Transforming Learning: The Role of School-Related Factors in Student Achievement

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Abstract:

This study focuses on the exploration of school-related factors that affect the academic performance of students in public high schools in Kwara State, Nigeria. The main objective of this study is to identify and analyze how classroom management, teacher personality, physical environment, and teacher-student ratio contribute to student learning outcomes. This study uses a quantitative approach with a type of correlational descriptive research. Data was collected through structured questionnaire surveys filled out by teachers and students, as well as in-depth interviews with several principals. Data analysis was performed using descriptive and inferential statistics, including Pearson correlation analysis and multiple regression. The results of the study show that classroom management and teacher-student ratio have a significant influence on students' academic performance. Teachers' personalities were also found to have a positive impact, although not as much as the other two factors. Meanwhile, the physical environment, while important, has a relatively smaller influence on learning outcomes. These findings suggest that the interaction between these various factors overall affects students' academic achievement. The implications of this study emphasize the importance of paying more attention to effective classroom management and determining the optimal teacher-student ratio to improve students' academic performance. In addition, the results of this study can be used as a basis for policymakers and education practitioners in designing more effective strategies to improve the quality of education in Nigeria. This research also opens up opportunities for more comprehensive follow-up research in understanding the complexity of factors affecting academic performance in various educational contexts.

Key Words: *School Facilities, School Related Factors, Student's Academic Performance, Public Secondary Schools*

INTRODUCTION

The quality of education is one of the main indicators of a nation's progress (Friedman et al., 2020; Alam et al., 2020; Goczek et al., 2021). In Nigeria, particularly in Kwara State, the quality of education in upper secondary schools is still a serious concern (Shittu et al., 2021; Atanda & Olaifa, 2022; Atolagbe, 2024). Students' graduation rates and academic achievement often do not meet the expected standards (Barbera et al., 2020; Pinquart & Ebeling, 2020; Toutkoushian et al., 2021). This is interesting to research because education is the

main foundation in the development of quality human resources (Stofkova & Sukalova, 2020; Mulang, 2021; Piwowar-Sulej, 2021). A good education not only produces knowledgeable individuals, but also contributes to social and economic development (Saravanakumar, 2020; Mohamed et al., 2021; Сагикызы et al., 2021). Therefore, understanding the factors that affect students' academic performance is very important to be raised in academic discussions. The importance of a conducive learning environment and positive interaction between teachers and students as the main key to achieving optimal learning outcomes (Naz & Rashid, 2021; Cayubit, 2022; Rusticus et al., 2023).

The main problem faced in the education system in Kwara State is the low academic performance of students in high school. Although various efforts have been made by the government and schools to improve educational standards, the results achieved are still far from expectations. One of the crucial problems identified is ineffective classroom management. Poor classroom management can disrupt the teaching and learning process and reduce student motivation and involvement in learning activities. In addition, teachers' personalities and the school's physical environment are often overlooked as important factors that affect students' academic performance. The high teacher-student ratio is also a serious problem because it reduces the quality of interaction between teachers and students. Thus, the focus of this study is to identify and analyze school-related factors that affect the academic performance of students in Kwara State, Nigeria.

Previous research has shown various factors that affect students' academic performance. Cents-Boonstra et al. (2021) in their research revealed that effective classroom management contributes significantly to increasing student learning motivation and engagement. This study emphasizes that good classroom management can create a conducive learning environment and support academic achievement. Dawabsheh et al. (2020) found that the physical environment of the school, including facilities and infrastructure, plays an important role in supporting the learning process. Adequate facilities such as comfortable classrooms, well-equipped laboratories, and a good library can improve the quality of student learning. Meanwhile, Sakineh & Ali. (2020) in his research showed that teachers' personalities and positive interactions between teachers and students have a significant influence on academic performance. Teachers who have a pleasant personality and can establish good relationships with students can increase learning motivation and student learning outcomes.

Although various studies have been conducted to identify factors that affect students' academic performance, there are still significant gaps in this study. Previous research has tended to focus on one or two factors separately without considering the complex interactions between these factors. In addition, there has been no research that comprehensively explores how these factors interact and influence students' academic performance in cultural and social contexts in Kwara State, Nigeria. This study aims to fill the gap by adopting a

more holistic and comprehensive approach in analyzing school-related factors that affect students' academic performance.

