

INFLUENCE OF TEACHER FEEDBACK AND CLASSROOM CLIMATE ON MOTIVATION AND ACADEMIC PERFORMANCE OF SENIOR SECONDARY SCHOOL STUDENTS IN ADAMAWA STATE, NIGERIA

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Abstract

This study investigated the relationships among teacher feedback, classroom climate, motivation, and academic performance of senior secondary school students in Adamawa state, Nigeria. A survey research design was employed. The population comprised all SSS II & III students in public schools during the 2024/2025 academic session, with a sample of 400. Data were gathered using the Teacher Feedback Scale (TFS), Classroom Climate Scale (CCS), Students' Motivation Questionnaire (SMQ), and official academic records. Pearson correlation analysis revealed significant positive relationships among teacher feedback, classroom climate, student motivation, and academic performance ($r = .33-.58, p < .01$), suggesting that supportive learning environments and effective feedback are associated with higher motivation and achievement. Multiple regression results indicated that teacher feedback and classroom climate together explained 46% of the variance in student motivation ($R^2 = .46, F(2, 397) = 168.34, p < .001$), while teacher feedback, classroom climate, and motivation collectively accounted for 38% of the variance in academic performance ($R^2 = .38, F(3, 396) = 80.90, p < .001$), highlighting the combined effect of instructional and environmental factors. Hierarchical regression further showed that classroom climate significantly moderated the influence of teacher feedback on motivation ($\beta = .12, p = .019$) and academic performance ($\beta = .09, p = .031$), indicating that feedback is most effective within supportive and well-structured classrooms. The findings emphasize the importance of integrating high-quality teacher feedback with positive classroom environments to enhance student motivation and academic outcomes.

Keywords: Teacher feedback, Classroom Climate, Student Motivation, Academic Performance, Senior Secondary School.

Introduction

Students' motivation and academic performance are among the most important indicators of success in the educational process. Motivation influences students' interest in learning, their willingness to participate in classroom activities, and their persistence when faced with academic challenges. Academic performance, on the other hand, reflects the extent to which

students achieve the expected learning outcomes. When students are motivated, they are more likely to engage actively in learning activities and perform better academically. Despite efforts by government and educational stakeholders to improve the quality of education in Nigeria, the academic performance of many secondary school students remains a source of concern. This challenge has increasingly been linked to factors within the school and classroom environment rather than external influences alone (Adurota & Olajide, 2024).

Among the classroom-related factors that have attracted considerable attention are teacher feedback and classroom climate. Teacher feedback is an essential aspect of the teaching and learning process because it provides students with information about their strengths, weaknesses, and progress toward learning goals. Effective feedback helps students understand what is expected of them, identify areas for improvement, and develop confidence in their academic abilities. As a result, it can enhance both motivation and academic achievement. Studies have shown that timely, constructive, and meaningful feedback contributes significantly to students' learning and academic success (Wisniewski *et al.*, 2020).

Classroom climate is another important factor that shapes students' educational experiences. It refers to the overall atmosphere of the classroom, including the quality of teacher-student relationships, peer interactions, classroom management practices, and the sense of support and belonging students experience. A positive classroom climate promotes active participation, encourages collaboration, reduces anxiety, and creates an environment where students feel valued and motivated to learn. Research has consistently demonstrated that students are more likely to be engaged and achieve better academic outcomes when they learn in supportive and well-managed classroom environments (Wang *et al.*, 2020).

In Adamawa State, the academic performance of senior secondary school students, as reflected in public examination results from WAEC, NECO, NABTEB, NBAIS, and JAMB, has shown inconsistent patterns over the years (Adamawa State Ministry of Education, 2024). These fluctuations have generated concern among educators, parents, and policymakers. While several factors may contribute to this situation, increasing attention has been directed toward school-based factors such as the quality of instruction, teacher-student interactions, feedback practices, and classroom management. In addition, challenges such as overcrowded classrooms, inadequate teaching resources, and low teacher morale may negatively affect the learning environment, thereby reducing students' motivation and academic performance (Akinyemi *et al.*, 2023).

