

The Correlation Between English Classroom Environment and Learning Motivation on EFL Secondary School Students

 <https://jele.or.id/index.php/jele/article/view/785>

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ABSTRACT

The classroom environment plays a crucial role in supporting students' learning motivation. A comfortable environment can enhance focus, engagement, and academic achievement, while poor conditions may hinder students' motivation to learn. Therefore, this study aims to analyze the correlation between the English classroom environment and students' learning motivation at the secondary school level using a quantitative correlational method. Data were collected from 67 students at a Madrasah Tsanawiyah in Palangka Raya, Central Kalimantan, through questionnaires on classroom environment and learning motivation. Spearman's correlation analysis showed a significant positive correlation ($\rho = 0.405$, $p < 0.001$), indicating that a well-maintained classroom environment can enhance students' learning motivation. Key factors such as sound insulation, lighting, temperature, ventilation, and classroom decoration influence students' learning experiences. A comfortable and supportive classroom helps improve students' focus and engagement, while an inadequate environment may reduce their motivation. These findings highlight the importance of optimizing the classroom environment to enhance students' motivation. Teachers can improve classroom management by arranging flexible seating, ensuring proper lighting, and maintaining good air circulation. Additionally, policymakers should consider upgrading school facilities to create a more conducive learning environment that fosters student motivation. With a better classroom environment, students can stay more focused, motivated, and achieve better academic outcomes.

Keywords: Correlation, Classroom Environment, Motivation

Article History:

Received 26th March 2025

Accepted 18th April 2025

Published 19th April 2025



INTRODUCTION

The school environment has a significant impact on the teaching and learning process because it serves as the place where students indirectly learn. When students struggle to learn, it is not only due to their lack of intelligence but also due to other factors such as the surrounding environment (Salim et al., 2022). This is especially true in the classroom, where students spend a significant amount of time, making the physical classroom environment a crucial factor in their development (Zeng et al., 2023).

According to the research conducted by Kılıç et al., (2021) the educational environment factor affects students' motivation. In this context, all physical conditions required for education must be available in schools. Considering this factor, it is recommended that the relevant institutions determine the physical conditions needed for education in both schools and universities. This aligns with the research conducted by Hanaysha et al., (2023), which asserts that the classroom environment and teacher quality are significantly associated with student engagement and academic performance in the context of higher education in the United Arab Emirates (UAE). The study further emphasizes that enhancements in various classroom environment aspects, such as lighting, ventilation, cleanliness, and physical layout, contribute to more effective teaching pedagogy, thereby fostering student engagement and academic achievement. These findings further underscore the critical role of a conducive

classroom environment in supporting students' learning motivation across different educational levels.

The impact of the classroom environment on students' learning motivation can also be explained through Pavlov's Classical Conditioning Theory. Pavlov's theory explains the relationship between stimulus (S) and response (R) in learning (Pavlov, 2010). Ivan Pavlov's Classical Conditioning Theory highlights how stimuli from the environment can be conditioned to elicit desired learning responses from students (Jelita et al., 2023). This theory emphasizes the importance of using appropriate stimuli to stimulate specific learning responses (Nabilaa Faizatuz et al., 2023). Therefore, it is important to organize the learning environment to support the learning process and enhance student comfort. A similar statement is supported by the study conducted by Jazuli et al., (2023), The classroom environment plays a crucial role in influencing students' learning experiences and academic achievements. An essential aspect of the school environment is the classroom environment.

A conducive learning environment creates a comfortable space for students to study. This comfort can be achieved through a clean and organized setting (Havidz & Mujakiah, 2023). A conducive learning environment will impact students' cognitive processes during learning, as it has the potential to enhance their focus and memory (Zen et al., 2022). The classroom environment in this study refers to the facilities available in the classroom. Adequate classroom facilities have an impact on students' motivation to learn English. Facilities such as desks, chairs, whiteboards, and appropriate learning tools help create a supportive learning atmosphere. A well-organized classroom environment not only makes students feel comfortable but also increases their motivation to learn. Therefore, attention to the physical aspects of the classroom environment is crucial in creating a supportive learning environment for English language learning.

