



ENGAGING CLASSROOMS, EMPOWERED LEARNERS: MEDIATING ROLE OF STUDENT ENGAGEMENT BETWEEN CLASSROOM CLIMATE AND ENGLISH ACHIEVEMENT IN GOVERNMENT-SPONSORED SCHOOLS

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ABSTRACT

Student engagement is widely recognized as a fundamental element of academic achievement, encompassing both emotional and cognitive dimensions. However, observations suggest a decline in student engagement within numerous government-sponsored schools in India. This research investigates the mediating role of student engagement in the relationship between classroom climate and English language proficiency among secondary school students. Utilizing a quantitative approach, the study collected data from 700 students attending government-sponsored schools in West Bengal, employing validated instruments to assess classroom climate, student engagement, and English achievement. The analysis involved descriptive statistics, correlation, and regression analyses performed using SPSS, followed by a formal mediation analysis conducted in R with 5,000 bootstrap simulations. Findings indicated robust positive correlations across all three variables. Regression results demonstrated that while classroom climate significantly predicted English achievement, its predictive power decreased considerably when student engagement was introduced into the model, thereby suggesting a mediating effect. The mediation analysis confirmed a significant indirect effect (ACME = 0.1313, 95% CI [0.1118, 0.15], $p < .001$), revealing that approximately 66% of the total effect was transmitted via student engagement. These results underscore that student engagement is not merely an outcome but a crucial psychological mechanism through which the classroom environment impacts academic performance. Consequently, this study offers practical implications for educators and policymakers, suggesting that cultivating engaging and emotionally supportive classroom settings can significantly enhance English learning outcomes in under-resourced government schools.

Keywords: Academic outcomes; Classroom climate; English achievement; Mediation; Student engagement.

INTRODUCTION

Student engagement is frequently conceptualized as a vital component driving academic achievement. Regrettably, in contemporary educational settings, especially within government-sponsored schools, there appears to be a noticeable decrease in this crucial aspect. A growing number of educators are observing an increasing trend of student disengagement, characterized by a lack of attentiveness, limited involvement, and diminishing enthusiasm. Even in classrooms with meticulously designed lessons and structured evaluation methods, the learning environment often lacks vibrancy. This research addresses this critical issue by investigating



how student engagement could serve as a pivotal connection between the classroom environment and students' English language performance.

The atmosphere within a classroom, particularly in government schools across India, significantly influences students' academic conduct and emotional preparedness (Fraser, 1998; Moos, 1979). For individuals learning a second language, an unstimulating classroom environment can further impede their progress in subjects such as English (Reyes et al., 2012; Singh & Sharma, 2023). Although factors like home environment and previous exposure are influential, school-based elements, including the degree to which students feel supported and intellectually stimulated, are equally vital (Zullig et al., 2011; OECD, 2021). Student engagement, which encompasses emotional, behavioral, and cognitive aspects, has the potential to act as a mediating variable connecting classroom climate and overall academic performance (Fredricks et al., 2004; Wang & Holcombe, 2010). Students who are engaged typically derive more enjoyment from learning, demonstrate greater persistence, and interact with classroom activities in a more profound way. Despite existing research, there is limited investigation into this specific relationship within government-sponsored secondary schools in West Bengal, a region where English proficiency and student engagement continue to be significant concerns (Mishra & Sharma, 2021; Chakraborty, 2022). This study aims to bridge this gap by examining the combined influence of classroom climate and student engagement on English achievement, thereby providing valuable insights for both educators and policymakers.

LITERATURE REVIEW

1. Classroom Climate and Academic Achievement

Classroom climate refers to students' perceptions of the psychological and instructional aspects of their learning environment. A positive climate—characterized by supportive teacher-student interactions, clear expectations, mutual respect, and opportunities for participation—has been consistently linked to better academic outcomes (Fraser, 1998; Zullig et al., 2011). Moos (1979) emphasized that students are more likely to be motivated and perform well when they feel emotionally safe and valued in class. In the Indian context, Singh and Sharma (2023) found that classroom atmosphere significantly influenced the academic attitudes and efforts of students, especially in public schools with limited resources.