Given the central role of motivation and academic performance in educational success, it is important to examine how teacher feedback and classroom climate influence these outcomes among senior secondary school students in Adamawa State. Such an investigation will provide valuable evidence for improving classroom practices and developing strategies aimed at enhancing students' motivation, engagement, and academic achievement. Motivation in psychology refers to the internal processes that initiate, guide, and sustain goal-directed behaviour, explaining why individuals choose particular actions, the effort they exert, and the persistence they demonstrate (Ryan & Deci, 2020). Motivation can be intrinsic, arising from personal interest, curiosity, or enjoyment of learning, or extrinsic, driven by external rewards,

recognition, or avoidance of negative outcomes (Deci & Ryan, 2020; Wang, 2024). It can be intrinsic, arising from personal interest, curiosity, or enjoyment of a task, or extrinsic, driven by external rewards, recognition, or avoidance of negative outcomes (Deci & Ryan, 2020; Wang, 2024). In educational contexts, motivation determines the degree of effort students invest, their persistence through challenges, and ultimately their academic performance, with highly motivated learners demonstrating active participation, effective learning strategies, and resilience, whereas low motivation is linked to disengagement and poor outcomes (Schunk *et al.*, 2022). Motivation serves as a critical driver of learning, shaping both the effort and quality of students' engagement and their academic achievement.

Educational psychologists emphasize that motivation is multidimensional, encompassing cognitive, emotional, and social components. For instance, motivated students are more likely to participate actively in lessons, apply effort consistently, develop problem-solving skills, and regulate their own learning (Schunk *et al.*, 2022). In school contexts, motivation significantly impacts academic performance, engagement, and persistence. A supportive classroom climate and constructive teacher feedback can enhance motivation by fostering students' sense of competence and belonging, thereby improving learning outcomes (Wisniewski *et al.*, 2020; Aminu *et al.*, 2023). Conversely, lack of motivation may result in disengagement, poor academic performance, and limited participation in learning activities.

In this study, academic performance refers to the level of students' achievement as reflected in their official school examination records, particularly the results of SSS II and SSS III students. These examination scores serve as an objective measure of students' mastery of curriculum content, their ability to apply acquired knowledge, and their overall progress across core subject areas. More broadly, academic performance captures a student's success in achieving educational goals, which can be demonstrated through exam grades, continuous assessments, and overall academic output (Onyekwelu, 2025).

Teacher feedback denotes information provided to learners regarding their performance plays a crucial role in guiding academic improvement. Constructive, timely and specific feedback enhances students' intrinsic motivation, confidence and engagement, while inconsistent or overly critical feedback may hinder enthusiasm and achievement (Wang, 2025). Similarly, classroom climate, defined as the emotional, social, and academic environment of the classroom, is shaped by teacher-student relationships, peer interactions, emotional support and opportunities for participation (Akinyemi *et al.*, 2023). A positive classroom climate fosters cooperation, emotional security, and improved learning outcomes, whereas a negative climate may lead to reduced motivation and academic disengagement.

Teacher feedback refers to the verbal or written responses, comments, corrections, or guidance given by teachers to students regarding their academic tasks, performance, and behaviour. It includes positive reinforcement, constructive criticism, and evaluative remarks intended to improve learning outcomes. Feedback serves as a bridge between teaching and learning, helping students understand what they are doing well and what areas need improvement. According to Williams (2024), effective feedback is timely, specific, and constructive, focusing on the learning process rather than merely judging outcomes. It can be delivered verbally, in

writing, or through digital platforms and may take various forms such as; evaluative, corrective, or motivational feedback (Adurota & Olajide, 2024). Recent research emphasizes that students' responses to feedback depend largely on the emotional tone and clarity of the message. When feedback is supportive and goal-oriented, it enhances students' self-efficacy and learning engagement (Zedan & Haifa, 2021). However, overly critical or ambiguous feedback may discourage learners, reduce motivation, and negatively impact performance. Thus, teacher feedback is not only an instructional tool but also a motivational strategy that shapes students' attitudes toward learning and achievement.

