

SCHOOL ENVIRONMENT AS A CORRELATE OF STUDENTS' ACADEMIC PERFORMANCE IN
PUBLIC SECONDARY SCHOOLS IN ANAMBRA STATE

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Abstract

This study examined school environment as a correlate of students' academic performance in public secondary schools in Aguata Education Zone of Anambra State. The study was guided by three research questions and three null hypotheses. The null hypotheses were tested at the 0.05 level of significance. A correlational research design was utilized for the study. The population comprised 2,964 SS2 students in public secondary schools in Aguata Education Zone of Anambra State. A sample of 297 students was drawn from the population using proportionate stratified and simple random sampling techniques. Two instruments developed by the researcher, namely the School Environment Questionnaire (SEQ) and the Mathematics Test Questions (MTQ), were used for data collection. The face validity of the instruments was established by three experts, while construct validity was determined using the Principal Component Analysis approach. The reliability of the instruments was ascertained using the Cronbach Alpha procedure. An average reliability coefficient of 0.810 was obtained, indicating that the instruments were reliable for the study. The collected data were analyzed using the Pearson Product Moment Correlation Coefficient (PPMC). The findings revealed a significant relationship between physical school environment, psychological school environment, and students' academic performance, whereas no significant relationship was found between social school environment and students' academic performance. Based on the findings, it was recommended that the government should ensure the provision of adequate physical facilities in schools and allocate funds for their maintenance to enhance students' academic performance. Principals should also foster supportive, safe, and inclusive school environments where students feel valued, respected, and emotionally secure. The results of this study have added to the existing body of knowledge by affirming the existence of a positive and significant relationship between school environment and students' academic performance in public secondary schools in Aguata Education Zone of Anambra State.

Keywords: School, Environment, Student, Academic Performance

Introduction

The aim of education is to develop cognitive skills, critical thinking and problem-solving skills for individual successful and national development. Secondary education is a very important level in the educational system because it helps to prepare students for tertiary institutions, vocational training or entry into the workforce, through the process of teaching and learning. Students' academic performance a measure of the quality of instruction gained by students from teachers. Sivathaasan and Velnampy cited in Ogunbodede and Oribhabor (2022) noted that students' academic performance is their achievement of educational goals. Students' academic performance is crucial for determining their position which helps teachers, principals and decision-makers to evaluate them for proper decision-making.

Students' academic performance in some public secondary schools in Aguata Education zone of Anambra State appears poor. Poor student's academic performance is a problem that needs solution in order to ensure that the goals of education at the secondary school level is achieved. Poor students academic performance in some public secondary schools in Aguata Education zone of Anambra State could be as a result of lack of adequate educational facilities, poor students' reading habit, family issues, the method of instructional delivery by teachers, lack of adequate school environment and so on. Students' academic performance in this study was ascertained through marks from mathematics test scores administered to senior secondary school (SS II) students in some public secondary schools in Aguata Education zone of Anambra State. This study focused on school environment as it relates to students academic performance in public secondary schools in Aguata Education zone of Anambra State.

School environment is a learning environment. Williams and Clint (2023) opined that school environment is the set of facilities such as classrooms, infrastructure, health, sanitation, teacher-student relations, moral or social values, etc which the school provides for effective teaching and learning. Lee (2024) defined school environment as a space where students can feel safe and supported in their pursuit of knowledge and be inspired by their surroundings. School environment is made up of all spaces in the school and around the school which where academic activities take place. There are various things that comprise the school environment. School environment is a combination of physical, social, psychological, cultural, and learning environments (Jain, 2024). School

environment is made up of the physical, social, and academic (curricular) environment (Corral-Verdugo et al. cited in Tapia-Fonllem et al., 2020). The school environment consists of the physical, psychological, and instructional environment (Watts, 2023). This study examined, physical, psychological and social school environment.

Physical school environment is the external part of the environment. Lee (2024) maintained that a school physical environment is made up of all the tangible aspects of a learning space which comprised the physical facilities such as: the classroom design, libraries, laboratories, playgrounds, sports facilities and the physical safety and security facilities in the school. The physical infrastructure of a school constitutes its physical environment (Williams & Clint, 2023). The structure of physical school environment among other factors could influence the performance of students. Teachers and students will feel relaxed to learn in a good and safe school environment.

