They are key factors that create a favourable teaching-learning milieu that will make the instructional process easy, enthusiastically adaptable and useful (Closs et al., 2022). The way in which his personality interacts with the personalities of the pupils helps to determine the kind of behaviour which emerges from the learning situation (Gao et al.s, 2020). Environmental factors like classrooms, textbooks, equipment, school supplies, and other instructional materials are the physical conditions needed for learning Oduwaye (2011). Adewuyi (2012) observed that before students can succeed academically, they must feel safe, both physically and mentally, and to have a safe learning environment, students must feel welcomed, supported, and respected. Personalizing learning helps students develop skills including thinking critically, using knowledge and information to solve complex problems, working collaboratively, communicating effectively, learning how to learn, and developing academic mind sets that would greatly increase students' engagement. More so, students must feel connected to teachers, staff, and other students. Schools can nurture these connections by focusing on students' social and emotional learning (SEL). Students' must also feel supported by all those connected to their learning experience like teachers, classmates, administrators, family, and community members for a higher academic feat (Rohana, 2009). Productive learning environments are crucial to students' academic, emotional and social success in school. A conducive learning environment doesn't just happen on their own or by chance. They should be created through conscious procedures like interacting with students in a positive manner, exhibiting positive behaviours that would promote learning activities in the learning environment (Dinh et al., 2022). The school learning environment should be well structured, organized, studied and well managed for the attainment of the secondary school education goals and to enhance students' academic performance.

The issue of poor academic performance of students in Nigeria has been of much concern to the government, ministry of education, parents, teachers and even student themselves. The quality of education not only depends on the teachers as reflected in the performance of their duties, but also in the effective co-ordination of the school learning environment. The physical characteristics

of the school have a variety of effects on teachers, students and the learning process, poor light, noise, high level of carbon dioxide in classroom, and inconsistent temperatures make teaching and learning difficult. It has been observed that poor maintenance and ineffective ventilation systems leads to poor health among students as well as teachers, which lead to poor performance and higher absentee.

These factors can adversely affect students' behavior and lead to higher levels of frustration among teachers and poor learning attitude among students. For education in the secondary school to be effective the environment needs to be conducive for learning, allowing the student space and time to interact within the learning and teaching process. Creating and maintaining stimulating learning environment can be achieved through effective classroom organization, interactive and a whole display of climate of innovation.

The school learning environment is a well-structured, organized and planned place or setting where teaching and learning occur. The place or setting can be in the classroom situation, library (school library and classroom library), school laboratory where experiment and practical works are carried out by students, technical workshop. Thus, the school or learning environment remains an important area that should be studied and well managed.

Consequently, there are factors affecting student's academic performance in learning environment. Shamaki (2015) and Duruji (2014) asserted that learning environment that is not free of barriers or noise, gas, smoke, pollution and so on can constitute health hazard, which in turn affect or reduce student's concentration in learning environment where by affecting their academic performance. Markets and garages located near schools have always posed a threat to student's academic performance. Noise and pollution from these sources have always endangered student life and concentration.

Other factors according to Shamaki (2015) and Duruji (2014) complementing environment and socio-economic factors to produce high academic achievement and performance include good teaching, counseling, good administration, good building. Dilapidating buildings, lack of mental stimulating facilities that is characterized with low or no sitting arrangement will also be destructive. However, they lamented that the innovation environment do stimulate head start learning and mental perception, not only that, it has also been proved that students that comes from stimulating

environment with laboratory equipment or those that are taught with rich instructional aids, pictures and allowed to demonstrate using their functional peripheral nerves like eyes, hands and sense of taste performed better than those trained under theoretical and canopy of abstraction.