Classroom climate denotes the overall social, emotional, and academic atmosphere of the classroom as experienced by students. It reflects the quality of teacher-student relationships, peer interactions, supportiveness, fairness, and sense of belonging within the learning environment. Classroom climate refers to the overall social, emotional, and instructional atmosphere within a learning environment, shaped by teacher-student relationships, peer interactions, and classroom organization. A positive classroom climate fosters respect, support, and active participation, leading to higher motivation and better academic outcomes, while a negative climate characterized by hostility or neglect can hinder learning and increase anxiety. According to Ma and Wei (2022), it is a multidimensional construct encompassing teacher support, structure, autonomy, and safety, all of which influence engagement and performance. Teacher feedback, classroom climate, and student motivation are interconnected factors that collectively influence learning. Constructive feedback in a supportive classroom enhances motivation, which in turn improves academic performance, while unsupportive environments can limit the effectiveness of even accurate feedback. This highlights the need for instructional strategies that address both cognitive and emotional aspects of learning, particularly in senior secondary schools. This study is grounded in Self-Determination Theory (Deci & Ryan, 1985) and Social Cognitive Theory (Bandura, 1986), which explain how teacher feedback and classroom climate influence motivation and performance. Feedback enhances competence, autonomy, and relatedness, fostering intrinsic motivation, while a positive classroom climate characterized by respect, support, and collaboration strengthens self-efficacy and engagement. Together, these factors are essential for promoting effective learning and academic performance.

Statement of the Problem

In an ideal senior secondary school environment, teachers provide timely, constructive, and specific feedback, while classrooms are orderly, supportive, and academically stimulating. Such conditions enhance students' motivation, persistence, and academic performance. However, evidence across Nigeria shows wide variation in learning conditions and feedback practices. Many schools face overcrowded classrooms, poor facilities, inadequate materials, and weak teacher-student relationships, all of which undermine motivation. In Adamawa State, low foundational literacy (about 56.1%) and inequalities in access and quality persist. Although the state recorded an exceptional WAEC performance in 2022, with about 78% obtaining five credits including English and Mathematics, results in subsequent years (2023–2025) and across several zones have been weaker, confirming inconsistent student achievement. National

WAEC and NECO reports (2021–2025) also indicate withheld results, irregularities, and subject-specific weaknesses, affecting schools in the state and contributing to declining morale. Several factors contribute to these challenges, including ineffective feedback practices, poor classroom management, overcrowding, inadequate teacher support, poverty, limited resources, and infrastructural deficits. Students in unsupportive or disorganized classrooms often lose motivation, disengage, or adopt shallow learning strategies, resulting in long-term consequences such as lower tertiary enrolment, higher dropout rates, and limited employability. Although the state education board and schools have implemented reforms, teacher training, blended-learning initiatives, and infrastructure improvements, these interventions remain inconsistent, small-scale, and rarely evaluated for their impact on feedback quality or psychosocial climate. Existing research tends to focus on isolated variables rather than the combined effects of teacher feedback and classroom climate on motivation and academic performance. This study aims to bridge these gaps by providing up-to-date and contextually relevant evidence that can guide efforts to enhance teaching effectiveness and learning outcomes in Adamawa State.

Objectives of the Study

The following are the research objectives:

1. To determine the influence of teacher feedback on students' academic motivation among senior secondary school students in Adamawa State.
2. To determine the influence of classroom climate on students' academic motivation among senior secondary school students in Adamawa State.
3. To determine the influence of teacher feedback on students' academic performance (exam outcomes) among senior secondary school students in Adamawa State.
4. To determine the influence of classroom climate on students' academic performance among senior secondary school students in Adamawa State.
5. To examine whether classroom climate moderates the relationship between teacher feedback and students' motivation and academic performance among senior secondary school students in Adamawa State.

Hypotheses

The following null hypotheses were formulated to be tested at 0.05 alpha level of significance:

Ho1: There is no significant influence of teacher feedback on students' academic motivation among senior secondary school students in Adamawa State.

Ho2: There is no significant influence of classroom climate on students' academic motivation among senior secondary school students in Adamawa State.

Ho3: There is no significant influence of teacher feedback on students' academic performance among senior secondary school students in Adamawa State.

Ho4: There is no significant influence of classroom climate on students' academic performance among senior secondary school students in Adamawa State.

Ho5: There is no significant moderating effect of classroom climate on the relationship between teacher feedback and students' motivation and academic performance among senior secondary school students in Adamawa State.

