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Teaching Strategies, Learning Environments and Students' Motivation to Learn English : PLS SEM Analysis

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ABSTRACT

In the learning process, teaching strategies and the learning environment play an important role in motivating students. Learning motivation is the foundation for developing learning potential optimally. However, students' motivation to learn English is still relatively low. This can be seen from various factors that influence low learning motivation, including difficulty in understanding English, lack of confidence, and lack of enthusiasm, such as frequently asking for permission to leave class, not submitting assignments on time, and sleeping in class. This research aims to analyze the influence of teacher teaching strategy and student learning environment on English learning motivation at SMP N 1 2 x 11 Enam Lingkung. A quantitative method was used in this study, with a sample of 68 Grade IX students. The study used questionnaires for data collection and the data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method with SmartPLS 4.0 software. The findings show that teaching strategy and learning environment individually have a significant influence on English learning motivation. Simultaneously, teaching strategy and learning environment explain 57% of the variation in English learning motivation (R2 = 0.570), with the remaining 43% attributed to other factors not included in the model. This study concludes that Effective and varied teaching strategies, coupled with a conducive and supportive learning environment, are crucial for increasing student engagement and motivation in English language learning.

I. Introduction

English is one of the international languages that has a significant influence in almost all aspects of life, especially in the era of globalization. Knowledge of English is crucial for the young generation of Indonesia to be competent in education, employment, and global communication. Therefore, English learning in schools, particularly at the secondary level, has become a key objective in improving the quality of Indonesia's human resources.

However, in reality, students' motivation to learn English remains relatively low. According [1], It shows that around 62% of secondary school students feel unmotivated to attend English lessons. They[2] explains that motivation consists of intrinsic motivation, which refers to internal drives such as curiosity and personal satisfaction, and extrinsic motivation, which is influenced by external factors such as grades and recognition. Learning motivation is a psychological condition that consciously arises within individuals, encouraging and directing their learning activities to achieve specific goals or fulfill certain needs. This motivation plays an important role in fostering students' enthusiasm and persistence in the learning process. In addition, [3] argues that motivation in foreign language learning is a complex concept, encompassing various psychological dimensions such as needs, desires and drive to learn. These

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definitions underline that motivation is the foundation for success in learning English, influencing the intensity, direction and persistence of learners' efforts.

Many students consider English to be a difficult and uninteresting subject, resulting in low participation in class activities and suboptimal learning outcomes. Observations at SMP N 1 2x11 Enam Lingkung show that some students have not shown strong enthusiasm for English lessons. This can be seen from their study habits, lack of engagement, unsupportive learning environment, and suboptimal teaching strategies. Teachers also report that student interest in learning English remains low. This can be seen in behaviors such as frequently asking permission to leave the classroom, submitting assignments late, or sleeping during class. There are many factors that influence student learning motivation, including difficulty in understanding English, negative perceptions of the subject, limited variety of teaching strategies used by teachers, lack of confidence, and an unfavorable learning environment. Therefore, among the various factors that influence learning motivation, this study focuses on analyzing teacher teaching strategies and the student learning environment in relation to English learning motivation.

Teachers' teaching strategies refer to the techniques used by teachers to optimize teaching and learning by focusing on effective teaching methods, creating positive learning conditions, and adapting to students' needs. Teaching strategies are one of the key elements that influence student motivation. Reference [4]stated a teaching strategy is any long-term plan designed to achieve learning objectives. It includes a series of decisions made by the teacher before, during, and after the teaching process to ensure that the material is delivered in the most effective way and suits the needs of the students. Then [5] define a teaching strategy as a plan of action that includes the systematic use of certain methods and techniques to achieve learning objectives. teaching strategies are ways that teachers use to help students learn the material they want to learn and can achieve the goals that have been set . Strategies are very important to create more active and effective learning, as well as attracting student interest[6]. From the opinions of the experts above, it can be concluded that teaching strategies are very important to implement and design based on learning objectives to create effective teaching according to students' needs.

