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School Climate and Active Learning Strategies Used by the School Teachers in Classrooms of Madurai District

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Abstract

This study has investigated the relationship between school climate and the use of active learning strategies among teachers in the classrooms of Madurai District. School climate, encompassing factors such as teacher-student relationships, administrative support, safety, and inclusivity, plays a crucial role in shaping the educational environment. Active learning strategies, which actively engage students through methods like discussions, group activities, and problem-solving tasks, have been shown to enhance student understanding and retention. The objective of the research is to examine how different aspects of school climate influence teachers adoption and implementation of these strategies. Using a mixed-methods approach, data were collected through surveys, interviews and classroom observations involving a sample of teachers from various schools across Madurai District. Statistical and thematic analyses were conducted to determine patterns and correlations between school climate dimensions and the prevalence of active learning strategies. The findings of the study revealed that there is a positive and supportive school climate significantly correlates with a higher frequency and variety of active learning strategies. This study highlights the need for a conducive school environment to foster innovative teaching practices which ultimately enhance the educational outcomes. The insights provided could be valuable for educational policymakers, administrators, and teachers aiming to create an engaging and supportive learning atmosphere.

Key Words: School Climate and Active Learning Strategies, School Teachers

Introduction

In recent years, educational research has increasingly emphasized the importance of school climate in shaping teaching practices and fostering student engagement. School climate refers to the encompassing aspects such as teacher-student relationships, administrative support, safety, inclusivity, and a sense of belonging. A positive school climate has been shown to contribute to enhanced teacher satisfaction, improved student behaviour, and better academic

outcomes. This environment sets the foundation for teaching practices, including the adoption of innovative strategies like active learning, which are crucial for meeting the demands of modern education.

Active learning strategies have gained prominence for their role in engaging students directly in the learning process. Unlike present, lecture-based methods, active learning emphasizes student participation and interaction through methods such as group discussions, problem-solving activities, hands-on projects, and collaborative learning. These strategies promote critical thinking, foster creativity, and improve knowledge retention, making them particularly beneficial for diverse learning needs. However, the effective implementation of active learning in classrooms can be influenced by the surrounding school climate, as a supportive environment can encourage teachers to experiment with new instructional approaches.

In the context of Madurai District, where schools represent a diverse array of socioeconomic backgrounds and educational resources, understanding the interplay between school climate and active learning strategies is especially relevant. This study aims to examine how elements of school climate influence the use of active learning techniques among school teachers in this district. By exploring the relationships between school climate and active learning, this research seeks to provide insights that can inform policies and practices for fostering a conducive learning environment.

Need and Signification of the study

The study aims to explore the impact of school climate on teaching methods and student engagement in the Madurai District. It aims to identify the gap in active learning strategies implementation and the challenges faced by teachers in implementing these strategies. The findings could help to improve classroom practices, enhance student participation, and improve student outcomes. The study also provides insights for teacher training programs, highlighting skills and attitudes that foster active learning and a positive school climate, which also have a long-term social impacts, promoting educational environments that develop student's social, emotional, and intellectual capacities. The findings will contribute to the academic understanding of environmental factors influencing teaching methods and student engagement.

Objectives of the study

i. To investigate the relationship between school climate and use of Active Learning Strategies in classrooms.
ii. To assess the current state of school climate in Madurai District
iii. To identify the active learning strategies employed by teachers and
iv. To explore how various dimensions of school climate impact the frequency and nature of active learning strategies used by the teachers in classrooms.

Hypotheses of the study

H.1. There is no significant relationship between school climate and active learning strategies used in the classrooms of Madurai district school teachers.

H.1.1 Teacher-student relationship
H.1.2 Administrative support
H.1.3 Safety and inclusivity
H.1.4 Student engagement

H.1.5 Overall school climate

H.2. There will be no significant difference among the sample subgroups with respect to school climate with respect to their

H.2.1	Gender	: (Male / Female)
H.2.2	Teaching subject	: (Arts / Science)
H.2.3	Type of school	: (Government / Private)
H.2.4	Locality of the school	: (Rural / Urban)
H.2.5	Designation	: (BT Teacher / PG Teacher)
H.2.6	Medium of instruction	: (Tamil / English)
H.2.7	Year of experience	: (Less than 10 years / More than 10 years)
H.2.8	Marital status	: (Married / Unmarried)

Methodology, Tool and Sample of the study

The study aims to analyze the impact of school climate on active learning strategies in Madurai District, identifying areas for policy improvement and professional development through surveys, interviews, and observations.

Research Design

- ***Type of Study***: It is a descriptive and correlational study aimed at understanding the current state of school climate and active learning strategies in Madurai District schools and exploring the relationship between them.
- ***Population and Sample***: All the school teachers in Madurai District is the targeted population. A stratified random sampling method may be used to ensure representation across different types of schools (e.g., public, private, urban, rural). Hence 210 sample were selected using stratified random sampling method.