2. Challenges in English Achievement in Government Schools

English, as a second language in India, poses unique challenges for students, particularly in government-sponsored schools. These schools often struggle with inadequate language exposure, limited instructional resources, and high student–teacher ratios (Chakraborty, 2022). Raj and Thomas (2020) noted that students from such settings experience difficulty in mastering reading, writing, and speaking components of English. Additionally, disparities in classroom interaction and instructional strategies further widen the achievement gap in language learning.

3. The Mediating Role of Student Engagement



Student engagement, comprising cognitive, emotional, and behavioral dimensions, is widely recognized as a predictor of academic success (Fredricks et al., 2004). Engaged students show greater persistence, participate more in learning tasks, and display deeper understanding. Recent studies suggest that engagement may also serve as a **mediator**, explaining how learning environments influence achievement (Reyes et al., 2012; Wang & Holcombe, 2010). However, the role of engagement as a mediator has rarely been tested in the context of English learning in government schools—an area this study seeks to address.

RESEARCH GAPS

Although several studies have examined classroom climate, student engagement, and academic achievement individually, few have explored their interrelationship in a unified model—particularly in the context of English as a second language. Most research focuses on private or urban schools and treats engagement as an outcome rather than a mediator. In government-sponsored schools in West Bengal, this area remains underexplored, with limited empirical work addressing engagement as a mediator between classroom climate and English achievement (Chakraborty, 2022; Singh & Sharma, 2023). This study tried to address that gap.

RATIONALE OF THE STUDY

The role of English as a gateway to higher education, career opportunities, and digital access in India has been strongly emphasized in national educational policies. However, the persistent underachievement in English among students in government-sponsored schools, particularly in regions like West Bengal, remains a major concern. Traditional interventions have focused heavily on curriculum content and teacher training, often overlooking the deeper psychological and contextual factors that shape students' willingness and ability to engage in language learning.

Given that classroom climate significantly affects students' emotional and academic well-being (Zullig et al., 2011; OECD, 2021), it becomes essential to understand how this environment contributes to or hinders language achievement. Yet, the relationship may not be linear. Student engagement encompassing cognitive, emotional, and behavioral aspects can serve as a mechanism explaining how a classroom climate influences learning outcomes. If students are disengaged, even the most supportive classroom setting might fail to yield academic gains.

In this light, investigating the mediating role of student engagement is not just academically relevant, but also practically significant for educators and policymakers working in under-resourced school systems. By exploring this dynamic in the specific context of government-sponsored secondary schools, this study seeks to generate insights that are locally grounded and immediately applicable. The findings can help teachers and administrators design more responsive, engagement-driven strategies to improve English learning outcomes in similar school environments.

RESEARCH QUESTIONS

What is the relationship between classroom climate and English achievement among secondary school students in government-sponsored schools?



To what extent does student engagement mediate the relationship between classroom climate and English achievement?

What is the overall influence of student engagement on English achievement in the given context?

STATEMENT OF THE PROBLEM

Despite numerous curricular reforms and teacher-focused initiatives, English achievement among students in government-sponsored secondary schools continues to be low. While various external factors have been considered, the role of the **classroom learning environment** and the students' **active engagement** in the learning process have received limited attention. Given that classroom climate plays a vital role in shaping students' academic behavior and motivation, it is critical to examine **how this environment influences English performance**. However, without understanding whether **student engagement acts as the linking mechanism**, educators and policymakers may continue to miss a key component in the effort to improve language learning outcomes. Therefore, this study seeks to investigate this mediating role of student engagement in the relationship between classroom climate and English achievement.

OPERATIONAL DEFINITIONS

Classroom Climate

In this study, classroom climate refers to students' perceptions of the overall classroom environment, including interpersonal relationships, discipline, participation, fairness, teacher behavior, and classroom management. It is measured using the Classroom Climate Scale developed by Jessina Mutthe, consisting of 36 items rated on a 5-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree."

Student Engagement

Student engagement is defined as the extent to which students are emotionally, cognitively, and behaviorally involved in the learning process. It includes three dimensions:

Cognitive Engagement: Efforts to understand academic content, use of learning strategies.

Emotional Engagement: Positive feelings about learning, teachers, and school.