The novelty of this research lies in the holistic approach used to analyze various school-related factors that affect students' academic performance. Unlike previous studies that tend to focus on one aspect only, this study combines analysis of classroom management, teacher personality, physical environment, and teacher-student ratio. In addition, the study also considers the unique cultural and social context in Kwara State, Nigeria, which can influence how these factors interact and affect students' academic performance. Thus, this study not only enriches the academic literature on the factors affecting students' academic performance, but also provides a strong empirical basis for better decision-making in improving the quality of education in Nigeria and other regions with similar characteristics.

The main objective of this study is to identify and analyze school-related factors that affect the academic performance of students in public high schools in Kwara State, Nigeria. Thus, the results of this study are expected to make a significant contribution in efforts to improve the quality of education and academic performance of students in Nigeria. By comprehensively identifying and analyzing these factors, this study is expected to provide deeper insights into how to improve the quality of education in public high schools in Kwara State.

RESEARCH METHODS

This study uses a quantitative approach with a type of correlational descriptive research (Essel et al., 2022; Taherdoost, 2022; Ansori et al., 2023). This approach was chosen because it allows researchers to measure and analyze the relationship between different variables, such as classroom management, teacher personality, physical environment, and teacher-student ratio, as well as student academic performance. The research was conducted in a public high school in Kwara State, Nigeria, with the research locations including several schools in Ilorin West, Ilorin South, and Ilorin East. The full addresses of some of the research sites are Ilorin West Secondary School, No. 45 Unity Road, Ilorin; Ilorin South Secondary School, No. 12 Fate Road, Ilorin; and Ilorin East Secondary School, No. 8 GRA Road, Ilorin. The selection of these schools is based on the availability of data and a good representation of the student and teacher populations.

The data collection technique used in this study is a survey using a structured questionnaire (Aithal & Aithal, 2020; Adeoye-Olatunde & Olenik, 2021; Norman & Paramansyah, 2024). The questionnaire is designed to measure the perception of teachers and students towards various school-related factors that affect academic performance. In addition, in-depth interviews were conducted with several principals and teachers to obtain additional and contextual information regarding the implementation of educational policies and the conditions of the learning environment. Demographic data such as age,

gender, educational background, and teaching experience are also collected to aid in data analysis. Data collection was carried out in a three-month period, from January to March 2024.

The data analysis techniques used in this study include descriptive and inferential statistical analysis. Descriptive statistics were used to describe the characteristics of the sample and the distribution of the research variables. Meanwhile, Pearson's correlation analysis was used to test the relationship between independent variables (classroom management, teacher personality, physical environment, and teacher-student ratio) and dependent variables (student academic performance). In addition, multiple regression analysis was carried out to determine the relative influence of each independent variable on students' academic performance. All data analysis was carried out using SPSS statistical software version 25 to ensure the accuracy and validity of the research results (Siedlecki, 2020; Wiltshire & Ronkainen, 2021; Guzik & Więckowska, 2023).

RESULTS AND DISCUSSION

The following are the findings of a study that outlines various school-related factors that affect the academic performance of students in public high schools in Kwara State, Nigeria. This study aims to explore the perceptions of teachers and principals regarding important elements in the educational environment, such as classroom management, teacher personality, physical environment, and teacher-student ratio. These findings are expected to provide in-depth insights into factors that need to be considered and optimized to improve student learning outcomes. This study also discusses differences in perception based on gender and position in schools, as well as the implications of the variability of these perceptions on educational policies and practices in the field.

Perception of School-Related Factors

This study revealed that there was a significant variation in perception related to factors related to the school, such as classroom management, teacher personality, physical environment, and teacher-student ratio. From the results of data analysis, it was found that the average perception of these factors had varying values. Based on Table 1, classroom management and teacher-student ratio have the highest perception average with a score of 3.04 each, indicating that these two factors are considered important in supporting students' academic performance. The teacher's personality has an average of 2.85, while the physical environment is in last place with an average score of 2.47. This shows that although the physical environment is important, this factor is considered less significant than other factors.