According to Kirikkaleli & Serol (2024), a positive classroom climate creates opportunities for students to demonstrate good behaviour, confidently share their opinions, and freely express their thoughts. Additionally, a supportive environment enables them to collaborate with teachers in establishing classroom rules, fostering an inclusive learning atmosphere. The school environment, along with classroom conditions, plays a significant role in influencing students' learning motivation. Learning motivation is defined to the internal and external influence that shape students' efforts and participation in the learning process.

In this research, learning motivation focuses on students learning English as a foreign language. Highly motivated students are characterized by their enthusiasm and active participation in the learning process, which contributes to their academic success (Lena et al., 2022). Motivation not only keeps students interested in learning but also serves as a key determinant of their success, as even highly intelligent students may struggle if they lack sufficient motivation (Safitri & Octarisa, 2023). Thus, learning motivation is essential for academic achievement and student engagement in the learning process (Lu et al., 2021). Without motivation, individuals may lack the effort needed to achieve their goals (Ulfa & Bania, 2019).

This is evidenced by research performed by Nja et al, (2023) which concluded that a positive acoustic environment significantly impacts students' academic performance and ability to collaborate. Similar research was also conducted by Andeka et al, (2021) Student motivation will increase as the learning facilities available become better. Conversely, inadequate learning facilities are lacking, student motivation will decrease. A similar study was also conducted by Siregar & Tarigan (2022), who found a significant impact of learning facilities at school on students' learning motivation. Inefficient use of learning facilities at school can lower students' learning motivation.

Based on the explanation above, the results indicate a significant correlation between the school environment and students' learning motivation. However, most previous research has focused on the general school environment and its influence on subjects such as sciences and economics, with the majority conducted in high school education.

Most previous studies have examined the general influence of the classroom environment on students' learning motivation. However, few have explored how physical

aspects such as lighting, temperature, and room color affect motivation in learning English as a foreign language (EFL). These factors play a crucial role in enhancing students' comfort and engagement. To address this gap, this study investigates the contribution of the classroom environment to students' motivation in learning English at the junior high school level. By focusing on English classes, this study provides deeper insight into the relationship between the learning environment and students' motivation.

Literature review

A conducive classroom atmosphere, including a comfortable room arrangement, availability of learning resources, and positive interactions between teachers and students, can improve students' motivation and active engagement in the learning. With a supportive environment, students can focus better, feel more motivated, and achieve optimal learning outcomes. Effective instructional support, socioemotional support, and classroom organization and management are key components of a supportive classroom environment (Wang et al., 2020). According to Hanaysha et al., (2023), stated that the physical classroom environment significantly influences students' perceptions of educational institutions and their participation in the learning process.

Similar research conducted by Pringgoutami et al, (2019) demonstrates a significant correlation between perceptions of learning environment and learning motivation. In addition, the research conducted by Noor et al., (2021) found that the classroom learning environment significantly influences students' academic motivation, as a conducive classroom atmosphere enhances students' desire to achieve academic goals. These findings highlight the important of creating a comfortable classroom environment tailored to students' needs to support an effective learning process.

Based on the explanation outlined above, this study focuses on the following research questions: Does a more positive English classroom environment correlate with higher student learning motivation?

METHOD

This research utilized a quantitative correlational research design. Correlational research was a study in which researchers observed natural events without making changes. It examined the relationship between existing variables but did not establish cause and effect (Field, 2017). In a correlational design, researchers used a correlational approach to describe and measure how strongly two or more variables were related (Creswell, 2023). This study used a quantitative correlational method because the main focus of this research was to examine the relationship between two variables, namely the English classroom environment and students' learning motivation. The quantitative correlational method allowed the researcher to identify and measure the extent to which these two variables were related.

The research was conducted at one of the Islamic Junior High Schools in the city of Palangka Raya. This study involved 67 students as the sample, determined based on calculations using G*Power. G*Power is a free software designed to assist researchers in calculating statistical power and determining the appropriate sample size (Erdfelder et al., 2009). The sample was selected using the purposive sampling technique. Purposive sampling is a technique in which the researcher chooses participants based on predefined criteria or objectives that align with the study's aim. The study's sample included students from classes VIII A, and VIII B.