Instrumentation

- ***A scale on School Climate*** : This scale was assessed using Likert's Item Wise Analysis (e.g., 1-5) to measure teachers' perceptions of various factors of school climate .
- ***A scale on Use of Active Learning Strategies*** : This scale will also employ a Likert scale to rate how frequently and effectively teachers employ active learning techniques in their classrooms.
- ***Reliability and Validity Checks***: Pilot testing will be conducted to check the reliability (using Cronbach's alpha) and validity of the instruments before the full data collection begins.

Data Analysis

- ***Quantitative Analysis***: Descriptive statistics such as means, standard deviations summarized the teachers' perceptions of school climate and level of using active learning strategies.
- ***Correlation Analysis***: Pearson's correlation or Spearman's rank correlation was used to analyze the relationship between school climate variables and the use of active learning strategies.

Delimitations of the study

This study has focused only on school teachers within Madurai District, hence findings may not be generalizable to other regions without further research.

Analysis and Interpretation of Data

Table: 1 mean, standard deviation and t- values of School climate based on the sub groups

Variables	Group	N	Mean	S.D	t-Value	Level of significance
Gender	Male	125	82.139	9.613	4.349**	Sig.
	Female	085	87.452	8.000		
Teaching Subject	Arts	126	82.195	11.238	4.864**	Sig.
	Science	084	87.432	3.629		
Types of School	Government	129	82.627	11.325	4.043**	Sig.
	Private	081	86.938	3.395		
Locality of the School	Rural	133	82.079	10.613	5.688**	Sig.
	Urban	077	88.109	4.618		
Designation	BT Teacher	141	82.804	10.866	4.510**	Sig.
	PG Teacher	069	87.325	3.398		
Medium of instruction	Tamil	102	82.660	9.731	2.628**	Sig.
	English	108	86.015	8.706		
Year of Experience	Less than 10 years	129	82.627	11.235	4.043**	Sig.
	More than 10 years	081	86.938	3.395		
Marital Status	Married	141	83.025	10.204	3.279**	Sig.
	Unmarried	069	86.874	6.642		

Note: * denotes significance at 0.05 level ** denotes significance at 0.01 level

Results based on difference among the sample subgroups on school climate scores

From the table 1 it is observed that the mean scores of female teachers (M=87.452; SD=8.000) are comparatively greater than their male counterparts (M=82.139; SD=9.613) respectively, $t(208) = 4.349$, $p<0.01$. Hence null hypothesis H.2.1 is rejected at 0.01 level. The mean scores among the teaching subject in science teachers (M=87.432; SD=3.629) are found to be greater than their arts teachers (M=82.195; SD=11.238) respectively, $t(208) = 4.864$, $p<0.01$. Hence null hypothesis H.2.2 is rejected at 0.01 level.

The mean scores with respect to private school teachers (M=86.938; SD=3.395) are comparatively greater than their government school teachers (M=82.627; SD=11.325) respectively, $t(208) = 4.043$, $p<0.01$. Hence null hypothesis H.2.3 is rejected at 0.01 level. The mean scores based on locality of school with regard to urban area (M=88.109; SD=4.618) are

found to be greater than their rural area (M=82.079; SD=10.613) respectively, t(208) = 5.688, p<0.01. Hence null hypothesis H.2.4 is rejected at 0.01 level.

The mean scores with respect to the designation of the teachers rely on PG teachers (M=87.325; SD=3.398) are comparatively greater than those of the BT teachers (M=82.804; SD=10.866) respectively, t(208) = 4.510, p<0.01. Hence null hypothesis H.2.5 is rejected at 0.01 level. The mean scores of teachers with medium of instruction in teaching of Tamil medium teachers (M=82.660; SD=9.731) are found to be less than the English medium teachers (M=86.015; SD=8.706) respectively, t(208) = 2.628, p<0.01. Hence null hypothesis H.2.6 is rejected at 0.01 level.

The mean scores of teachers years of experience in more than 10 years (M=86.938; SD=3.395) are comparatively greater than their less than 10 years (M=82.627; SD=11.235) respectively, t (208) = 4.043, p<0.01. Hence null hypothesis H.2.7 is rejected at 0.01 level. The mean scores (M=86.874; SD=6.642) of teachers with their marital status for unmarried teachers are found to be greater than their married counterparts (M=83.025; SD=10.204) respectively, t (208) = 3.279, p<0.01. Hence null hypothesis H.2.8 is rejected at 0.01 level.