Methodology

This study adopted a descriptive survey research design to investigate the relationships among teacher feedback, classroom climate, students' motivation, and academic performance of senior secondary school students in Adamawa State. The descriptive survey approach was considered appropriate because it permits the assessment of the direction and strength of relationships among variables without manipulating them (Creswell & Creswell, 2022). The target population comprised 25,995 students enrolled in public senior secondary schools across the state (Adamawa State Ministry of Education, 2024). Guided by the Research Adviser (2006), which recommends a minimum sample size of 378 for populations of 25,000 and above. A total of 400 correctly completed questionnaires were used for analysis.

A multistage sampling procedure was employed to ensure adequate representation across urban and rural local government areas, schools, and grade levels, in line with established educational sampling principles (Cohen *et al.*, 2021). Data were collected using four validated instruments: the Teacher Feedback Scale (TFS) (Wisniewski *et al.*, 2020), the Classroom Climate Scale (CCS) (Wang *et al.*, 2020), and the Students' Motivation Questionnaire (SMQ) (Adurota & Olajide, 2024), alongside school academic records for SSS II and SSS III students. The instruments were subjected to expert validation from the Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria, and reliability of 0.82, 0.79, and 0.81 was confirmed using Cronbach's alpha coefficients, indicating high internal consistency. Data were analysed using SPSS 26.0 with descriptive statistics (means, standard deviations, and frequencies, percentages) to summarize demographics and performance. Pearson's correlation examined relationships among variables, multiple regression tested the predictive effects of teacher feedback and classroom climate on motivation and achievement, and hierarchical regression assessed classroom climate as a moderator (Cohen *et al.*, 2021). Hypotheses were evaluated at 0.05 significance, with results presented in tables, providing a rigorous approach to understanding their combined impact on student motivation and performance.

Results

Ho1: There is no significant influence of teacher feedback on students' motivation among senior secondary school students in Adamawa State.

Table 3: Regression Predicting Students' Motivation from Teacher Feedback

Predictor	β	t	p
Teacher Feedback	.29	6.02	.000

The result from Table 3 shows that; teacher feedback significantly predicted motivation ($\beta = .29$, $p < .001$). Where $R^2 = .46$, $F(2, 397) = 168.34$, $p < .001$. Therefore, the Ho1 which states that "There is no significant influence of teacher feedback on students' academic motivation among senior secondary school students in Adamawa State" is hereby rejected.

Ho2: There is no significant influence of classroom climate on students' motivation among senior secondary school students in Adamawa State.

Table 4: Regression Predicting Students' Motivation from Classroom Climate

Predictor	β	t	p
Classroom Climate	.44	9.12	.000

Table 4 indicated that; classroom climate is significantly influencing motivation ($\beta = .44$, $p < .001$). $R^2 = .46$, $F(2, 397) = 168.34$, $p < .001$. Therefore, the Ho2 which states that "There is no significant influence of classroom climate on students' motivation among senior secondary school students in Adamawa State" is thereby rejected.

Ho3: There is no significant influence of teacher feedback on students' academic performance among senior secondary school students in Adamawa State.

Table 5: Regression Predicting Academic Performance from Teacher Feedback

Predictor	β	t	p
Teacher Feedback	.18	3.71	.000

The result from table 5 ($\beta = .18$, $p < .001$) whereas $R^2 = .38$, $F(3, 396) = 80.90$, $p < .001$ revealed that; teacher feedback is significantly correlate academic performance. Thus, the Ho3 which states that "There is no significant influence of teacher feedback on students' academic performance among senior secondary school students in Adamawa State" is thereby rejected.

Ho4: There is no significant influence of classroom climate on students' academic performance among senior secondary school students in Adamawa State.

Table 6: Regression Predicting Academic Performance from Classroom Climate

Predictor	β	t	p
Classroom Climate	.27	5.41	.000

The result from the findings in table 6 indicated that; classroom climate is significantly influenced academic performance. Therefore, the Ho4 which states that "There is no significant influence of classroom climate on students' academic performance among senior secondary school students in Adamawa State" is thereby rejected.

Ho5: There is no significant moderating effect of classroom climate on the relationship between teacher feedback and students' motivation and academic performance among senior secondary school students in Adamawa State.