Behavioral Engagement: Participation in academic tasks and school activities. This is measured using the Student Engagement Scale (SES-SLHCM) developed by Prof. (Dr.) Hemant Lata Sharma and Ms. Manasi Chowdhry, which includes 30 items covering all three dimensions.

English Achievement

English achievement refers to students' performance in English as a second language. It is measured through a 50-item English Achievement Test covering reading comprehension, vocabulary, and grammar. This tool has been developed and standardized by the author



specifically for Bengali-medium senior secondary students in alignment with the West Bengal Council of Higher Secondary Education (WBCHSE) curriculum.

Government-Sponsored Secondary Schools

These are partially state-funded schools affiliated with the WBCHSE, serving secondary-level students in West Bengal. These schools cater primarily to students from lower- and middle-income communities and operate under government management structures.

OBJECTIVES AND HYPOTHESES

Objectives of the Study

To assess the level of classroom climate perceived by secondary school students in government-sponsored schools.

To measure the level of student engagement across cognitive, emotional, and behavioral dimensions.

To evaluate the English achievement of secondary students in government-sponsored schools.

To examine the relationship between classroom climate and English achievement.

To examine the influence of student engagement on English achievement and its mediating role in the relationship between classroom climate and English achievement.

A substantial body of academic literature highlights the beneficial effects of conducive learning environments and active student participation on educational results, thereby informing the development of the subsequent directional hypotheses. Previous studies consistently demonstrate that a positive classroom atmosphere cultivates greater student engagement, which consequently leads to enhanced academic performance (Fraser, 1998; Moos, 1979; Reyes et al., 2012). Moreover, student engagement—covering cognitive, emotional, and behavioral dimensions—is posited as a crucial psychological process through which the classroom setting translates into tangible learning achievements (Wang & Holcombe, 2010).

Hypotheses of the Study:

The following alternative Hypotheses are constructed:

H₁: There is a significant positive relationship between classroom climate and student engagement among secondary school students.

H₂: There is a significant positive relationship between classroom climate and English achievement.

H₃: There is a significant positive relationship between student engagement and English achievement.

H₄: Student engagement significantly influences English achievement and mediates the relationship between classroom climate and English achievement among secondary school students in government-sponsored schools.



DELIMITATION OF THE STUDY

"The scope of this research is restricted to a selection of schools within particular districts of West Bengal, which might constrain its broader applicability."

"This investigation centers exclusively on English as a subject, omitting consideration of performance in other academic disciplines."

"The sample exclusively comprises Bengali-medium students enrolled in Class XI and XII."

"Participation in this study is limited to students attending government-sponsored secondary schools affiliated with the West Bengal Council of Higher Secondary Education (WBCHSE)."

METHODS

Research Design

This investigation employs a quantitative methodology, specifically a descriptive and correlational research design, to explore the connections among classroom climate, student engagement, and English achievement. Additionally, mediation analysis is conducted to ascertain if student engagement serves as an intermediary factor in the relationship between classroom climate and English achievement.

Sample

The study's sample comprises 700 students enrolled in Class XI and XII from government-sponsored Bengali-medium secondary schools located in specific districts of West Bengal. A stratified random sampling technique was implemented to guarantee equitable representation concerning gender, geographic area (urban/rural), and academic stream. Before data collection, necessary permissions were secured from school authorities, and informed consent was acquired from all participants.

Tools Used

Classroom Climate Scale

This 36-item scale, developed by Jessina Mutthe, utilizes a 5-point Likert format. It evaluates students' perceptions regarding diverse facets of the classroom environment, such as teacher conduct, disciplinary practices, support systems, and opportunities for participation.

Student Engagement Scale (SES-SLHCM)

Authored by Prof. (Dr.) Hemant Lata Sharma and Ms. Manasi Chowdhry, this 30-item instrument measures student engagement across its cognitive, emotional, and behavioral dimensions, employing a 5-point Likert scale.