Table 1. Average Perception of School-Related Factors

Variable	Frequency	Average
Classroom management	120	3.04
Teacher personality	120	2.85
Physical environment	120	2.47
Teacher-student ratio	120	3.04

The results from Table 1 show that classroom management and teacher-student ratio have the highest average score of 3.04, indicating that these two factors are seen as very important elements in influencing the academic performance of students in public high schools in Kwara State, Nigeria. Teachers' personalities, with an average score of 2.85, were also considered significant although slightly below the previous two factors, suggesting that teachers' behaviour and attitudes play an important role in the student learning experience. The physical environment had the lowest average score of 2.47, indicating that while important, this factor was considered less critical compared to classroom management and teacher-student ratios. Overall, these data indicate that good classroom management and optimal teacher-student ratios are prioritized in efforts to improve student learning outcomes, while the physical environment aspect, although important, is considered less urgent.

Differences in Perception Based on Gender Towards Classroom Management

The results of the analysis showed that there was a significant difference in the perception of classroom management based on gender. From Table 2, it was found that the obtained p-value was 0.073, greater than the specified p-value of 0.05, so the null hypothesis stating that there was no significant difference in the perception of class management based on gender was accepted. However, it should be noted that although it is not statistically significant, there is a tendency to perceive differently between male and female teachers. Male teachers tend to have a more positive perception of classroom management compared to female teachers.

Table 2. T-Test Analysis of Perception of Classroom Management by Gender

Variable	N	Average	Std. Deviation	Df	T-Value	P-Value	Results
Man	27	3.18	0.874	118	1.812	0.073	Insignificant
Woman	93	2.76	1.096				

Table 2 shows the results of the T-Test analysis on the perception of class management based on gender. From the data, it can be seen that the average perception of classroom management by male teachers is 3.18 with a standard deviation of 0.874, while the average perception by female teachers is 2.76 with a standard deviation of 1.096. The t-value obtained is 1.812 with a degree of

freedom (Df) of 118 and a p-value of 0.073. Because the p-value is greater than 0.05, the decision taken is "insignificant." This means that there is no statistically significant difference in classroom management perceptions between male and female teachers. Although there was a difference in the mean perception, the difference was not large enough to be considered statistically significant at a 95% confidence level.

Differences in Perception Based on Teacher-Student Ratio

Further analysis showed a significant difference in the perception of the teacher-student ratio in schools. From Table 3, it is found that there are significant differences between the four positions chosen in the school (principal, deputy principal, subject head, and teacher). The F value obtained at 24,666 is greater than the critical F value of 2,000 with a df of 2,297. This shows that the perception of the teacher-student ratio differs significantly between these positions, with a p-value of 0.000 which is below the alpha significance level of 0.05. This difference was due to higher scores on school-related factors based on perceptions of the teacher-student ratio at a public high school in Ilorin West, Kwara State.

Tabel 3. Analisis Varians Persepsi terhadap Rasio Guru-Murid

Variable	N	Average	Std. Deviation	Df	T-Value	P-Value
Between Groups	34.074	2	17.039	24.666	0.000	Significant
In Groups	205.162	297	0.691			