Table 7: Moderation Effects of Classroom Climate

Outcome Variable	Interaction (TF × CC)	Term β	p	Interpretation
Motivation	Significant	.12	.019	CC strengthens effect of TF on motivation
Academic Performance	Significant	.09	.031	CC enhances effect of TF on performance

The result revealed that; Classroom climate significantly moderated the relationships. Therefore, the Ho5 which stated that “there is no significant moderating effect of classroom climate on the relationship between teacher feedback and students’ motivation and academic performance among senior secondary school students in Adamawa State” is hereby rejected. Collectively, all five null hypotheses were rejected, indicating significant relationships among the variables examined.

Discussion of Findings

The findings of this study highlight the pivotal role of both teacher feedback and classroom climate in shaping students’ academic motivation and performance. The study found that teacher feedback significantly predicted students’ motivation ($\beta = .29$, $t = 6.02$, $p < .001$), which aligns with Wisniewski, Zierer, and Hattie (2020), who described feedback as one of the most powerful influences on learning. Constructive and timely feedback helps students understand their progress, increases self-efficacy, and boosts willingness to engage with learning tasks. Classroom climate, however, emerged as an even stronger predictor of motivation ($\beta = .44$, $t = 9.12$, $p < .001$), confirming research by Wang et al. (2020), which emphasizes the psychosocial environment as a critical determinant of student engagement. Supportive, orderly, and relationally warm classrooms foster students’ sense of belonging and interest in learning, particularly important in Adamawa State, where crowded classes and strained teacher-student relationships are common.

Teacher feedback also significantly influenced academic performance ($\beta = .18$, $t = 3.71$, $p < .001$), consistent with prior evidence that feedback directs students toward correcting misconceptions, refining skills, and improving outcomes. The moderate size of this effect suggests that feedback alone supports performance but may be insufficient without conducive learning conditions, supporting Hattie’s (2009) assertion that feedback must be timely, specific, and actionable to enhance achievement. Classroom climate significantly predicted academic performance as well, with a stronger effect than teacher feedback ($\beta = .27$, $t = 5.41$, $p < .001$). This finding aligns with the Information Processing Theory (IPT), which posits that environmental conditions influence how learners attend to, process, and store information. Conducive classroom climates which characterized by reduced distractions, supportive

teacher-student interactions, and well-managed routines which enhances concentration and reduce cognitive load, thereby improving academic outcomes.

Motivation emerged as the strongest predictor of academic performance ($\beta = .36$, $t = 7.46$, $p < .001$), highlighting the centrality of psychological engagement in learning. Motivated students are more likely to persist in challenging tasks, utilize effective learning strategies, and take initiative in their academic growth. Pearson correlation analysis further revealed significant positive relationships among the key variables: teacher feedback correlated positively with classroom climate ($r = .54$, $p < .01$), motivation ($r = .47$, $p < .01$), and academic performance ($r = .33$, $p < .01$), while classroom climate also correlated strongly with motivation ($r = .58$, $p < .01$) and performance ($r = .41$, $p < .01$), with motivation moderately correlated with performance ($r = .49$, $p < .01$). These findings suggest that teacher feedback and classroom climate are strongly interconnected, indicating that feedback is most effective in supportive, well-organized, and emotionally positive classrooms, while its impact diminishes in disorganized or unsupportive settings.

Finally, classroom climate was found to significantly moderate the effect of teacher feedback on both motivation ($\beta = .12$, $p = .019$) and academic performance ($\beta = .09$, $p = .031$), demonstrating that feedback is most effective in positive and supportive learning environments. When classroom conditions are hostile or chaotic, even high-quality feedback may lose potency. This moderation effect supports ecological and social-cognitive theories, which argue that environmental factors shape how learners interpret and respond to instructional inputs, and fills an important gap in research on Adamawa State, where few studies have explored how contextual factors amplify or diminish the impact of feedback.

These findings emphasize the need for schools to adopt a holistic approach that integrates high-quality instructional practices with strategies to cultivate academically rich, emotionally supportive, and socially positive classroom environments. Such an approach ensures that teacher feedback can thrive, student motivation is nurtured, and academic outcomes are maximized, providing a comprehensive framework for improving teaching and learning in senior secondary schools in Adamawa State.