English Achievement Test (EAT)

The English Achievement Test (EAT) is a 50-item multiple-choice assessment created and validated by the researcher to evaluate students' English language skills. It covers grammar, vocabulary, and reading comprehension, aligning with the WBCHSE senior secondary



curriculum. The EAT underwent a thorough development and standardization process involving 240 secondary school students (aged 15-17 years) chosen through stratified random sampling. Its psychometric attributes were assessed via extensive analyses. Reliability was confirmed with a Kuder-Richardson Formula 20 (KR-20) value of 0.796 and a split-half reliability coefficient of 0.942 (Spearman-Brown Prophecy Formula), both indicating robust internal consistency. Item analysis verified suitable difficulty levels (P-values from 0.438 to 0.583, all within the ideal 0.3-0.7 range) and strong discrimination (D-index values from 0.200 to 0.508, with 39 items demonstrating good discrimination). Criterion validity was supported by a significant positive correlation (Pearson $r = 0.772$, $p < .001$) between EAT scores and Class XI English Marks, thereby affirming its utility in measuring English proficiency against established academic standards.

Procedure

Before commencing data collection, the researcher secured authorization from school principals and relevant district authorities. The objectives of the study were conveyed to all participants, and their engagement was entirely voluntary. Data acquisition occurred in January 2025. All research instruments were administered in a classroom environment during regular school hours, with each student's session extending for approximately 130 minutes. Participants received explicit guidance and ample time to complete the questionnaires and the achievement test. Following data collection, the raw information was coded and input into Excel and SPSS (version 29) for subsequent statistical analysis.

Techniques of Analysis

Descriptive Statistics: Calculation of means, standard deviations, and percentages to identify general patterns.

Pearson's Correlation Coefficient: Utilized to investigate the associations between variables.

Multiple Regression Analysis: Employed to assess the direct impacts of classroom climate and engagement on English achievement.

Mediation Analysis: Performed using Hayes' mediation approach in R Studio, incorporating bootstrapping (5,000 simulations) to evaluate the mediating function of student engagement.

RESULTS

This section presents the findings derived from the statistical analyses, which were performed using SPSS (v26) and RStudio. The focus of these analyses was to investigate the relationships among Classroom Climate, Student Engagement, and English Achievement, as well as to examine the mediating role of Student Engagement.

Descriptive Statistics:

Table 1: Descriptive Statistics of Study Variables

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Classroom Climate	700	75	173	126.00	15.000



Student Engagement	700	68	137	105.00	12.000
English Achievement	700	15	50	35.01	5.984
Valid N (listwise)	700				

Descriptive statistics (N = 700) were computed for all three variables under investigation. The outcomes, detailed in Table 1, reveal moderate to high levels for Classroom Climate and Student Engagement, alongside a normally distributed performance for English Achievement.