Result for the Correlation Analysis

There is no significant relationship between school climate and active learning strategies in classrooms of Madurai district school teachers. Correlation between school climate its dimensions and active learning strategies is presented in Table:2

Table: 2 Pearson correlation result for the sub-scales of school climate and active learning strategies (N=210)

Sub-variables of School climate	1	2	3	4	5
Teachers-student relationship	0.597**				
Administrative support	0.641**	0.791**			
Safety and inclusivity	0.624**	0.618**	.748**		
Student engagement	0.662**	0.824**	.936**	0.938**	
School climate	0.692**	0.791**	.831**	0.920**	0.938**

*Correlation is significant at the 0.05 level **Correlation is significant at the 0.01 level
N = 210, df = (N-2) = 208

Results based on correlation between school climate and active learning strategies

Table 2 represents the correlation between the school climate and its sub-variables with active learning strategies in the classrooms of Madurai district school teachers. It can be seen that there exists a statistical relationship between school climate and active learning strategies for school teachers.

It is observed from table 2, that the calculated r-value for the school climate and its dimensions namely, teachers-student relationship, r (208) = .597, p=.181, p<0.01, administrative support, r (208) = .641, p=.181, p<0.01, safety and inclusivity, r (208) = .624, p=.181, p<0.01, student engagement, r (208) = .662, p=.181, p<0.01 and school climate, r (208) = .692, p=.181, p<0.01 respectively.

Inter-relationship between school climate and use of active learning strategies of school teachers

The relationship between school climate and active learning strategies for teachers is crucial in educational psychology. A supportive school climate encourages teachers to adopt innovative teaching techniques, such as group discussions and problem-solving, and fosters personality expression. Active learning strategies, which involve engaging students directly in the learning process, are more likely to be implemented when the school climate is supportive, personality traits align with teaching methods, and the school climate is conducive to creativity and collaboration. Successful implementation of active learning strategies can lead to improved student engagement and outcomes, thereby fostering a feedback loop that nurtures effective teaching practices.

This analysis beautifully highlights the dynamic interplay between school climate and active learning strategies, emphasizing how each element reinforces the other. Here's a breakdown of these inter-relationships and how they can impact educational outcomes:

School Climate as a Foundation for Active Learning

- A positive school climate acts as a foundational support for teachers, providing them with the confidence and resources to experiment with **innovative teaching techniques**. When teachers feel valued, safe, and supported, they are more likely to take pedagogical risks and employ active learning strategies.
- **Emotional and Physical Safety**: Teachers are more willing to try new approaches when they don't fear judgment or failure, fostering an environment where active learning can thrive.
- **Collaborative Atmosphere**: A school climate that promotes collaboration allows teachers to share ideas and refine active learning practices together, enhancing their implementation and success in the classroom.

Personality Expression and Alignment with Active Learning

- **Teacher Personality Traits**: Traits such as **openness**, **creativity**, and **agreeableness** are particularly conducive to active learning. Teachers who feel supported in expressing these traits are more likely to engage in student-centered methods like discussions, peer teaching, and problem-solving.
- **Personality-Method Alignment**: When a teacher's personality aligns with active learning approaches, their delivery is often more authentic and effective, resulting in higher engagement from students.

Active Learning Strategies as Catalysts for a Positive School Climate

- **Engagement and Student Success**: Active learning strategies are known to enhance student engagement, critical thinking, and collaboration skills. As students become

more invested in their learning, they may exhibit fewer behavioural issues and greater academic curiosity, which in turn fosters a more positive school climate.
- **Professional Satisfaction**: Teachers who see positive outcomes from active learning often report higher job satisfaction and a sense of accomplishment. This satisfaction can contribute to a more enthusiastic and optimistic school atmosphere.

The Feedback Loop of Mutual Reinforcement

- **Mutual Influence**: A school climate that encourages active learning enhances teacher traits and behaviours conducive to innovation. Teachers with these traits further nurture a positive climate by successfully implementing active learning strategies, thus creating a **positive feedback loop**.
- **Sustainable Development of Best Practices**: As active learning becomes more prevalent, the supportive school climate is strengthened, leading to continuous improvement in teaching practices and, ultimately, student outcomes.

This article suggests that both school climate and active learning strategies are interdependent in promoting effective teaching practices and enhancing educational experiences. Schools that prioritize fostering a positive climate can, therefore, expect to see a natural increase in the use of active learning strategies, which will, in turn, strengthen the climate, creating an ever-improving educational environment.

Summary of recommendations

The following recommendations for school climate and active learning strategies in Madurai District classrooms provide valuable insights for policymakers, educators, and students. Here's how the study can contribute to each group:

For Policymakers

- **Informed Decision-Making**: The study provides data-driven insights into how school climate impacts teaching effectiveness and student engagement. Policymakers can use these findings to create policies that promote a supportive and collaborative school environment.
- **Resource Allocation**: Understanding the influence of school climate on active learning adoption allows policymakers to allocate resources effectively, ensuring that schools receive the training, tools, and infrastructure needed to support these strategies.
- **Educational Reforms**: By highlighting the importance of school climate, this research can inspire reforms that prioritize teacher support, professional development, and collaborative initiatives, fostering environments conducive to active learning.