Shamaki, (2015) conducted a study to determine the influence of learning environment on students' academic achievement at senior secondary school level in Yobe state, Nigeria and found a significant difference between the mean performance of students taught in an ideal learning environment and that of students taught in a dull learning environment. Adamu (2015) examined the impact of learning environment on the Performance of Students in public secondary schools in Taraba State, Nigeria and the findings revealed a significant difference in the performances of the two groups (Experimental and Control) implying that a classroom building; class with adequate furniture; class with small class population and the use of instructional materials has positive impact on the performance of students in junior Secondary schools. In a related development, Opeyemi, (2020) conducted a study to examine how school environment influence students' academic performance in junior secondary schools in Ogun State. The result of the study indicated that students from a school with adequate facilities, good teachers and favourable environment perform better than those from schools with fewer facilities, unqualified teachers and less enabling environment. In another research by Duruji (2014), which examines the impact of learning environment on students' performance in external examination in secondary schools in Ota, Nigeria considering factors such as school facilities, class size, school location and school plant planning, aesthetics, maintenance culture, sanitation, conveniences. The study established that "the state of learning environment and quality of infrastructure, together with the extent to which they are being maintained has a strong bearing to academic performance among students". Furthermore, Ezike (2018) investigated classroom environment and students' academic interest as correlates of achievement in Senior Secondary Chemistry students in selected Public Secondary Schools in Ibadan, Oyo State, Nigeria. The result showed significant relationships between classroom environment and academic achievement, while combined contribution of classroom environment and academic interest was equally significant. Gilavand (2016) in a study whose aim is to investigate the impact of environmental factors (schools' open space, noise, lighting and paintings in educational institutions) on learning and academic achievement of elementary students, found that environmental factors (appropriate colouring, lighting of educational

environment and schools' open space) has impact on learning and academic achievement of elementary school students.

The innovation environment does stimulate head start learning and mental perception, not only that, it has also been proved that students that comes from stimulating environment with laboratory equipment or those that are taught with rich instructional aids, pictures and allowed to demonstrate using their functional peripheral nerves like eyes, hands and sense of taste performed better than those trained under theoretical and canopy of abstraction. This study therefore focuses on the relationship between learning environment and academic performance of secondary school students' in Nasarawa North Senatorial District of Nasarawa State.

Statement of Problem

The learning environment in secondary schools are characterized with dilapidated classrooms, equipment and facilities which have effect on students' academic performance. Some of the classrooms are over populated with students beyond the normal capacity of the classroom. In this case, the teachers find it difficult to communicate to large population of students and move freely due to lack of space in the classroom. Students have poor sitting arrangement due to over congested students in the sitting chairs in the classroom. Moreover, the attitude, motivation, and interest exhibited by learners in learning environment has constituted a lot of problem, such as his readiness to learn, his entry behavior, is he/she interested in what he/she is expected to learn? Shortage of learning facilities, negative attitude to learning and general intelligence could have effect on students' academic performance in the learning environment. What then is the relationship between learning environment and public secondary school students' academic performance in Nasarawa North Senatorial District of Nasarawa State?

Purpose of the Study

The objectives of this study are to:

1. investigate the relationship between facilities in the learning environment and students' academic performance in public secondary schools in Nasarawa North Senatorial District of Nasarawa State.

2. examine the relationship between the students' attitude in the learning environment and their academic performance in public secondary schools in Nasarawa North Senatorial District of Nasarawa State.

Research Questions

1. What is the relationship between facilities in the learning environment and students' academic performance in public secondary schools in Nasarawa North Senatorial District of Nasarawa State?
2. What is the relationship between the students' attitude in the learning environment and their academic performance in public secondary schools in Nasarawa North Senatorial District of Nasarawa State?

Research Hypotheses

1. There is no significant relationship between facilities in the learning environment and students' academic performance in public secondary schools.
2. There is no significant relationship between students' attitude to learn in learning environment and their academic performance in public secondary schools.

Methodology

This study employed the correlational research design to investigate the relationship between learning environment and secondary school students' academic performance in Nasarawa North Senatorial District of Nasarawa State. The population of this study comprised of all students in public senior secondary school class two (SS2) in Nasarawa North Senatorial District of Nasarawa State. The instrument for data collection was questionnaire. The constructed questionnaire has two main parts, Section A and B. Section A measures the personal data of the respondents such as name of school, gender, class etc. While section B contains twenty (20) items which were structured to elicit information on the relationship between learning environment and public secondary school students' academic performance in Nasarawa North of Nasarawa State. The instrument was personally administered by the researcher. A random sampling technique was employed to select 384 students for the study in fifteen public senior secondary schools. The instrument was face validated by experts in measurement and evaluation from Federal University of Lafia to logical validity of 0.88. Pilot study was conducted to

further assess the reliability of the instrument, resulting to a reliability index of 0.074. Chi-square statistical test was used to resolved the hypotheses at a 0.05 level of significance, providing insights into the relationship between learning environment and students' academic performance in public senior secondary schools in Nasarawa North Senatorial District of Nasarawa State.