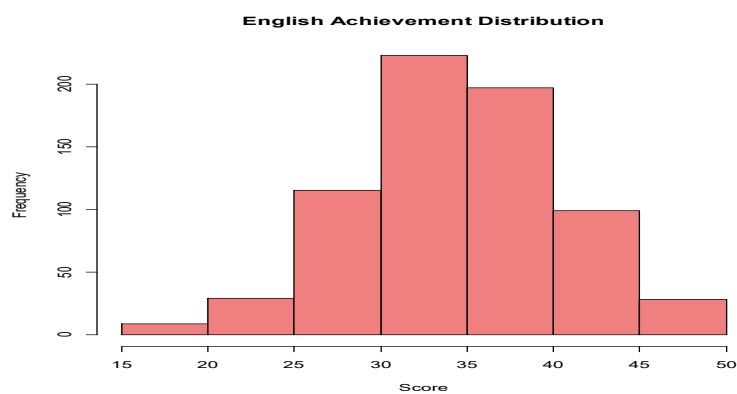


Figure 1A. Distribution of English Achievement Scores

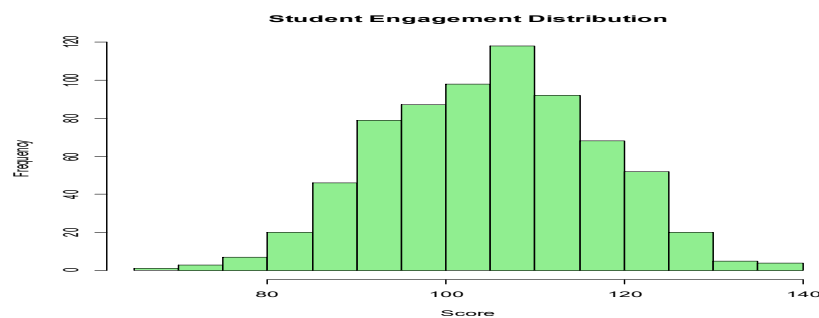


Figure 1B. Distribution of Student Engagement Scores Figure

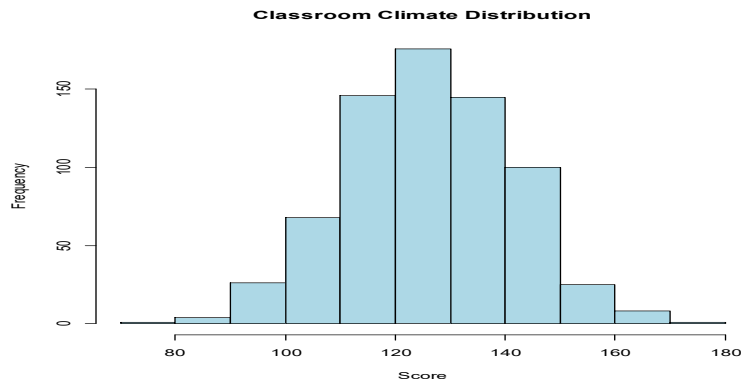


Figure 1C. Distribution of Classroom Climate Scores

Correlation Analysis

Pearson's correlation coefficients were calculated using SPSS. As shown in Table 2, all three variables exhibited significant positive correlations ($p < .01$). These correlations indicate that more positive perceptions of classroom climate are associated with higher student engagement and improved English performance.

Table 2: Pearson Correlation Coefficients among the Key Variables (N = 700)

	Classroom Climate	Student Engagement	English Achievement
Classroom Climate	1	.600**	.500**
Student Engagement	.600**	1	.651**
English Achievement	.500**	.651**	1

Note: $p < .01$ (2-tailed)

These correlations suggest that **higher classroom climate perceptions** are associated with **greater student engagement** and **better English performance**.