The research instrument for this research was questionnaire. The research tool utilized a Likert Scale, which offered response choices ranging from 1 (the least) to 5 (the most). This questionnaire was adopted from the studies of Nguyen & Habók (2021) and Peng et al. (2022). The questions related to learning motivation were adopted from Nguyen & Habók, (2021), which originated from the motivation scale by Brown (2002), Hsu (2005), and Swatevacharkul (2009). This scale consisted of two main factors: internal motivation orientation (TVE = 48%) and external motivation orientation (TVE = 51.2%). Previous validity and reliability tests

showed a KMO value of 0.920 ($p < 0.01$), Cronbach's alpha ranging from 0.782 to 0.796, and rho A values from 0.790 to 0.821, indicating that this instrument possessed good psychometric qualities.

Additionally, the questionnaire in this study also adopted the instrument developed by Peng et al., (2022), focusing on the "Physical Environment" dimension, which included aspects such as ventilation, natural and artificial lighting, temperature and humidity, color schemes, and classroom decoration styles. The validity and reliability tests in the previous study showed that this instrument had good psychometric quality, with a KMO value of 0.91 ($p < 0.01$), indicating that the sample was sufficient for factor analysis. Additionally, the internal reliability for the overall instrument was demonstrated by a Cronbach's alpha value of 0.939, indicating that the instrument was reliable for measuring perceptions of the physical environment in active learning classrooms.

These questions were selected due to their relevance to the focus of this research, which examined the correlation between classroom environment and learning motivation. Furthermore, these questions had been tested for validity and reliability in previous research contexts, making them dependable for collecting accurate data in this research. This study employed correlation analysis with JASP (Jeffrey's Amazing Statistics Program) (Mark A Goss-Sampson, 2019).

FINDINGS AND DISCUSSION

A Significant Correlation Between English Classroom Environment and Students' Learning Motivation in Secondary Level English Classes.

The results of the descriptive statistical analysis show that this study involved 67 respondents, with no missing data. The mean score for the Classroom Environment variable is 68.912 with a standard deviation of 10.102, while the Motivation variable has a mean score of 78.582 with a standard deviation of 12.934. The score range for Classroom Environment is between 48.570 – 100.000, while Motivation ranges from 57.500 – 100.000.

The close values of the mean and median indicate that the data distribution is relatively symmetrical. Additionally, the higher standard deviation in the Motivation variable suggests greater variation in motivation scores among respondents compared to Classroom Environment.

Table 1. Descriptive Statistics

	Classroom Environment	Motivation
Valid	67	67
Missing	0	0
Median	68.570	77.500
Mean	68.912	78.582
Std. Deviation	10.102	12.934
Minimum	48.570	57.500
Maximum	100.000	100.000

To assess whether the data met the assumptions for parametric analysis, a normality test was conducted using the Shapiro-Wilk Test for Bivariate Normality, as normality is a key assumption for Pearson Correlation. The results showed that the Motivation variable had a Shapiro-Wilk value of 0.950 with $p = 0.001$. Since $p < 0.05$, the data were not normally distributed. Consequently, the use of parametric methods such as the Pearson Correlation was not appropriate due to the violation of the normality assumption. Therefore, correlation analysis in this study was conducted using Spearman's Rank Correlation, which was more suitable for non-normally distributed data.

Table 2. Assumption check Shapiro-Wilk Test for Bivariate Normality

		Shapiro-Wilk	<i>p</i>
Classroom Environment	- MOTIVATION	0.950	0.001

The results of the Spearman correlation analysis indicated a significant positive relationship between *classroom environment* and *motivation*. The correlation coefficient (Spearman's $\rho = 0.405$) indicated a moderate relationship between these two variables. The Pearson's r value is actually an effect size, where <0.1 is trivial, $0.1-0.3$ is a small effect, $0.3-0.5$ a moderate effect, and >0.5 a large effect (Mark A Goss-Sampson, 2019). Based on this interpretation, the correlation coefficient in this study fell within the moderate effect range. This meant that while the classroom environment had a meaningful impact on students' motivation, other factors may also influence their motivation levels.

Furthermore, the p -value was < 0.001 , indicated that this relationship was highly statistically significant. A p -value this small suggested that the probability of this correlation occurring by chance was very low. In other words, the more positive the classroom environment was perceived by students, the higher their motivation to learn. Based on these findings, the null hypothesis (H_0) was rejected. The null hypothesis in this study likely stated that "there is no relationship between classroom environment and learning motivation". However, since the results showed a statistically significant correlation, it could be concluded that there was indeed a real relationship between these two variables.

