

INFLUENCE OF ACADEMIC ENVIRONMENT ON ACHIEVEMENT OF SENIOR SECONDARY SCHOOL STUDENTS IN ENUGU EDUCATION ZONE OF ENUGU STATE

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Abstract

The study investigated the influence of academic environment on achievement of senior secondary school students in Enugu Education Zone of Enugu State. Three specific purposes and three research questions guided the study. Descriptive survey research design was adopted. Population for the study consisted of 1863 teachers in public secondary schools in Enugu Education Zone. 373 (204) rural and urban (169) teachers which represent 20% of the population were used as sample size for the study. Questionnaire was used as the instrument for data collection. The researcher administered the copies of questionnaire, with the help of three research assistants were briefed on how to administer and retrieve questionnaires. Data collected on research questions relating to the study were analyzed using descriptive statistics such as mean, standard deviation and t-test. The analysis revealed that; physical environment influence students' academic achievement (3.10). The result of the hypothesis equally revealed that there was significant difference in the mean response score of respondents in rural and urban area on the influence of physical environment on students' academic achievement in Enugu Education Zone. The study highlighted the significant influence of various aspects of the academic environment physical, emotional, and social on the achievement of senior secondary school students in the Enugu Education zone of Enugu State, Nigeria. The results indicated that both students in rural and urban areas experience similar impacts from these environmental factors, suggesting that the academic environment plays a crucial role in the educational success of students across different locales. It was recommended that: schools should invest in improving the physical infrastructure of educational facilities, ensuring classrooms are adequately equipped with learning materials, technology, and safe, inviting spaces that promote effective learning.

Keywords: Academic Environment and Academic Achievement

Introduction

Education has played a pivotal role in shaping individuals and communities, driving progress and advancement. Education is defined as the aggregate of all the processes designed to encourage the development of knowledge, attitudes, and skills for sustained national development. According to Arikewuyo (2019), education is an activity that can take place in formal or informal settings, the formal setting refers to the education that takes place within the four walls of a school where activities are systematically structured in order to achieve learning whereas the informal setting refers to the education we receive from our parents, in our churches, from elders and society. Therefore, being educated in Nigeria is relevant as it empowers individuals to contribute meaningfully to societal development, tackle challenges effectively, and participate actively in the country's progress. Through education, individuals engage in formal learning experiences, gaining the tools and competencies necessary for personal growth, professional success, and societal contribution (UNESCO, 2015). However, in Nigeria like in many other countries, education is often measured by academic performance.

Academic performance refers to how well students are doing in their studies, including their grades in exams, assignments, and overall achievements in their academic endeavors.

Academic performance is a critical aspect of education as it serves as a yardstick to measure students' understanding of the subjects being taught and their ability to apply that knowledge in real-world scenarios. Academic performance plays a crucial role in determining the achievement of educational goals in Nigeria. Therefore, Education is seen as a tool for social, economic, and political development in the country while academic performance becomes a key indicator of whether the educational system is effectively delivering on its objectives. According to UNESCO (2015), although academic performance in Nigeria has shown some improvement in recent years. However, challenges still exist in ensuring high academic performance across all levels of education. In Enugu State, academic performance data shows disparities in achievement among students from different socio-economic background (Nkongho, 2023). UNESCO (2022), it also found that academic performance, specifically in secondary education, can be impacted by learning environmental issues such as teacher shortages, overcrowded classrooms, and outdated teaching materials. These learning environmental challenges have hindered students' ability to learn and achieve their academic potential and have contributed to lower overall academic performance levels in Enugu Education Zone.

Learning is a fundamental aspect of achieving educational objectives as it is the process by which individuals acquire knowledge, skills, and behaviors through study, experience, or teaching. It plays a crucial role in the educational system by enabling students to comprehend, apply, and internalize information, which ultimately contributes to their academic success and personal development. Research has shown that creating a supportive learning environment is essential for improving learning outcomes and achieving educational objectives. A positive learning environment fosters a sense of belonging, enhances learning experiences, and promotes academic success. Fisher and Baird (2023), defined learning environment as the physical, social, and psychological context in which learning occurs. This definition emphasizes the multidimensional nature of the learning environment, highlighting its impact on students' cognitive, emotional, and social development. However, Jennings and Greenberg (2019), stated that the learning environment plays a crucial role in shaping the academic performance of students. It encompasses a range of factors, including physical spaces, emotional support, social dynamics, and resource availability (Jennings and Greenberg, 2019).