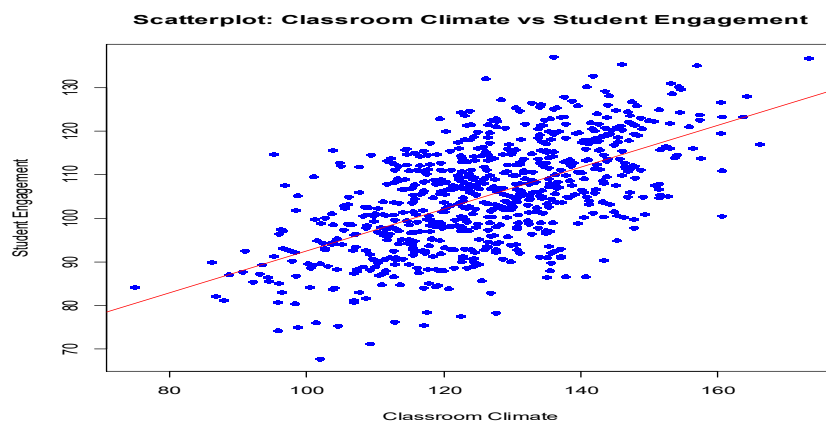


Figure 2A. Scatter plot: Classroom Climate vs Student Engagement

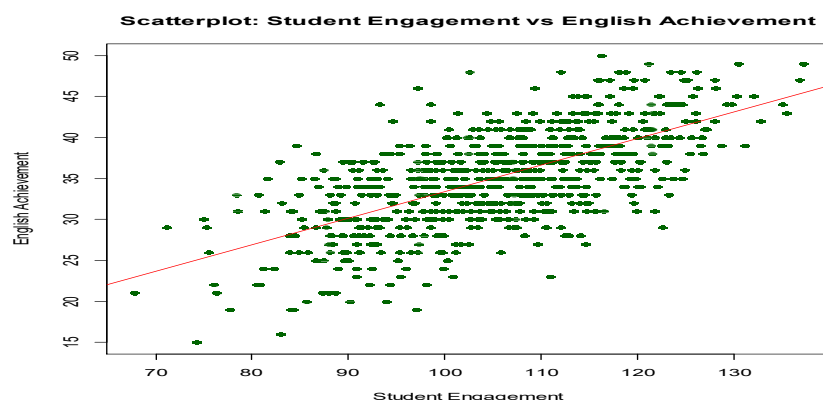


Figure 2B. Scatter plot: Student Engagement vs English Achievement

Regression Analysis

A hierarchical regression analysis was conducted in SPSS to further investigate the predictive relationships among the variables. The results are summarized in Table 3. This analysis revealed that the predictive strength of Classroom Climate on English Achievement diminished when Student Engagement was introduced into the model (Classroom Climate drops to $\beta = .170$), which strongly suggests partial mediation.

Table 3: Regression Summary

Model	Predictor	β (Standardized)	R^2	F	Sig.
1	Classroom Climate	.500	.250	232.05	.000 **
2	+ Student Engagement	.549 (SE)	.442	276.18	.000 **
	(Classroom Climate drops to $\beta = .170$)				

This result indicated that when Student Engagement was included in the model, the predictive strength of Classroom Climate on English Achievement **dropped**, which is a strong sign of **partial mediation**.

Mediation Analysis in R

To formally assess the mediation effect, nonparametric bootstrapping was performed in RStudio (using the mediation package) with 5,000 simulations. The results, presented in Table 4, confirm that Student Engagement significantly mediates the relationship between Classroom Climate and English Achievement. The significance of both direct and indirect effects provides clear evidence of partial mediation.

Table 4: Mediation Analysis Summary (RStudio)

Effect Type	Estimate	95% CI	p-value
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Indirect (ACME)	0.1313	[0.1118, 0.15]	< .001
Direct (ADE)	0.0680	[0.0397, 0.10]	< .001
Total Effect	0.1993	[0.1733, 0.22]	< .001
Proportion Mediated	0.6590	[0.5558, 0.78]	< .001

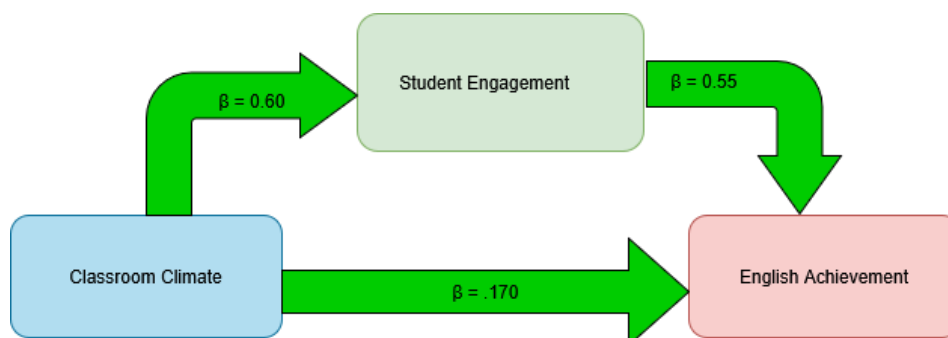


Figure 3. Mediation Model Illustrating the Role of Student Engagement between Classroom Climate and English Achievement.

These results confirm that **Student Engagement significantly mediates** the relationship between Classroom Climate and English Achievement. Since both **direct and indirect effects are significant**, this provides **evidence of partial mediation**.

FINDINGS AND DISCUSSION

The study examined how classroom climate influences English achievement among secondary students in government-sponsored schools, with student engagement as a potential mediator. Data from 700 students were analyzed using SPSS and RStudio.

Key Findings

Significant Correlations: Classroom climate, student engagement, and English achievement were all positively and significantly related.

Partial Mediation: Regression showed that while classroom climate predicted English achievement, its effect weakened when student engagement was included—suggesting partial mediation.

Mediation Confirmed: RStudio's mediation analysis revealed a significant indirect effect (ACME = 0.1313), with student engagement mediating about 66% of the total effect between classroom climate and English achievement.