Table 3. Spearman's Correlations

Variable		Classroom Environment	Motivation
1. Classroom Environment	Spearman's ρ	—	
	p -value	—	
2. Motivation	Spearman's ρ	0.405	***
	p -value	$< .001$	—

These findings highlight the importance of creating a supportive and conducive classroom environment. A positive classroom atmosphere, whether in terms of facilities, teacher-student interactions, or peer relationships, can contribute to increased student motivation. Therefore, for educators and policymakers, focusing on improving the classroom environment can be an effective strategy to enhance student learning outcomes.

The results of the Spearman correlation analysis indicate a significant positive correlation between students' perceptions of the English classroom environment and their learning motivation ($\rho = 0.405$, $p < 0.001$). This finding suggests that the more positively students perceive their classroom environment, the higher their motivation to learn English.

Several factors within the classroom environment, such as sound insulation, natural and artificial lighting, temperature and humidity, ventilation, classroom decoration style, and color scheme, contribute to students' learning motivation. The physical conditions of the classroom play a crucial role in creating a comfortable and conducive learning atmosphere. For instance, adequate lighting and an appropriate color scheme can enhance focus and learning comfort, while good ventilation, along with well-maintained temperature and humidity levels, contribute to students' physical well-being during lessons. On the other hand,

a suboptimal classroom environment, such as poor lighting, inadequate ventilation, or high noise levels may negatively affect learning motivation.

Previous research has shown that there was a positive correlation between school environment and student learning motivation. The results of this research supported these findings, as this research also demonstrated that a positive classroom environment contributed significantly to students' learning motivation level. A conducive classroom environment, including aspects such as lighting, ventilation, temperature and interior design, created a comfortable learning atmosphere, thereby encouraging students to be more motivated in the learning process.

In addition, these findings aligned with Ivan Pavlov's theory which explained the relationship between stimulus (S) and response (R) in the learning process. This theory emphasized that stimuli from the environment could be conditioned to produce the desired learning response from students. In this context, a conducive classroom environment acted as a stimulus that encouraged students to be more focused, enthusiastic, and better prepared to learn. Thus, this research reinforced previous findings of the correlation between the school environment and student learning motivation.

This study had several limitations that should be acknowledged. It was conducted in a single class. Therefore, the findings could not be generalized to other classes with different conditions. Furthermore, the scope of this research was limited to classroom facilities, including lighting, ventilation, temperature, and interior design, without considering other factors that might have also influenced student learning motivation.

For a deeper insight into the correlation of the classroom environment on learning motivation, future studies should involve a larger class sample to improve the generalizability of the findings. Additionally, the scope of research should be expanded to examine other factors within the classroom environment, such as social interactions and learning dynamics. This broader perspective would provide deeper insight into the factors that may influence student learning motivation.

CONCLUSIONS

The findings of this study indicate a significant positive correlation between students' perceptions of the English classroom environment and their learning motivation. The Spearman correlation analysis shows a moderate yet significant relationship ($\rho = 0.405, p < 0.001$), indicating that the more positively students perceive their classroom environment, the higher their motivation to learn English. Classroom environment factors such as sound insulation, lighting, temperature and humidity, ventilation, decoration style, and color schemes play a crucial role in enhancing students' learning motivation. A comfortable and supportive classroom environment can improve students' focus and comfort, ultimately encouraging their engagement in learning. Conversely, suboptimal classroom conditions, such as inadequate lighting, poor ventilation, or high noise levels, can decrease students' motivation and hinder their academic achievement. These results align with previous research that emphasizes the importance of the learning environment in supporting students' motivation. Therefore, educators and policymakers should consider these factors when designing and managing classrooms. Concrete measures such as flexible seating arrangements, increasing natural lighting, improving ventilation, and reducing classroom noise can help create a more conducive learning environment, thereby enhancing students' motivation and academic performance.

ACKNOWLEDGEMENTS

The researchers express their sincere appreciation to all those who have supported and contributed to the completion of this article. Special thanks go to those who have provided invaluable guidance and direction throughout the research process. Appreciation is also extended to the institution that provided the data and resources necessary for this study.

Additionally, the researchers are grateful to their family and friends for their continuous motivation and encouragement. It is hoped that this article will benefit readers and inspire further research in this field.

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