Psychological school environment of the school constitute the standard, expectations, the diversity and inclusivity of all in the school programme. Nanda et al. (2019) noted that psychological school environment is all the conditions that occur relating to relationships in the school. This aspect of the environment describes the mental feeling and activities in the school. Psychological school environment has to do with building of trust and creating a safe and welcoming environment for all students. Psychological school environment helps to encourage students' engagement, participation, asking questions, taking risks, and receive feedback in the school. It is concerned with how students feel about their learning. Psychological school environmental include the negative or positive effects of spaces on people who use them. It also includes the impact of environmental stressors like noise or crowding, the positive effect of natural environments, and the features associated with increased well-being and performance of students and teachers.

Psychological school environment has to do with the emotional well-being of the students which is vital for build resilience in them Williams and Clint (2023). It involves recognizing of one's own feelings and the feelings of others, and then developing effective ways for handling those feelings. The psychological school environment is an invisible measure of feelings which could be positive or negative. There is need for teachers to always focus not just in instructional delivery but also have the capacity to monitor the students to find out whether they are passing through any kind of mental issues which could affect their feelings and influence their social environment.

School social environment has to do with social relationships in the school. (Jain, 2024) opined that school social environment consists of the school culture which includes the shared values, beliefs, peer relationships, students-teacher relationships and teacher-teacher relationships. A positive social school environment enhances a sense of belonging and encourages positive interactions in the school. The school is a social setting where interrelationship is inevitable, therefore social school environment is a very important aspect of school environment.

The quality of interactions between teachers and students could motivate students to pay attention during teaching and learning and also develop zeal for learning. Meer (2023) stressed that building supportive and collaborative school environment is important because it could help to improve the academic performance of students. The quality of interactions between teachers and students influences the classroom atmosphere and students' academic performance (Jain, 2024). Despite the fact that school environment play important role in teaching and learning in the school, observation by the researcher showed that their present state in some public secondary schools in Aguata Education zone of Anambra State is not good. Uche and Ekiugbo (2023) reported that students' experience physical discomfort in schools due to overcrowded classrooms, inadequate toilet facilities, and an unsatisfactory building design which has a negative impact on their academic performance.

One of the ways of ensuring the development of any society is through the academic performance of students. If students' academic performance continues to improve, the society or nation is sure of steady development because the output from the school which are students (graduates) will still be the input in the society. If students' academic performance is poor, they will turn out to be problems in the society instead of future nation builders. Observation indicated that students' academic performance in some public secondary schools in Aguata Education zone of Anambra State appears poor and fluctuating. The fluctuating academic performance of students could be as a result of poor study habit of students, inadequate management of educational facilities, stress, family influence, poor study habits, poor school environment and so on. It is based on this backdrop that this study examined school environment as correlates of students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Statement of the Problem

Academic performance of students in public secondary schools has continued to be a major concern for educators, parents, and policymakers. Despite efforts to improve educational outcomes through curriculum reforms, teacher training, and provision of instructional materials, many students still perform below expectations in external and internal examinations. One factor that has been increasingly recognized as influencing students' academic success is the school environment, particularly its psychological aspects, such as the level of support, teacher-student relationships, peer interactions, safety, and overall school climate. In the Aguata Education Zone, observation suggest that students face various environmental challenges that may affect their learning, including overcrowded classrooms, inadequate teacher support, and poor student morale. However, there is limited empirical research specifically examining how these aspects of the school environment correlate with students' academic performance in this region. Without a clear understanding of the relationship between the school environment and

academic performance, interventions may fail to address the underlying factors contributing to low performance. Therefore, it becomes necessary to investigate the extent to which physical, psychological and social aspects of the school environment influence students' academic performance in public secondary schools within the Aguata Education Zone of Anambra State. This study filled this gap by providing evidence on the relationship between the school environment and students' academic performance, offering insights that could guide school administrators, teachers, and policymakers in creating conditions conducive to improved academic performance.

Purpose of the Study

The main purpose of this study was to examine school environment as correlates of students' academic performance in public secondary schools in Aguata Education zone of Anambra State. Specifically, the study sought to:

1. determine the relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.
2. verify the relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.
3. examine the relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Research Questions

The study was guided by the following research questions:

1. What is the relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State?
2. What is the relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State?
3. What is the relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State?