Results

Research Question 1: What is the relationship between facilities in the learning environment and students' academic performance in public secondary schools in Nasarawa North Senatorial District of Nasarawa State?

Table 1: Mean and Standard Deviation of the relationship between facilities in the learning environment and students' academic performance in public secondary schools

S/N	Responses	N	Mean	SD	Df
1	Agreed	370	112.3840	12.4368	382
2	Disagreed	14	101.4612	16.1248	

Table 1 revealed the mean and standard deviation of responses of respondents that agreed (M=112.3840, SD=12.4368) and those that disagreed (M=101.4612, SD=16.1248). The mean of respondents agreed is higher than those that disagreed

Research Question 2: What is the relationship between the students' attitude in the learning environment and their academic performance in public secondary schools in Nasarawa North Senatorial District of Nasarawa State?

Table 2: Mean and Standard Deviation of the relationship between students' attitude in the learning environment and their academic performance in public secondary schools

S/N	Responses	N	Mean	SD	Df
1	Agreed	374	121.4326	13.2468	382
2	Disagreed	10	106.2548	14.4126	

Table 2 revealed the mean and standard deviation of responses of respondents that agreed (M=121.4326., SD=13.2468) and those that disagreed (M=106.2548, SD=14.4126). The mean of respondents agreed is higher than those that disagreed

Hypothesis

There is no significance relationship between facilities in the learning environment and students' academic performance in public senior secondary schools.

Table 3: Chi-Square analysis on the relationship between facilities in the learning environment and students' academic performance in public senior secondary schools

S/N	Responses	Observed Frequency	Expected Frequency	X ² Cal	X ^{2tab} Cal	Df	P-Val	Alpha Level	Decision
1	Agreed	370	384	249.21	14.067	382	0.02	0.05	Sig
2	Disagreed	14							

The table above revealed that the X² calculated value of 249.21 is higher than the X² table value of 14.067. p-value of 0.02 is less than the alpha level of significance 0.05 at 382 degree of freedom. The null hypothesis is therefore rejected. This implies that there is a significant relationship between facilities in the learning environment and students' academic performance in public senior secondary schools in Nasarawa North Senatorial District.

Hypothesis Two: There is no significant relationship between students' attitude to learning in the learning environment and their academic performance in public senior secondary schools.

Table 4: Chi-Square analysis on the relationship between students' attitude to learning in the learning environment and their academic performance in public senior secondary schools

S/N	Responses	Observed Frequency	Expected Frequency	X ² Cal	X ^{2tab} Cal	Df	P-Val	Alpha Level	Decision
1	Agreed	374	384	249.822	14.067	382	0.02	0.05	Sig
2	Disagreed	10							

The table above revealed that the X² calculated value of 249.822 is higher than the X² table value of 14.067. p-value of 0.02 is less than the alpha level of significance 0.05 at 382 degrees of freedom. The null hypothesis is therefore rejected. This implies that there is a significant relationship between students' attitudes to learning in the learning environment and their academic performance in public senior secondary schools in Nasarawa North Senatorial District.

Discussion

The first hypothesis revealed that there is a significant relationship between facilities in the learning environment and public senior secondary school students' academic performance. This implies that when facilities are available and meaningfully utilized in the learning environment it can boost students' academic performance. This finding is in agreement with the finding of Shamaki (2015) and Duriji (2014) who in their study confirmed a strong and positive relationship between quality of school facilities and students' academic achievement. This finding shows that facilities in the learning environment relates to academic performance of students.