The physical learning environment, including classroom design, noise levels, and access to resources, directly influences student learning. Adeyemi (2019) revealed that a well-designed classroom characterized by adequate lighting, comfortable seating, and organized spaces can contribute to improved focus and reduced distractions. In line with this assertion, a study conducted by Shultz (2020), demonstrated that students in environments with optimal lighting and temperature settings showed higher levels of engagement and better overall performance than their peers in less conducive settings. Furthermore, the presence of resources such as libraries, laboratories, and technology tools significantly enhances learning opportunities. These submissions suggest that appropriate learning environment may influence academic achievement

The emotional and psychological aspects of the learning environment, including teacher-student relationships and peer support dynamics, also play a critical role in influencing academic performance. According to UNESCO (2015), supportive learning atmosphere where students feel safe to express themselves is essential for their emotional well-being and academic motivation. Positive teacher-student relationships foster a sense of belonging, which is instrumental in motivating students to excel academically. On the other hand, a negative atmosphere characterized by bullying or lack of support can lead to anxiety, decreased motivation, and ultimately poorer academic performance. Baker, Bridger and Ricks (2018), further supports this idea by showing that students who reported feeling connected to their

peers and teachers were more likely to perform well academically compared to those who felt isolated.

The social context within the learning environment also affects student academic performance. This includes the values, beliefs, and expectations of the school community, as well as the cultural backgrounds of the students. Babalola (2016) highlights that students from diverse cultural backgrounds often face unique challenges that can impact their academic success, such as language barriers and cultural disconnection. Schools that actively promote inclusivity and cultural awareness tend to create environments where all students can thrive. Engaging families and communities in the educational process is another critical factor. Moreover, peer interactions and the overall social dynamics within the learning environment can affect how students perceive academic challenges. Collaborative learning atmosphere encourages teamwork and peer support, which can lead to improved problem-solving skills and academic performance. Conversely, overly competitive environments may exacerbate stress and hinder performance, particularly for students who struggle academically.

A teacher is a professional educator who plays a crucial role in facilitating learning, guiding students, and shaping their intellectual, social, and emotional development. According to Akande (2017), a teacher is not only responsible for imparting knowledge and skills but also for motivating, inspiring, and nurturing students to reach their full potential. Teachers serve as role models, mentors, and facilitators of learning, creating a supportive environment where students can thrive and grow academically and personally. Tella (2017), revealed that student engagement is a crucial factor in academic success and retention. Therefore, by examining and effect of learning environment on academic performance, teachers can enhance student engagement, motivation, and participation in the learning process. Babalola (2016), found that a supportive and positive learning environment has been linked to improved academic performance and learning outcomes among students and teachers play a significant role in creating an atmosphere that fosters learning, collaboration, and critical thinking, leading to enhanced educational achievement. Furthermore, Adeyemi (2019), revealed that a conducive learning environment can contribute to students' overall well-being and mental health. Therefore, examining and implementing strategies for promoting a conducive learning environment for students by teachers in secondary schools is essential for enhancing student engagement, improving learning outcomes, supporting student well-being, and preparing students for future success.

Nevertheless, the location of senior secondary schools significantly influences the academic environment, which in turn affects student achievement. Ogundipe and Nwogbo (2023), indicates that urban schools often provide superior resources, including access to qualified teachers and educational materials, compared to their rural counterparts. In addition, Akintunde, Olatunji and Obiora, (2022), revealed that the socio-economic status of a location plays a pivotal role in shaping the academic environment, affecting students' motivation and engagement. As a result, students in well-resourced urban areas tend to perform better on academic assessments than those in less advantaged settings (Odeyemi & Usoro, 2023). Studies on the influence of academic environment on the achievement of senior secondary school students in Nigeria reveals gaps, particularly regarding specific factors influencing this dynamic (Akande, 2017; Ogundipe & Nwogbo, 2023). Many studies have focused on general environmental factors without delving into nuanced elements, such as parental involvement or community support. Furthermore, there is a lack of longitudinal studies that track changes in academic achievement relative to evolving academic environments over time, indicating the need for more comprehensive research in this area (Saliu, Adebayo & Okanlawon 2023). Thus, this study examines the influence of academic environment on students' academic achievement among students in Enugu Education Zone of Enugu State.