Hypotheses

The following null hypotheses further guided the study and were tested at 0.05 level of significance:

1. There is no significant relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.
2. There is no significant relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.
3. There is no significant relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Method

Correlational research design was used for this study. The population comprised 2964 SS2 students in public secondary schools in Aguata Education zone of Anambra State. A sample size of 297 was drawn using proportionate stratified and simple random sampling technique. Three research questions and three null hypotheses guided the study. The hypotheses were tested at 0.05 level of significant. Two instruments structured by the researcher was used for data collection. The instruments were titled: "School Environment Questionnaire (SEQ)", and "Mathematics Test Questions (MTQ)". One expert from Measurement and Evaluation and two experts from Educational Management established the face validity of the instruments. The experts were all from the Department of Educational Foundations in the Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus. The construct validity of the instruments was explored using Principal Component Analysis approach. The reliability of the instruments was ascertained using Cronbach Alpha procedure. The average reliability coefficient value of 0.810 was obtained and the instrument was considered reliable. Four research assistants helped in the administration and collection of the instruments. Out of the 297 instruments administered, 288 was successfully retrieved and used for data analysis. Pearson Product Moment Correlation Coefficient (PPMC) was used to answer the research questions and test of significance of correlation was used to test hypotheses at 0.05 level of significance. All the analysis was carried out using Statistical Package for Social Sciences (SPSS) version 27.

Results

The collected data were analyzed in line with the research questions and hypotheses and the results were shown in tables below:

Research Questions 1: What is the relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State?

Table 1: Pearson (r) of the relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Sources of variation		Physical school environment	Students' academic performance	Remark
Physical school environment	Pearson (r) N	1.00 288	0.767 ^{xx} 288	High positive relationship
Students' academic performance	Pearson (r) N	0.767 ^{xx} 288	1.00 288	

^{xx}(0.767) = High positive relationship

Result from Table 1 showed the relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State. The Pearson (r) obtained showed a value of 0.767. This meant that there was a high positive relationship ($r= 0.767$, $N = 288$) between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Research Questions 2: What is the relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State?

Table 2: Pearson (r) of the relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Sources of variation		Psychological school environment	Students' academic performance	Remark
Psychological school environment	Pearson (r) N	1.00 288	0.371 ^{xx} 288	Low positive relationship
Students' academic performance	Pearson (r) N	0.371 ^{xx} 288	1.00 288	

^{xx}(0.371) = Low positive relationship

Table 2 showed the relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State. The Pearson (r) obtained showed a value of 0.371. Therefore, there was a low positive relationship ($r= 0.371$, $N = 288$) psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Research Questions 3: What is the relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State?

Table 3: Pearson (r) of the relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Sources of variation		Social school environment	Students' academic performance	Remark
Social school environment	Pearson (r) N	1.00 288	0.505 ^{xx} 288	Moderate positive relationship
Students' academic performance	Pearson (r) N	0.505 ^{xx} 288	1.00 288	

^{xx}(0.505) = Moderate positive relationship

Result from Table 3 displayed the relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State. The Pearson (r) obtained

showed a value of 0.505. Hence, there was a moderate positive relationship ($r = 0.505$, $N = 288$) between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Test of Hypotheses

The null hypotheses were tested at 0.05 level of significance in order to confirm the relationship between school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Hypothesis 1: There is no significant relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Table 4: Test of significance of relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Sources of variation		Physical school environment	Students' academic performance	Remark
Physical school environment	Pearson (r) sig. (2-tailed)	1.00	0.767 ^{xx}	Significant
	N	288	288	
Students' academic performance	Pearson (r) sig. (2-tailed)	0.767 ^{xx}	1.00	
	N	288	288	

^{xx} correlation is significant at the 0.05 level (2-tailed).

The result of the correlation between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State was displayed in Table 4. The value of 0.767 with associating probability value of 0.001 obtained was. Since the p-value of 0.001 was less than 0.05 level of significance, the null hypothesis of no significant relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State was rejected ($r, 288 = 0.767$, $p\text{-value} = 0.001$). Hence, there is a significant relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Hypothesis 2: There is no significant relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Table 5: Test of significance of relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Sources of variation		Psychological school environment	Students' academic performance	Remark
Psychological school environment	Pearson (r) sig. (2-tailed)	1.00	0.371 ^{xx}	Significant
	N	288	288	
Students' academic performance	Pearson (r) sig. (2-tailed)	0.371 ^{xx}	1.00	
	N	288	288	

^{xx} correlation is significant at the 0.05 level (2-tailed).