The result from the second finding revealed that there is a significant relationship between students' attitude to learning and their academic performance in public senior secondary schools. This implies that the attitude students show or display toward learning has tremendous effect on their academic achievement. This finding is in line with Ezike (2018), who stated that positive attitude of students toward learning may be both the cause and the result of success, whereas negative attitude is demonstrated by students due to lack of success. It was stressed further that positive attitude do not necessarily bring academic success if these attitudes are not accompanied by effective strategies that enable students to take advantage of instructional opportunities and if they are not clearly presented to them. This shows that students' attitude to learning relates to their performance.

Conclusion

Based on the findings, the following inferences were drawn:

1. It was evident that there is a significant relationship between facilities in the learning environment and students' academic performance in public senior secondary schools in Nasarawa North Senatorial District of Nasarawa State.
2. It was further proved that there is a significant relationship between students' attitude to learning in learning environment and their academic performance in public senior secondary schools.

Recommendations

Based on the findings and conclusion of this study, the following recommendations were made.

1. The government should inject more funds into the educational system for the procurement of teaching and learning facilities such as building of modern classrooms, laboratories, libraries and furniture.
2. Parents should show active interest in their children's education by providing them with rich instructional materials and also make the home environment conducive for learning by ensuring homework habit, parental support and guidance, intellectual stimulations etc.
3. Students who show positive interest and attitude in learning should be encouraged by parent and teachers while those who display negative attitude should be dissuaded.

Reference

- Adamu, D. E. (2015). impact of learning environment on the Performance of Students in public secondary schools in Taraba State, Nigeria *Educational studies* 30 (2) 134-143
- Adewuyi, D. A. (2012). Comparison between school effectiveness, characteristics and development. Classroom instructions strategies in the United States and Nigeria. *Journal for African* 27 (1&2) 263-287
- Closs, L., Baxter, G. & Mroz, A. (2022). Effective learning environments in higher education: Impacts on student performance and satisfaction. *Frontiers in Education*, 7: 876352
- Crowe, S. M. (2023). Creating a conducive learning environment for all students in higher education (Doctoral dissertation). Available: https://typet.io/papers/creating-a-conducive-learning-environment-for-all-students-lolzt3wv?utm_source=chatgpt
- Dinh, T. C., Nguyen, P.-B.-T., Nguyen, T. T. T., Ngo, X. M. T. & Nguyen, A. T. (2022). The predictors of students' satisfaction and academic achievements in online learning environment in higher education. *Vietnam Journal of Education*, 132: 80-92

- Duruji K. C. (2014). Impact of learning environment on students' performance in external examination in secondary schools in Ota, Nigeria. *Journal of Education and Ethics* 10 (3) 80-90
- Ezike, L. K. (2018). Classroom environment and students' academic interest as correlates of achievement in Senior Secondary Chemistry students in selected Public Secondary Schools in Ibadan, Oyo State, Nigeria. *Journal of Higher Education Policy and Management* 40(5) 420-431
- Gao, X., Li, Y. & Wang, J. (2020). Student satisfaction as a mediator of learning environment and academic performance. *International Journal of Education Development*, 73: 102-09
- Givayand, M. A. (2016). The impact of environmental factors on learning and academic achievement of elementary students in Kwara State Nigeria. *Journal of Higher Education* 20(4) 130-139
- Li, X., Zhang, W. & Zhao, Y. (2021). The role of learning environment in academic success: Evidence from vocational colleges. *Educational Research and Reviews*, 16(4): 112-12.
- Oduwaye R. O. (2011). Learning environment and school management. Lagos: Scholastic and Allied Production Ltd
- Omar, M. S. & Awang, M. I. (2023). The learning environment as a predictor of higher order thinking skills. *International Journal of Evaluation and Research in Education*. 12(1): 239-50
- Opeyemi, J. A. & Murainah, T. H. (2020). Effect of learning environment on the performance of students in Business Studies in junior secondary school in Ogun State Nigeria. *International Journal of Management and Social Science Research* 2(5) 80-94
- Rohana, K. (2009). The quality of learning environment and academic performance from students' perception, *International Journal of Business and Management*. 4(4) 171-173
- Shamaki, A. A. (2015). Influence of learning environment on students' academic achievement at senior secondary school level in Yobe state,

Nigeria. *International Journal of Educational Administration and Policy Studies*. 9(3) 49-54