Statement of the Problem

The present state of the academic environment in secondary schools in Enugu Education Zone is characterized by various factors that affect students' ability to learn effectively. These factors may include overcrowded classrooms, inadequate infrastructure and facilities, limited access to educational resources, outdated teaching methods, and lack of teacher-student interaction. These issues contribute to a suboptimal learning environment that may hinder students' academic progress and engagement. The researcher was worried that these problems have far-reaching and detrimental consequences to students' academic achievement and well-being. Students may experience decreased motivation, poor academic performance, low self-esteem, and disengagement from the learning process. Inadequate learning environments can also contribute to some problems such as increased dropout rates, and limited opportunities for students to reach their full potential. Furthermore, the absence of a conducive learning environment can impact teachers' job satisfaction, effectiveness, and overall morale, ultimately affecting the quality of education provided to students. The ripple effect of a suboptimal learning environment extends beyond the classroom, impacting the community, economy, and society at large. Given the critical role of the learning environment in shaping students' educational experiences and outcomes, it is imperative to address the identified problems and develop effective strategies for creating a conducive learning environment in secondary schools in Enugu Education Zone. Thus, this study examines the influence of academic environment on achievement of senior secondary school students in Enugu Education Zone of Enugu State.

Purpose of the Study

The general purpose of this study is to examine influence of academic environment on achievement of senior secondary school students in Enugu Education Zone of Enugu State. Specifically, the study sought to:

1. find out the influence of physical environment on students' academic achievement in Enugu Education Zone.
2. find out the influence of emotional environment on students' academic achievement in Enugu Education Zone.
3. find out the influence of social environment on students' academic achievement in Enugu Education Zone.

Research Questions

The following research questions guided this study:

1. What is the influence of physical environment on students' academic achievement in Enugu Education Zone?
2. What is the influence of emotional environment on students' academic achievement in Enugu Education Zone?
3. What is the influence of social environment on students' academic achievement in Enugu Education Zone?

Hypotheses

The following null hypotheses were tested at 0.05 degree of significance:

1. There is no significant difference in the mean response score of respondents in rural and urban area on the influence of physical environment on students' academic achievement in Enugu Education Zone.
2. There is no significant difference in the mean response score of respondents in rural and urban area on the influence of emotional environment on students' academic achievement in Enugu Education Zone

3. There is no significant difference in the mean response score of respondents in rural and urban area on the influence of social environment on students' academic achievement in Enugu Education Zone

Methods

Descriptive survey research design was used for the study. This is because descriptive survey helps researchers to gather information about the characteristics, attributes, or opinion of population or phenomenon. This study was conducted in Enugu Education Zone of Enugu State. This area comprises of Enugu North, Enugu East and Isi Uzo Local Government Area, Enugu State. Population for the study consisted of 1863 teachers in public secondary schools in Enugu Education Zone. 373 (204 rural and urban 169) teachers which represent 20% of the population were used as sample size for the study. Simple random sampling technique was used to sample 10 public secondary schools out of 33 public secondary schools in Enugu Education Zone. Questionnaire was used as the instrument for data collection. The questionnaire was validated by three experts, two in Educational Management and one from Measurement and Evaluation unit of Mathematics and Computer Education Department, all in the Faculty of Education, Enugu State University of Science and Technology (ESUT). The researcher obtained an introductory letter from the Head, Department of Educational Management, ESUT in order to administer questionnaire to respondents. The researcher administered the copies of questionnaire, with the help of three research assistants who were briefed on how to administer and retrieve questionnaires. The instrument was administered on the days agreed between the researcher, the assistants and the respondents. The administered instrument was collected on the spot. However, after data collection, it was found that 3 copies of the questionnaire were filled incorrectly, thus only 370 copies of the questionnaire were used for data analysis. This gave a percentage return rate of 99.2%. Data collected on research questions relating to the study were analyzed using descriptive statistics such as mean, standard deviation and t-test. The decision rule is that any item with mean 2.50 and above on responses was regarded as Agree (A), while below (2.50) was considered as Disagree (D). For hypotheses, when the calculated t-value was equal or greater than the critical t-value, the null hypotheses were rejected. On the other hand, when the calculated t-value was less than the critical t-value the null hypotheses were accepted.