For Educators

- **Professional Development**: The study's findings can underscore the need for teacher training programs focused on active learning methods, helping educators build the skills needed to implement these strategies confidently.
- **Enhanced Teaching Strategies**: Educators can gain insights into how a positive school climate supports innovative teaching practices. Teachers who understand this relationship may become more intentional in fostering positive classroom climates, ultimately benefiting their teaching effectiveness.

- **Job Satisfaction and Well-being**: A supportive school climate can boost job satisfaction by encouraging teachers to explore new methods without fear of judgment. Teachers may feel more fulfilled when they can express their creativity and collaborate with peers, who in turn can lead to reduced burnout and increased retention.

For Students

- **Improved Engagement and Learning Outcomes**: Active learning strategies have been shown to increase student engagement, critical thinking, and academic performance. When the school climate supports these methods, students are more likely to benefit from enriching learning experiences that encourage active participation.
- **Social and Emotional Benefits**: A positive school climate provides students with a safe, inclusive, and supportive environment, fostering social skills, emotional well-being, and a sense of belonging. This setting enables them to take academic risks, collaborate effectively, and develop resilience.
- **Long-term Academic and Personal Growth**: By enhancing students' learning experiences through a supportive climate and active learning methods, the study can contribute to students' overall personal growth and prepare them with the skills needed for future success.

This study has the potential to transform educational practices in the Madurai District by providing a comprehensive understanding of the interdependencies between school climate and active learning. It offers a roadmap for continuous improvement in teaching strategies, creating a feedback loop that not only improves educational outcomes but also contributes to a more supportive and productive educational ecosystem. The findings can ultimately serve as a model for other districts, showing how prioritizing school climate can lead to improved teaching and learning experiences across diverse educational contexts.

Conclusion

This study explored the connection between school climate and active learning strategies in Madurai District classrooms, demonstrating that a positive school climate is key to fostering active learning practices. By examining factors such as teacher-student relationships, administrative support, inclusivity, and safety, the study revealed that teachers who perceive their school climate as supportive are more inclined to adopt interactive and student-centered teaching techniques, such as group activities, discussions, and problem-solving exercises.

The findings indicated that there is a significant correlation between a supportive school climate and the frequency and effectiveness of active learning strategies. Teachers in a nurturing and collaborative environment are more confident and willing to engage students actively, leading to improved student outcomes in terms of engagement, understanding, and retention. These insights are valuable for policymakers, school leaders, and educators in creating an atmosphere that not only supports teachers in their roles but also enhances the quality of education delivered to students.

Implications for Policy and Administration

The study emphasizes the need for policies that cultivate a positive school climate. Policymakers and administrators should consider initiatives that foster open communication,

provide continuous professional development, and offer administrative support to teachers. For instance, workshops on active learning could be more successful if schools have strong climates that encourage teachers to apply what they learn in training.

Additionally, administrators should ensure that teachers feel emotionally and professionally supported. For instance, practices that encourage teacher collaboration and recognize teachers' efforts can significantly contribute to their adoption of active learning techniques.

Impact on Teachers and Classroom Practice

The study underscores the importance of teacher agency in the adoption of active learning strategies. Teachers who are empowered and feel part of a collaborative school culture are more likely to feel secure in implementing student-centered practices. Teachers can leverage these insights to advocate for supportive changes in their schools and to actively engage in professional communities that encourage the exchange of active learning strategies.

This finding highlights the potential of active learning to transform student engagement and educational outcomes. Teachers may see first-hand how student participation, interest, and understanding improve when active learning techniques are used, reinforcing the importance of a conducive school climate.

Future Research Directions

Future studies could expand on these findings by exploring interventions to improve school climate and observing their direct impact on active learning adoption over time. Additionally, investigating school climate and active learning across different districts or educational contexts could provide comparative insights and highlight unique regional needs.

Further research might also focus on specific personality traits of teachers that correlate with both a positive perception of school climate and a higher frequency of active learning strategies. Understanding how these factors interact could provide a nuanced view of how personal attributes and school environment collectively shape teaching practices.

This study underscores the reciprocal relationship between school climate and teaching practices. By fostering an environment that supports teachers in their roles, schools can pave the way for more interactive, engaging, and effective learning experiences. Improving school climate is not only beneficial for teachers but also creates a feedback loop where student success and engagement further reinforce positive educational practices, ultimately contributing to a thriving learning community.

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