Table 3 shows the results of variance analysis (ANOVA) on the perception of teacher-student ratio based on groups. The results show that there is a significant difference between different groups in terms of perception of the teacher-student ratio. Specifically, the average score between the groups was 34,074 with a degree of freedom (df) of 2 and the average score within the group was 17,039. The F value obtained is 24,666 with a p value of 0.000. Since the p-value is less than 0.05, this result is considered statistically significant. This means that there is a marked difference in the perception of the teacher-student ratio among the analyzed groups. In other words, perceptions of the teacher-student ratio vary significantly among the groups, suggesting that there are different factors that influence their views on the issue. To further clarify the relationship between the various factors that have been identified in this study, the following is a visualization in the form of a mind map. This figure presents key factors such as classroom management, teacher personality, physical environment, and teacher-student ratio, as well as related sub-factors that affect students' academic performance in public high schools in Kwara State, Nigeria. This mind map provides a comprehensive overview and facilitates understanding of the contribution of each factor in the context of this study in Figure 2.
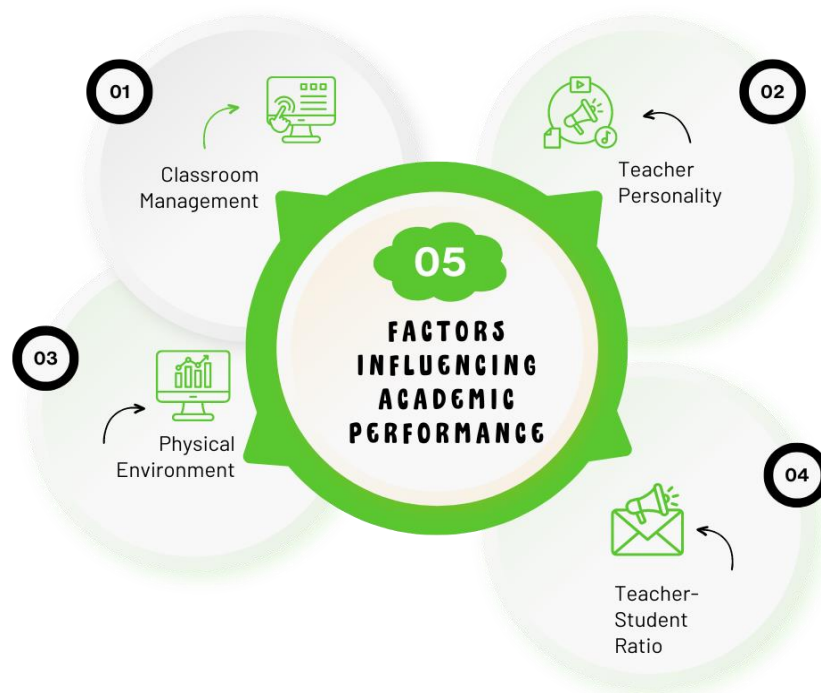
Figure 1. Factors Influencing Academic Performance

This study revealed a significant relationship between classroom management, teacher-student ratio, and student academic performance, which is in line with the findings of previous research. These results support research by Dawabsheh et al. (2020), which shows that good classroom management and optimal teacher-student ratios significantly contribute to improved student learning outcomes. However, the findings of this study are different from Cents-Boonstra et al. (2021) study, which emphasizes that the physical environment has a more dominant influence on students' academic performance than other factors such as classroom management and teacher personality. In addition, the study also found that there was no significant difference in classroom management perceptions between male and female teachers, which contradicted the results of a study by Hamidah. (2023) which showed that the gender of teachers affected their perception of classroom management. These differences can be caused by contextual variables that are unique to Kwara State, such as cultural differences and educational policies that may influence teachers' views of factors that affect students' academic performance. In conclusion, although the results of this study are consistent with some previous studies, there are also differences that show the importance of considering local contexts in data interpretation and education policy implementation.

This study makes a significant contribution in understanding school-related factors that affect the academic performance of students in public high

schools in Kwara State, Nigeria. By identifying elements such as classroom management, teacher personality, physical environment, and teacher-student ratio, the study offers important insights for policymakers and education practitioners to design more effective interventions. In addition, this study highlights the need for a comprehensive and contextual approach in efforts to improve the quality of education, as well as encourage the development of more inclusive and responsive policies to the specific needs of local education communities. Thus, these findings not only enrich the academic literature on the factors influencing students' academic performance but also provide a strong empirical basis for better decision-making in improving educational standards in Nigeria and possibly in other regions with similar characteristics.

CONCLUSION

The study revealed important findings regarding school-related factors that significantly affect the academic performance of students in public high schools in Kwara State, Nigeria. Through an analysis of classroom management, teacher personality, physical environment, and teacher-student ratio, this study provides in-depth insights into how these elements play a role in shaping student learning outcomes. The lesson that can be drawn from this study is the importance of effective classroom management and optimal teacher-student ratio in creating a conducive learning environment. In addition, this study also highlights the need to pay attention to the quality of the physical environment and personal characteristics of teachers in an effort to improve the quality of education.

This study uses a comprehensive methodological approach, involving a variety of relevant variables and in-depth data analysis. However, there are some limitations in this study, including limitations on the sample that only includes schools in one region, namely Kwara State, as well as limited variations in the gender and age of the respondents. To get a more comprehensive picture, further research is needed that includes a wider variety in terms of gender, age, and survey methods. This further research is expected to provide a stronger basis for more effective policy-making and goals in improving the quality of education in various contexts.

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