Hypotheses Interpretation

The results of the study provided clear statistical support for all four proposed hypotheses:

H₁ was supported, as the correlation analysis revealed a strong, significant positive relationship between classroom climate and student engagement ($r = .60$, $p < .01$). This suggests that a more positive classroom environment is associated with higher levels of student involvement. This



strong positive correlation ($r = .60$, $p < .01$) aligns with socio-constructivist theories emphasizing the role of a supportive learning environment in fostering active student participation. A classroom where students feel safe, respected, and valued is more likely to encourage their emotional investment and cognitive engagement, as evidenced by Moos, 1979 and Fraser, 1998.

H₂ was confirmed through both correlation and regression results, showing that classroom climate positively predicts English achievement ($r = .50$, $p < .01$; $\beta = .500$ in initial regression).

H₃ was strongly supported, with a significant correlation between student engagement and English achievement ($r = .651$, $p < .01$), and a high standardized regression weight ($\beta = .549$), indicating that engagement is a strong predictor of performance in English. The robust correlation ($r = .651$, $p < .01$) and high standardized regression weight ($\beta = .549$) for student engagement and English achievement underscore engagement as a critical predictor. This finding reinforces the notion that actively involved learners, who are emotionally connected and cognitively invested, are better positioned to assimilate and apply linguistic knowledge, consistent with the findings by Fredricks et al., 2004 and Wang & Holcombe, 2010.

H₄ was supported on both fronts. First, regression analysis showed that student engagement significantly predicted English achievement ($\beta = .549$, $p < .001$), confirming its direct influence. Second, mediation analysis using the mediation package in RStudio revealed a significant indirect effect of classroom climate on English achievement through engagement (ACME = 0.1313, $p < .001$), accounting for 66% of the total effect. These findings confirm that student engagement both **influences** English achievement and **partially mediate** the effect of classroom climate on it. The confirmation of partial mediation for H₄ (ACME = 0.1313, $p < .001$, accounting for 66% of the total effect) is a pivotal finding. It suggests that while a positive classroom climate can directly influence English achievement, a substantial portion of this influence is channeled through student engagement. This implies that a supportive environment doesn't automatically lead to better outcomes; rather, it creates the conditions under which students are more likely to become engaged, and it is this engagement that directly drives improved English proficiency. This also posits that environmental factors (classroom climate) influence individual psychological states (engagement), which then impact behavioral outcomes (achievement). The partial nature of the mediation indicates that other factors, not explored in this model, may also directly link classroom climate to achievement.

These findings collectively demonstrate that student engagement is a central mechanism through which classroom climate influences English academic outcomes—particularly in the context of government-sponsored schools. These findings also highlight the vital role of student engagement in linking supportive classroom climates to better English achievement. The results align with prior research (Fraser & Walberg, 2005; Kumar & Karabenick, 2013; Fredricks et al., 2004; Reeve, 2012; Bhattacharya, 2018; Singh & Sahu, 2020) and uniquely extend these insights to government-sponsored schools in West Bengal. In such resource-limited settings, fostering engagement and a positive climate can be effective, low-cost strategies to enhance language learning outcomes.

SUMMARIZATION, RECOMMENDATIONS, IMPLICATIONS



Summarization:

This investigation examined the influence of classroom climate on English achievement among secondary students in government-sponsored schools in West Bengal, with particular attention to the mediating role of student engagement. Utilizing a sample of 700 students and rigorously validated instruments, the findings revealed robust, positive interrelationships among the three variables. Mediation analysis confirmed that student engagement significantly mediated the effect of classroom climate on English achievement, with approximately 66% of the total effect being transmitted through engagement. This indicates that cultivating a positive classroom environment not only directly impacts learning outcomes but also exerts an indirect influence by shaping the active and emotional participation of students in their learning process.

Recommendations:

Based on the study's findings, the following recommendations are put forth:

Teacher Professional Development: Implement regular workshops focused on equipping educators with strategies to cultivate emotionally supportive and highly engaging classroom settings.

Effective Classroom Management: Schools should champion approaches that enhance classroom organization, ensure instructional clarity, and foster an atmosphere of mutual respect.

Engagement Monitoring: Introduce systematic periodic surveys and observational checklists to gauge student engagement levels, allowing for timely adjustments to pedagogical methods.

Targeted Language Interventions: Design English learning activities to be more interactive and culturally/contextually relevant, thereby sustaining students' active involvement.