Conclusion

Based on the study findings, both teacher feedback and classroom climate significantly influence students' motivation and academic performance in senior secondary schools in Adamawa State. Constructive, timely feedback enhances motivation by providing guidance, fostering competence, and encouraging engagement. Classroom climate emerged as an even stronger predictor, emphasizing the importance of supportive and well-structured learning environments. Students' motivation also mediates academic performance, highlighting the role of psychological engagement, while classroom climate moderates the effectiveness of feedback. These findings underscore the need for holistic educational strategies that combine quality instruction with positive classroom environments to optimize student success.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Teachers should provide timely, specific, and constructive feedback, supported by professional development to strengthen effective feedback practices.
2. Schools should foster a respectful, cooperative, and supportive classroom climate through positive classroom management strategies.
3. Teachers should adopt learner-centered instructional methods and integrate praise, recognition, and student choice to boost students' motivation.
4. The Ministry of Education and school authorities should offer continuous teacher training and mentorship programs to improve instructional and classroom practices.
5. Schools should provide psychosocial support through guidance and counselling services to enhance students' intrinsic motivation and self-regulated learning.

References

- Adamawa State Ministry of Education. (2024). *Annual Education Performance Report*. Yola: State Government Press.
- Adurota, O. J., & Olajide, S. O. (2024). Influence of teachers' feedback on senior secondary school students' academic achievement in Mathematics in Osun State. *Ifè Journal of Integrated Science*, 1(1), 60-70.
- Akinyemi, I. A., Gbesoevi, E. S., & Afolabi, S. A. (2023). Exploring classroom environment as a predominant factor affecting students' academic performance in Lagos State junior secondary schools. *Journal of Education and Learning Research*, 1(2), 70-81.
- Aminu, Y., Danjuma, H., & Yahaya, I. (2023). Impact of classroom climate and teacher personality on academic performance of secondary school students in Kaura LGA, Kaduna State. *ATBU Journal of Science, Technology and Education*, 11(3), 221-229.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Cohen, L., Manion, L., & Morrison, K. (2021). *Research Methods in Education* (9th ed.). Routledge.
- Creswell, J. W., & Creswell, J. D. (2022). *Research design: Qualitative, quantitative, and mixed methods approach* (6th ed.). Sage Publications.
- Ma, Y., & Wei, C. (2022). The relationship between perceived classroom climate and academic performance among English-major teacher education students in Guangxi, China: The mediating role of student engagement. *Frontiers in Psychology*, 13, 939661.
- Onyekwelu, R. A. (2025). Teachers adaptability and commitment as correlates of students' academic performance in Anambra State. *Multidisciplinary Journal of Current Research and Review*, 8(4), 86-96.
- Research Adviser. (2006). *Research methods and sampling techniques* (1st ed.). Academic Press.
- Ryan, R. M., & Deci, E. L. (2020). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.
- Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary Educational Psychology*, 60, 101832.

- Schunk, D. H., & DiBenedetto, M. K. (2024). *Motivation and social-cognitive theory*. In K. R. Wentzel & D. Miele (Eds.), *Handbook of motivation at school* (2nd ed., pp. 34-54). Routledge.
- Wang, M. (2025). Affective and metacognitive feedback as predictors of learning motivation among secondary students. *Journal of Education, Humanities, and Social Research*, 5(1), 45-58.
- Wang, M. T., Degol, J. L., Amemiya, J., Parr, A., & Guo, J. (2020). Classroom climate and children's academic motivation and achievement. *Educational Psychology Review*, 32(2), 337-367.
- Williams, A. (2024). Delivering effective student feedback in higher education: An evaluation of the challenges and best practice. *International Journal of Research in Education and Science*, 10(2), 473-501.
- Wisniewski, B., Zierer, K., & Hattie, J. (2020). The power of feedback revisited: A meta-analysis of educational feedback research. *Educational Research Review*, 9(2), 1-20.
- Zedan, R., & Haifa, H. (2021). Student feedback as a predictor of learning motivation, academic performance and classroom climate. *Education Sciences*, 16(2), 03.