Results

Research Question One: What is the influence of physical environment on students' academic achievement in Enugu Education Zone?

Table 1: Mean Scores and Standard Deviation of Respondents on the influence of physical environment on students' academic achievement

S/ N	Influence of physical environment on students' academic achievement	Urban X	N 166 SD	= Rural X	N =204 SD	Total X	Deci
1	Adequate classroom space promotes better concentration.	3.53	0.68	3.49	0.53	3.51	A
2	Access to learning materials enhances understanding.	3.31	0.59	3.38	0.59	3.35	A
3	Good lighting improves students' engagement.	1.59	0.51	3.43	0.89	2.51	A
4	Clean and safe school facilities motivate attendance.	1.78	1.14	3.42	0.62	2.60	A

5	Comfortable seating arrangements support longer study sessions.	2.60	0.59	2.88	0.81	2.74	A
6	Availability of technology aids in modern learning techniques.	3.31	0.66	3.25	0.67	3.28	A
7	Well-ventilated classrooms reduce fatigue and distraction.	3.35	0.51	3.50	0.68	3.43	A
8	Organized school environment fosters discipline and focus.	3.64	0.51	3.06	0.29	3.35	A
Grand Mean/ SD		2.89	0.65	3.30	0.64	3.10	A

Results from the table revealed that teachers in rural (3.30) and urban (2.89) location agree that physical environment influence students' academic achievement. The overall average mean of 3.10 signifies influence of physical environment on students' academic achievement in Enugu Education Zone.

HO 1: There is no significant difference in the mean response score of respondents in rural and urban area on the influence of physical environment on students' academic achievement in Enugu Education Zone.

Table 2: T-Test of Difference between the Mean Response Score of rural and urban area on the influence of physical environment on students' academic achievement

Variables	N	X	SD	Df	Sig	P-value	Decision
Rural	204	3.30	0.64	368	0.05	0.42	Accept Ho
Urban	166	2.89	0.65				

The table shows that the calculated P-value is 0.42 while the sig is 0.05. Since the calculated p-value (0.42) is greater than the 0.05, the null hypothesis was rejected. It then shows that there was significant difference in the mean response score of respondents in rural and urban area on the influence of physical environment on students' academic achievement in Enugu Education Zone.

Research Question Two: What is the influence of emotional environment on students' academic achievement in Enugu Education Zone based on location?

Table 3: Mean Scores and Standard Deviation of Respondents on the influence of emotional environment on students' academic achievement

S/N	influence of emotional environment on students' academic achievement	Urban X	N = 166 SD	Rural X	N = 204 SD	Total X	Deci
9	Supportive teacher-student relationships boost confidence.	2.51	1.02	3.47	0.65	2.99	A
10	Positive peer interactions enhance motivation.	3.65	0.58	3.36	0.55	3.51	A
11	Students' emotional well-being encourages active participation.	3.07	0.46	3.34	0.82	3.21	A
12	Safe emotional environment reduces anxiety during exams.	3.41	0.91	3.87	0.47	3.64	A
13	Recognition of achievements increases self-esteem.	1.48	0.65	3.41	0.65	2.45	D
14	Compassionate communication fosters student engagement.	2.98	0.64	3.40	0.65	3.19	A

15	Emotional support systems help in overcoming challenges.	3.49	0.68	3.41	0.65	3.45	A
16	Stress management programs promote mental health.	2.92	0.86	3.28	0.87	3.10	A
17	Open discussions about feelings can enhance understanding.	3.47	0.80	3.34	0.63	3.41	A
18	A nurturing environment encourages risk-taking in learning.	3.20	0.64	3.44	0.63	3.32	A
Grand Mean/ SD		3.02	0.72	3.43	0.66	3.23	A

Results from the table revealed that teachers in rural (3.43) and urban (3.02) agree that emotional environment influence students' academic achievement. The overall average mean of 3.23 signifies that emotional environment influence students' academic achievement in Enugu Education Zone.