The correlation between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State is shown in Table 5. The value obtained was 0.371 with a probability value of 0.02 which was less than 0.05 level of significance. The null hypothesis of no significant relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State was rejected ($r, 288 = 0.371$, $p\text{-value} = 0.02$). Invariably, there is significant relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Hypothesis 3: There is no significant relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Table 6: Test of significance of relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State.

Sources of variation		Social school environment	Students' academic performance	Remark
Social school environment	Pearson (r) sig. (2-tailed)	1.00	0.505 ^{xx}	Not Significant
	N	288	288	
Students' academic performance	Pearson (r) sig. (2-tailed)	0.505 ^{xx}	1.00	
	N	288	288	

^{xx} correlation is significant at the 0.05 level (2-tailed).

In Table 6, the result of the correlation social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State was shown. The value obtained was 0.505 with associating probability value of 0.064 which was less than 0.05 level of significance. Therefore, the null hypothesis of no significant relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State was not rejected ($r, 288 = 0.505, p\text{-value} = 0.064$). In other words, there is no significant relationship social school environment and students' academic performance.

Discussion of findings

The discussion of the findings was presented based on with the result from the research questions and hypotheses. They are presented as follows:

Relationship Between Physical School Environment and Students' Academic Performance in Public Secondary Schools in Aguata Education zone of Anambra State

The findings of this study showed that there is high positive relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State. Also, there is significant relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State. This implies that adequate physical school environment provides a positive educational climate suitable for teaching and student learning and the result would be good students' academic performance. In other words, it would not be easy for students to attain high academic performance in poor physical school environments which are not conducive and lack the necessary physical facilities.

This finding supports that of Ayodele and Gegelesho (2023) which maintained that physical school environment is significantly related with students' academic performance. Even though, the studies were conducted in different geographical locations, their findings still agree possibly because secondary level of education was used to conduct the two studies. Also the agreement in the findings also reveal that physical school environment is important for teaching and learning. Dirty, noisy and unsafe school environment would not make students to feel relaxed and be well engaged in their learning. There is need for schools to maintain good physical school environment that is safe for teaching and learning and for the realization of school goals.

Relationship Between Psychological School Environment and Students' Academic Performance in Public Secondary Schools in Aguata Education zone of Anambra State

The relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State is low positive. The result of the study also portrayed that there is significant relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State. It also depicts that students need to have a sense of belonging and safety in their school environment so that they will concentrate in the teaching and learning for improved academic performance. An unfriendly and chaotic learning environment would not promote good academic performance. This result supports that of Edgerton and McKechnie (2023) which asserted that psychological school environment is significantly related to students' academic performance. The reason for the agreement in the findings could be because of the closeness of the time of conducting the two studies

Relationship Between Social School Environment and Students' Academic Performance in Public Secondary Schools in Aguata Education zone of Anambra State.

The result of this study indicated that there is a moderate positive relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State. The study also revealed that there is no significant relationship between social school environment and students' academic performance in public secondary schools in Aguata Education zone of Anambra State. Human relations is important in social settings like school but the level of students' engagement in social relationships may not be a factor that will decide their academic performance. Ozuluonye et al. (2023) carried out a study in public secondary schools in Enugu State which revealed that social school environment significantly relates with students' academic performance. The finding is not supported by the finding of this study. The reason could be attributed to the difference in the geographical location of the studies.

Conclusion

Conclusion was drawn based on the results of this study. The findings revealed a high positive and significant relationship between physical school environment and students' academic performance in public secondary schools in Aguata Education Zone of Anambra State. The results also showed a low positive and significant relationship between psychological school environment and students' academic performance in public secondary schools in Aguata Education Zone of Anambra State. Furthermore, there was a moderate positive relationship between social school environment and students' academic performance in public secondary schools in Aguata Education Zone of Anambra State. However, the relationship between social school environment and students' academic performance was not statistically significant. Therefore, it was concluded that adequate physical and psychological school environments would enhance students' academic performance in public secondary schools in Aguata Education Zone of Anambra State.

Recommendations

The following recommendations were made in line with the results of this study ;

1. Government should ensure that all the necessary physical school facilities are provided in schools and principals should also solicit support from the host community, Parent Teachers Association (PTA), Alumni groups and other individual donors for the provision and maintenance of physical school facilities.
2. Promotion of students' confidence, and psychological well-being should be encouraged
3. Although the study revealed no significant relationship between social school environment and students' academic performance, school authorities should continue to promote a positive and supportive social environment because a healthy social atmosphere can still improve students' interaction and academic success.

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