In addition, the learning environment also plays an important role in building student motivation. Reference [7] emphasises that the learning environment, which includes physical, social, and psychological aspects, greatly determines students' learning experiences and academic success. A supportive environment, featuring adequate facilities, positive social interactions, emotional support from teachers, and an inclusive classroom climate, can enhance students' comfort, self-confidence, and motivation. Then, [8]states that one of the important factors that can influence students' desire to learn English is their learning environment. A pleasant and supportive learning environment can make students more motivated to learn, but an unsupportive learning environment can inhibit students' desire and make them less interested in learning English. The learning environment is not only a backdrop but the environment also actively influences students' motivation and engagement in learning. According [9] a positive and supportive learning environment promotes effective learning and boosts students' motivation. This statement is in line with research findings that show that a classroom environment equipped with adequate and interactive resources results in higher levels of student engagement.

Therefore, this study aims to analyze the influence of teachers' teaching strategies and students' learning environment on the motivation to learn English in SMP N 1 2x11 Enam Lingkung. The results of this study are expected to produce practical recommendations for teachers to develop more diverse teaching strategies and create a more conducive and supportive learning environment. This study can broaden the knowledge of both teachers and researchers in creating interesting teaching strategies and a supportive and conducive environment. What distinguishes this study from previous studies is the data analysis method used, namely PLS-SEM software. SEM was chosen because it is able to simultaneously test the causal relationship between latent variables (which are not directly observed) and their indicators.

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II. Method

The study used a quantitative approach. According to Creswell[10], quantitative research is a method used to test theories by examining relationships among measurable variables using research instruments. The population of this study consisted of all ninth-grade students at SMP N 1 2x11 Enam Lingkung, totaling 210 students. A simple random sampling technique was used to select participants. Simple because the sample from each member of the population is taken in stages without considering the strata of the population. In determining the sample, the Slovin formula was used with a sample size of 68 respondents. The primary instrument used in this study was **a** Likert-scale questionnaire**,** designed to measure students' perceptions of teachers' teaching strategies and the learning environment on a scale of 1–5. The questionnaire consisted of 35 statements covering three variables: teachers' teaching strategies**,** students' learning environment, and English learning motivation. In developing teaching strategy instruments, the author uses Brown's indicators, such as preparation and planning, presentation techniques, interaction and agreement, and feedback. An example of this is that teachers design clear and structured learning plans. For the student learning environment, the author uses indicators according to Fraser, namely the physical and psychosocial environment, the social environment, and the academic environment. The statement is that the lighting in the classroom is adequate and the classroom is kept clean for comfort. Next, learning motivation using indicators developed by Ryan and Deci, there are intrinsic and extrinsic motivations. An example of a statement developed is I study English because I want good grades. Students completed the questionnaire based on their personal experiences and perceptions. Descriptive statistics were used to describe the research variables**:** Teaching Strategies (X1)**,** Learning Environment (X2)**,** and English Learning Motivation (Y). The collected data was processed using PLS software to determine the mean, standard deviation, minimum value, and maximum value for each indicator and their respective composite scores. After conducting descriptive statistical analysis, several assumption tests were carried out, including validity and construct reliability tests, as prerequisites for data qualification. For data management, this study used the SMART PLS 4.0 software with the Partial Least Squares (PLS**)** methodology and Structural Equation Modeling (SEM) approach[11]. Two major analytical techniques were employed in the PLS-SEM analysis:

1. Measurement Model (Outer Model), the measurement model in SEM refers to the relationship between latent variables and the observed indicators that measure them. In this model, researchers test the validity and reliability of the constructs used in the study. Including Cronbach's Alpha, Average Variance Extracted (AVE), Convergent Validity, Discriminant Validity, and Composite Reliability.
2. Structural Model (Inner Model**),** in order to evaluate the structural model, R-square is used for dependent variables and koefisien path is used for independent variables. Analyzed using R-Square, F-Square, Path coefficient, and T-statistic.