Implications:

a) **Theoretical:** This study strengthens the conceptualization of student engagement as a crucial mediating construct. It provides empirical support for motivational and constructivist theories that posit a link between classroom climate and academic outcomes. Specifically, the research offers evidence demonstrating how environmental factors (classroom climate) influence psychological processes (engagement), which, in turn, shape learning achievements. This contributes to a more refined understanding of models explaining academic success.

b) **Practical:** For government-sponsored schools, promoting student engagement presents an efficient and economical strategy for enhancing English achievement, particularly in contexts with limited resources.

c) **Policy:** Policymakers could consider integrating indicators related to classroom climate and student engagement into frameworks for teacher evaluation and school quality assurance. Such a shift would broaden the focus beyond conventional metrics to include process-oriented indicators directly tied to student learning and well-being, potentially fostering more comprehensive educational reforms.

CONCLUSION



This study highlights the profound significance of a nurturing classroom environment and the pivotal role of student engagement in influencing English learning outcomes. Within the context of government-sponsored schools, where systemic limitations frequently pose challenges to student performance, the emotional and motivational atmosphere of the classroom gains even greater importance. The findings affirm that engaged students are products of engaging classrooms, suggesting that strategic investment in positive classroom practices can significantly empower learners to achieve better results, particularly in fundamental academic subjects like English.

REFERENCES

- Bhattacharya, S. (2018). Role of classroom climate in English learning at the secondary level in India. *Indian Journal of Educational Research*, 7(2), 45–54.
- Chakraborty, R. (2022). Teacher resistance to AI integration in public education: Barriers and possibilities. *Indian Journal of Educational Technology*, 30(2), 45–53.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. doi:10.1207/S15327965PLI1104_01
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. doi:10.3102/00346543074001059
- Fraser, B. J. (1998). Classroom environment instruments: Development, validity and applications. *Learning Environments Research*, 1(1), 7–33. doi:10.1023/A:1009937107815
- Fraser, B. J., & Walberg, H. J. (2005). Improving educational productivity: Examining classroom environments. National Society for the Study of Education.
- Jessina Mutthe. (2020). Classroom Climate Scale (CCS). Department of Education, Tamil Nadu Teachers Education University.
- Kumar, R., & Karabenick, S. A. (2013). Teacher support, motivation, and student engagement in high school classrooms: A comparison of U.S. and Indian adolescents. *International Journal of Educational Research*, 58, 134–143. doi:10.1016/j.ijer.2013.02.006
- Ministry of Education. (2020). National Education Policy 2020. Government of India. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
- Mishra, S., & Sharma, P. (2021). Student engagement and learning in low-resource classrooms: A systematic review. *Journal of Indian Education*, 47(3), 112–125.
- Moos, R. H. (1979). Evaluating educational environments. Jossey-Bass.
- OECD. (2021). Students' engagement, motivation and self-beliefs. OECD Publishing. doi:10.1787/19963777



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- Raj, S., & Thomas, V. (2020). The digital divide in Indian classrooms: Teachers' perspective. *Asian Journal of Educational Research and Technology*, 10(1), 25–32.
- Reeve, J. (2012). A self-determination theory perspective on student engagement. In S. Christenson, A. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 149–172). Springer. doi:10.1007/978-1-4614-2018-7_7
- Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, 104(3), 700–712. doi:10.1037/a0027268
- Sharma, H. L., & Chowdhry, M. (2020). Student Engagement Scale (SES). National Psychological Corporation.
- Singh, A., & Sahu, P. (2020). Relationship between classroom climate and English language achievement among secondary school students in India. *Journal of School Psychology and Research*, 12(1), 21–32.
- Singh, A., & Sharma, S. (2023). Classroom climate and student achievement in Indian government schools: An exploratory study. *Journal of Educational Research and Practice*, 18(2), 89–102.
- Wang, M. T., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *American Educational Research Journal*, 47(3), 633–662. doi:10.3102/0002831209361209
- Zullig, K. J., Koopman, T. M., Patton, J. M., & Ubbes, V. A. (2011). School climate: Historical review, instrument development, and school assessment. *Journal of Psycho-educational Assessment*, 29(2), 139–152. doi:10.1177/0734282910379969