HO 2: There is no significant difference in the mean response score of respondents in rural and urban area on the influence of emotional environment on students' academic achievement in Enugu Education Zone.

Table 4: T-Test of Difference between the Mean Response Score of rural and urban area on the influence of emotional environment on students' academic achievement

Variables	N	X	SD	Df	Sig	P-value	Decision
Rural	204	3.43	0.66	368	0.05	0.12	Accept Ho
Urban	166	3.02	0.72				

The table shows that the calculated P-value is 0.12 while the sig is 0.05. Since the calculated p-value (0.12) is greater than the 0.05, the null hypothesis was rejected. It then shows that there is significant difference in the mean response score of respondents in rural and urban area on the influence of emotional environment on students' academic achievement in Enugu Education Zone.

Research Question Three: What is the influence of social environment on students' academic achievement in Enugu Education Zone based on location?

Table 5: Mean Scores and Standard Deviation of Respondents on the influence of social environment on students' academic achievement

S/ N	Influence of social environment on students' academic achievement	Urban X	N = 166	=	Rural X	N = 204	Total X	Deci
			SD			SD		
19	Collaborative group work fosters teamwork skills.	3.27	0.52		3.06	0.99	3.17	A
20	Interaction with peers enhances problemsolving abilities.	3.46	0.76		3.41	0.55	3.44	A
21	Extracurricular activities build social connections.	3.31	0.59		3.25	0.67	3.28	A
22	Positive role models inspire academic aspirations.	2.60	0.59		3.38	0.59	2.99	A
23	Community involvement enriches learning experiences.	2.15	0.63		3.43	0.24	2.79	A
24	Diverse social backgrounds promote cultural understanding.	3.28	0.55		3.43	0.51	3.31	A
25	Family support influences students' academic goals.	1.77	0.59		3.27	0.74	2.52	A

26	Networking opportunities enhance future prospects.	3.39	0.66	3.07	0.27	2.78	A
27	Participation in social events increases school pride.	1.88	0.75	3.68	0.53	2.78	A
28	Friendships formed in school can encourage academic success.	3.31	0.59	3.32	0.77	3.32	A
Grand Mean/ SD		2.84	0.62	3.33	0.59	2.76	A

The table revealed that the respondents in urban area agreed with majority of the items (2.84). On the other hand, the respondents in rural area also agreed with majority of the items with an average mean of (3.33). The overall average mean of 2.76 signifies that social environment influence students' academic achievement in Enugu Education Zone.

HO₃: There is no significant difference in the mean response score of respondents in rural and urban area on the influence of social environment on students' academic achievement in Enugu Education Zone.

Table 6: T-Test of Difference between the Mean Response Score of rural and urban area on the influence of social environment on students' academic achievement

Variables	N	X	SD	Df	Sig	p-value	Decision
Rural	204	2.84	0.62	368	0.05	0.25	Accept Ho
Urban	166	3.33	0.59				

The table shows that the calculated P-value is 0.25 while the sig is 0.05. Since the calculated p-value (0.25) is greater than the 0.05, the null hypothesis was rejected. It then shows that there was significant difference in the mean response score of respondents in rural and urban area on the influence of social environment on students' academic achievement in Enugu Education Zone.

Summary of Major Findings

With respect to the analysis above, the following major findings were deduced;

1. Physical environment influence students' academic achievement (3.10). There was significant difference in the responses of respondents based on location.
2. Emotional environment influence students' academic achievement (3.23). There was significant difference in the responses of respondents based on location.
3. Social environment influence students' academic achievement (2.76). There was significant difference in the responses of respondents based on location.