III. Results

Descriptive analysis was conducted to describe the data containing the mean and variation of respondents' answers related to the variables of teaching strategy (X1), learning environment (X2), and learning motivation (Y). Based on the analysis, the variable of teachers' teaching strategies had a mean score of 3.82 with a standard deviation of 0.89, indicating that respondents' answers were quite consistent. The learning environment variable had an average of 3.74 with a standard deviation of 0.90, showing that students' responses were relatively stable. Meanwhile, English learning motivation showed an average of 3.54 with a standard deviation of 1.05, suggesting a higher level of variation in responses. This indicates that the respondents' answers varied considerably. To determine the effect of X1 and X2 on Y, several steps were taken through the measurement model (outer model)**,** the structural model (inner model)**,** and hypothesis testing**.** These steps aimed to answer the research hypotheses formulated earlier. For data analysis, this study utilised the Partial Least Squares (PLS) methodology together with Structural Equation

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Modelling (SEM) in data analysis. PLS-SEM is well suited for analysing complex causal relationships in situations that are not supported by a theoretical foundation, as emphasized [12].

1. Measurement Model

The measurement model test, also known as the reflective measurement model, was used to determine the relationship between latent variables and their indicators. Convergent validity was evaluated using loading factors and Average Variance Extracted (AVE**)**, where an indicator is considered valid if the loading factor exceeds 0.70 and the AVE value exceeds 0.50.

Based on the results, all research indicators had loading factor values above 0.70, indicating no issues with convergent validity. Thus, all indicators used in the model were valid.

Table 1. Loading Factor

	X1	X2	Y
X1.1	0.860		
X1.3	0.839		
X1.9	0.830		
X1.5	0.814		
X1.2	0.810		
X1.6	0.798		
X1.8	0.785		
X1.10	0.780		
X1.4	0.741		
X1.7	0.735		
X2.1		0.815	
X2.10		0.715	
X2.2		0.795	
X2.3		0.802	
X2.4		0.796	
X2.5		0.709	
X2.6		0.719	
X2.7		0.857	
X2.8		0.832	
X2.9		0.826	
Y1			0.703
Y10			0.782
Y11			0.753
Y12			0.776
Y13			0.706
Y14			0.741
Y15			0.727
Y2			0.740
Y3			0.785
Y4			0.790
Y5			0.718
Y6			0.756
Y7			0.757
Y8			0.717
Y9			0.703

Note : X1 = Teaching Strategies
X2= Learning Environment
Y = Learning Motivation

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Similarly, in Table 3, Average Variance Extracted (AVE)meets the criteria of >0.5. Teaching strategy has a value of 0.640, meaning that the latent variable can explain more than half of the variance of its indicators.

Table 2. Average Variance Extracted (AVE)

	Average Variance Extracted
X1	0.640
X2	0.621
Y	0.554

Next, Discriminant validity in this study was tested using HTMT (Heterotrait-Monotrait Ratio), which is considered more sensitive than the Fornell–Larcker criteria or cross loading analysis[12].

Table 3. Discriminant Validity HTMT

	X1	**X2**	**Y**
X1	-	0.774	0.740
X2	0.774	-	0.737
Y	0.740	0.737	-

The results of the discriminant validity test using the HTMT method show that the ratio values between construct X1 and X2 are 0.774, X1 and Y are 0.740, and X2 and Y are 0.737. The HTMT values for each variable are < 0.90, as recommended. Thus, it can be concluded that each construct in the research model has good discriminant validity and can be clearly distinguished from one another.

Next, reliability testing was conducted using Composite Reliability (CR) and Cronbach's Alpha (CA).

Table 4. Cronbach’s Alpha and Composite Reliability

	Cronbach's alpha	**Composite reliability**
X1	0.937	0.947
X2	0.932	0.942
Y	0.942	0.949

The results obtained from the Cronbach's alpha test show that the variable values are above 0.70 and the results of the composite reliability test are above 0.70, so all variables pass the variability test. It can be concluded that all variables have passed the convergent validity, discriminant validity and reliability tests, so we can proceed to test the hypothesis.

2. Structural Model

Internal model evaluation is carried out using three methods, namely analysing the results of R-Square, F-Square, Path Coefficient & t-Statistics. The R-square test was conducted to determine the extent of the influence of independent latent variables on dependent latent variables. The results of the study, which were processed using SmartPLS 4.0 version 4.1.1.4 software, showed that the R-square value in this study was 0.570 for the dependent variable of learning motivation with the independent variables of teaching strategies and learning environment. The R-square results indicate that the variables of teaching strategies and learning environment are able to explain the variable of learning motivation by 57%, while the remaining 43% is influenced or explained by variables not included in the research model. Furthermore , The results of the effect size (f^2) analysis show that the effect of X1 on Y has a value of 0.187, which is classified as moderate. This indicates that X1 makes a

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moderate contribution to explaining variable Y. Meanwhile, the effect of X2 on Y has an f^2 value of 0.173, which is also classified as moderate. Thus, it can be concluded that both independent variables have a fairly strong contribution to the dependent variable, with X1 being slightly more dominant than X2.

Based on the bootstrapping test in SmartPLS software, Figure 1 shows that the T-statistic value of teaching strategies on learning motivation is above 1.96. Similarly, the T-statistic of learning environment on learning motivation is above 1.96. Table 4.9 shows the results of the path coefficient.

Table 5. Path coeffisient

	Original Sample (O)	T-Statistics	P-Values
X1 → Y	0.414	2.586	0.010
X2 → Y	0.398	2.460	0.014

The path coefficient test results show that variable X1 (teaching strategies) has a positive and significant effect on Y (learning motivation). This is evidenced by a path coefficient value of 0.414, a T-statistic of 2.586, and P-value of 0.010. Therefore, Ha1 is accepted. This means that teaching strategies have a positive and significant effect on learning motivation.

Similarly, variable X2 (learning environment) has a positive and significant effect on Y (learning motivation) with a path coefficient value of 0.398, t-statistic of 2.460, and p-value of 0.014. It can be concluded that Ha2 is accepted. In other words, the learning environment has a positive and significant effect on learning motivation.

Furthermore, simultaneous testing results show that teaching strategies and learning environments together have a significant effect on students' motivation to learn English. This is indicated by an R^2 value of 0.570, which means that 57% of the variation in learning motivation can be explained by these two variables, while the remaining 43% is influenced by other factors outside the model.