Discussion

The study suggested that the physical academic environment significantly influences the achievement of students in the Enugu Education Zone. Factors such as classroom conditions, availability of learning resources, and infrastructure play a pivotal role in shaping student outcomes. Research by Adeogun and Afolabi (2022), supports this finding by emphasizing the importance of physical facilities in schools as vital contributors to student performance. Access to well-equipped laboratories, libraries, and learning materials promotes a conducive learning atmosphere and, consequently, better academic results. However, Akintunde, Olatunji and Obiora, (2022), did not support the finding and argued that external socioeconomic factors, rather than the immediate physical environment, might have a stronger influence on academic achievement. For instance, Okwu (2023) posits that students' motivation and background play a more significant role than merely the physical aspects of their academic surroundings. The researcher contends that while those external factors are indeed important, the findings indicate that improvement in physical facilities can create an optimal learning environment that

enhances student performance, regardless of rural or urban settings. The consistent responses from both locations point to a universal need for better physical resources in education.

Findings revealed that the emotional academic environment, encompassing aspects like teacher-student relationships, peer interactions, and overall school climate, was found to significantly impact student achievement, with no significant difference between rural and urban respondents. According to a study by Adeyemi (2019), positive teacher-student relationships and a supportive school climate correlate strongly with academic motivation and achievement, asserting that emotional well-being is critical for students' success in a learning environment. Conversely, Ogundipe and Nwogbo (2023), argued that emotional resilience and individual student characteristics could mitigate the influence of the emotional environment. A study by Umezuruike (2022) indicated that personal coping strategies and internal motivation may determine academic performance more than the school's emotional climate. The researcher believes that while personal characteristics cannot be undervalued, the collective emotional atmosphere within schools plays a crucial role in fostering an environment conducive to learning. When students feel supported and valued by their teachers and peers, they are more likely to engage actively in their education. Thus, enhancing the emotional academic environment is vital, particularly in fostering resilience and motivation among students.

The findings revealed that the social academic environment, which includes factors like social interactions, community involvement, and extracurricular activities, was observed to greatly influence the achievements of students in the Enugu Education Zone. The social networks that students cultivate play a significant role in their educational success. Research by Nkongho (2023) highlights that students who are actively involved in social and extracurricular activities tend to perform better academically. Such activities encourage teamwork, develop leadership skills, and create a sense of belonging, all of which can contribute to enhanced academic achievement. However, UNESCO (2015) argued that social distractions could impede academic performance. For example, Ugwu, Obi and Okafor (2022) suggest that excessive focus on social engagements could detract from time spent on academic pursuits, thus negatively affecting student grades. The researcher posits that while there can be distractions, the positive aspects of a rich social academic environment far outweigh the negatives. Building a supportive social community in schools encourages collaboration and peer motivation, essential ingredients for academic success. Creating avenues for healthy social interactions should be prioritized in schools to ensure that they enhance rather than hinder students' educational journeys.

Conclusion

The study highlighted the significant influence of various aspects of the academic environment physical, emotional, and social on the achievement of senior secondary school students in the Enugu Education zone of Enugu State, Nigeria. The results indicated that both students in rural and urban areas experience similar impacts from these environmental factors, suggesting that the academic environment plays a crucial role in the educational success of students across different locales.

Educational Implications of the Study

This study's findings have important educational implications for policy makers, school administrators, and educators in Enugu State and beyond. The significant impact of the physical, emotional, and social academic environments on student achievement suggests that educational policies must prioritize enhancements in these areas. Schools should aim to provide facilities that are not only functional but also physically appealing to create an inviting learning atmosphere. Furthermore, recognizing the importance of emotional support can lead to initiatives centered around mental health, promoting resilience and a positive mindset among students. Lastly, fostering social relationships through collaborative and community-based

learning strategies can help cultivate an educational culture that supports student interaction and camaraderie.

Recommendations

The study recommended that:

1. Schools should invest in improving the physical infrastructure of educational facilities, ensuring classrooms are adequately equipped with learning materials, technology, and safe, inviting spaces that promote effective learning. Regular maintenance and upgrades should be prioritized to create an environment conducive to academic success.
2. Educational institutions should implement programmes that focus on the emotional wellbeing of students. Training counselors and mental health practitioners to work within schools can foster a supportive atmosphere where students feel valued, understood, and motivated to achieve.
3. Schools should encourage collaborative learning and peer interaction through group projects, extracurricular activities, and community engagement initiatives. These efforts will help students build strong social connections that can enhance their overall academic experience and achievement.

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