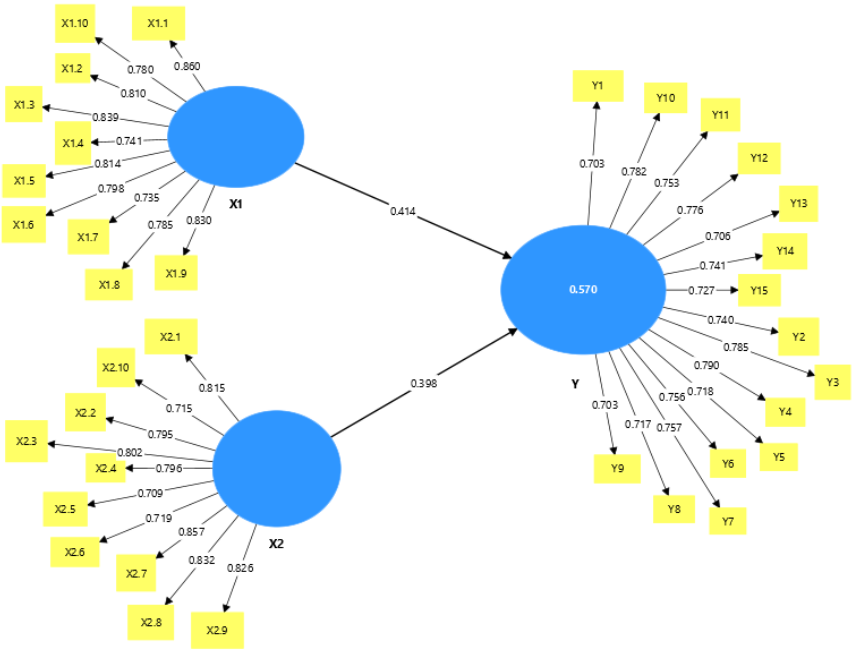

Fig. 1. PLS - SEM Model Output

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IV. Discussion

Based on the findings obtained, The results of the data analysis show a significant effect. These findings are consistent with the path coefficient analysis, which shows a value of 0.414, meaning that variable X1 (Teaching Strategy) has a significant effect on Y (Learning Motivation).This result aligns with the opinion of[13], who stated that teachers need to apply appropriate strategies to support the learning process. Teaching strategies play an important role in making learning more effective, interactive, and engaging for students [14][15]They also help teachers deliver material more efficiently and adjust teaching methods according to students' needs. Furthermore, research by [16] supports this finding, showing that teachers can improve students' learning outcomes and motivation by using effective teaching techniques that foster active participation. This can be seen when students learn enthusiastically in class. With these teaching techniques, learning in class becomes more interesting and less boring.

Moreover, this study also found that the learning environment significantly affects students' motivation to learn English. A conducive and comfortable learning environment both in school and at home encourages students to be more motivated to learn foreign languages. In line with the analysis results, the path coefficient of the learning environment variable (X2) was 0.398, confirming that it influences learning motivation positively and significantly.This finding is consistent with previous studies, such as which found that the physical characteristics of learning spaces, including seating arrangements, lighting, and classroom design, significantly impact students' motivation. Flexible and well-organized environments can enhance learning processes and support students' development. Similarly [17][18] found that the learning environment significantly influences students' development, enthusiasm, and even personal values. Additionally,[8] concluded that there is a significant relationship between the learning environment and students' learning motivation, suggesting that a supportive environment fosters better engagement and academic performance.

These findings indicate that student motivation is influenced by teaching strategies and the learning environment. In other words, even if teachers use effective and engaging teaching strategies, student motivation will not reach its maximum potential without a supportive and comfortable learning environment. Conversely, even the best classroom environment may not maximize student motivation if teachers fail to implement effective teaching methods.

Therefore, the success of English language learning depends on the synergy between teaching strategies and the learning environment. Teachers should design lessons that are both varied and interactive, encourage student participation, and provide feedback that motivates learners. At the same time, schools should ensure that the physical and social learning environments are conducive, supportive, and inclusive, allowing students to learn comfortably and confidently.

V. Conclusion

Based on the results of the research and discussion in the previous chapter, it can be concluded that this study aims to analyse the influence of teaching strategies and the learning environment on English learning motivation at SMP N 1 2x 11 Enam Lingkung. Teachers' teaching strategies at SMP 1 2x 11 Enam Lingkung have a significant influence on English learning motivation. This shows that the better the teaching strategies applied, the higher the learning motivation. This can be seen from the teachers' preparation and planning, delivery techniques, interaction and involvement of students and teachers, and the provision of feedback and evaluation. The results of the analysis using SEM-PLS show that teaching strategies (X1) have a significant effect on motivation to learn English (Y) with a path coefficient value of 0.414, t-statistic 2.586, and p-value 0.010. In addition, the learning environment also have a significant influence on students' motivation to learn English. This shows that a conducive learning environment and the existence of encouragement to learn English can increase students' motivation to learn. This can be seen from the physical, social and academic environments. The student

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learning environment (X2) also has a significant positive effect on learning motivation with a path coefficient value of 0.398, t-statistic 2.460, and p-value 0.014.

Simultaneously, teaching strategies and the learning environment have a significant effect on motivation to learn English, as measured by indicators related to teaching strategies, the learning environment, and learning motivation. These results are shown by an R^2 value of 0.570, which means that 57% of the variation in learning motivation is explained by these two variables and 43% of the variation in learning motivation is explained by other variables.

The combination of appropriate teaching strategies and a supportive learning environment is expected to optimally increase student motivation in learning English. Therefore, based on these findings, it is recommended that teachers and students recognise and understand the importance of learning motivation in increasing students' interest in learning English. With strong motivation, students will be more diligent, enthusiastic, and goal-oriented in their learning process and For future researchers, it is suggested to expand the number of respondents and include more than one school as the research object to obtain broader and more generalizable results.

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