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Analysis of Factors Affecting Barriers to Learning English for Students Using SEM-PLS

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This paper intends to estimate a structural equation model that can represent the relationship between latent variables, and the relationship between latent variables and indicator variables. The latent variables studied in this research are Campus Environment (KPS), Family Environment (LK), Community Environment (LM), and Seating (TD) on oneself (DS). The method used to analyze the data is Structural Equation Modeling (SEM) based on Partial Least Square (PLS). The research data was obtained through a survey using a questionnaire of Padjadjaran University students with simple random sampling technique. The research result shows that (1) Campus Environment has a significant positive influence on Oneself by 23.5%. (2) Family Environment has a significant positive influence on Oneself by 30.6%. (3) Community Environment has a significant positive influence on Oneself by 22.8%. (4) Seating has a significant positive influence on Oneself by 20.8%. The SEM model formed has a coefficient of determination (R-squared) of 0.90. So, SEM-PLS is an analysis that can provide information that can be used as a support for making learning process policies.

Keywords: barriers to learning, campus environment, environment, seating, SEM-PLS

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INTRODUCTION

English is one of the most widely used international languages in conversation which is described carefully, clearly, and accurately. English is not a knowledge that can perfect itself, but it can help people understand and talk about social, economic, and natural problems. It grows and develops because of the process of communicating and relating which is the basis for the formation of English (Banditvilai & Cullen, 2018; Nifriza & Yenti, 2021). English has a very important role because English is the science of language and literature which is widely used in various fields of life. Through learning English, students are expected to develop effective and efficient communication skills. One of the achievements of the ability to communicate in English can be assessed from the success of students in solving English problems (Çelik & Kocaman, 2016; Khan, 2016). For this reason, it is necessary to evaluate student learning outcomes in order to create quality education and quality graduates who are able to communicate and write in good-quality English. Qualified students can be seen from their learning achievements (DeFreitas & Rinn, 2013). Achievement in learning English is a success that is obtained by someone after learning English language and literature both in cognitive, affective, and psychomotor aspects according to the competence of the subject matter of English being studied (Anburaj & Christopher, 2015). Many factors can affect learning achievement, one of which is that students experience obstacles in the process of learning English itself (Wonglorsaichon et al., 2014; Davadas & Lay, 2018; Albelbisi & Yusop, 2019).

Learning barriers are conditions when students experience certain difficulties in participating in the learning process and achieving optimal learning outcomes (Çelik & Kocaman, 2016). In addition, learning barriers are things or distractions that result in failure or at least become distractions that can hinder learning progress (Khan, 2016). In line with the previous opinion, the learning difficulties experienced by students indicate that there is a gap or distance between the expected academic achievement, and the actual academic achievement achieved by students (Shakir & Sharma, 2018; Nezhad & Vahedi, 2011). In-depth learning barriers to teaching English involve an appreciation of the structure of the English language, the availability of learning resources, the quality of lecturers, the curriculum, the learning itself, and the value given to the subject by society (Fin & Ishak, 2012; Elastika et al., 2021). Students with learning disabilities underperform academically for a variety of reasons, including factors such as sensory impairment (weakness in vision or hearing); severe behavioral, psychological or emotional problems (Poole, 2011). Lazy nature may cause low interest and involvement in studying on campus. Given that poor motivation can be associated with learning barriers (Çelik & Kocaman, 2016; Khan, 2016).

The obstacles experienced by students certainly have causes, both internal factors, and external factors. Internal factors are training, intelligence, learning motivation, and personal growth. External factors are such as lecturers, family, campus environment, the methods used by teachers in the learning process, and so on. This should receive special attention from several parties, especially teaching staff.

In terms of student learning difficulties, it has become a concern in several studies, such as research conducted by Diezmann et al. (2016), by analyzing the learning difficulties of students of mathematics education study programs on the subject of the real number system. In this study, data collection techniques were carried out using interview techniques and mathematical tests. In Nasrin and Nasreen's (2016) research, the aim of analyzing the difficulty of learning calculus 1 for informatics engineering students. The data analyzed were obtained through a survey conducted using a careful sample of 160 students. Data collection was carried out through questionnaires, validated questions, and final exam scores. All of these data were analyzed using descriptive analysis, factor analysis, and multiple linear regression. Whereas Sembiring's (2015) research, conducted an analysis of student learning difficulties in Basic Mathematics courses. In this study, the method used was qualitative, with data collection techniques carried out using interviews, tests, and observations.

Learning Difficulties and Methods of Analysis

Learning Difficulties and Influential Factors

Learning barriers can be interpreted as anything that hinders or slows down a student in learning, understanding, and mastering something to achieve learning outcomes. Students who experience learning difficulties will find it difficult to absorb the subject matter presented by the lecturer, they will be lazy in learning, and cannot master the material, avoid lessons, and ignore assignments which can affect their learning outcomes (Çelik & Kocaman, 2016). Symptoms of learning difficulties will appear in the cognitive, motor, and affective aspects, both in the process and in the learning outcomes achieved. Barriers to learning can even cause a difficult situation and may lead to a feeling of hopelessness that forces a student to stop in the middle of the road. The existence of learning barriers in students can be detected by student errors in doing assignments and test questions (Khan, 2016).

Students are not always able to get good and maximum learning achievements as expected by parents and lecturers. This is because the achievement of learning achievement in students is influenced by several factors, including self-factors, the environment, learning and learning facilities, and infrastructure, as well as the interaction of all these factors in the learning process. Therefore, if the factors that influence learning are well cared for, they can support student learning achievement. But on the contrary, if it is not paid attention to, it will become a factor that causes problems and obstacles to the learning process (Mushtaq & Khan, 2012; Koç, 2016; Sembiring, 2014). According to Nauzeer and Jaunky (Nauzee & Jaunky, 2019), explain the factors that cause difficulties in learning, namely internal factors, or factors from within the students themselves and external factors, namely factors that arise from outside.

Factors that affect students' difficulty learning English, both internal factors and external factors can be analyzed using the SEM-PLS approach, as discussed below.

Based on the description of the problem and referring to previous research, this researcher intends to analyze the difficulties of learning English for Padjadjaran

University students, using different analytical methods. This research conducted an analysis of the difficulties of learning English students using SEM-PLS. Structural Equation Modeling (SEM) is a multivariate analysis technique that can be used to analyze patterns of relationships between variables and their indicators, variables with each other, as well as measurement errors directly to obtain a comprehensive picture of a model. This study was conducted using the Structural Equation Model (SEM) approach using Partial Least Square (PLS) software, namely Smart PLS. The reason for using this method is that the required sample size for analysis is relatively small, and Smart PLS analysis does not have to follow a normal distribution. As Yoda et al. (2017) research, Zain et al. (2013), Durdyev & Ihtiyar (2019), and Al-Sheeb (2019), conducted research on teacher self-efficacy, instructional quality, and student motivational beliefs: An analysis using multilevel structural equation modeling. However, no one has used SEM-PLS as a model for analyzing learning difficulties in these studies. The advantage of using the SEM-PLS model is that it is robust even when the data does not follow a normal distribution. It can handle non-normal, non-linear, and complex relationships among variables. Thus, this avoids biased model results due to unmet data assumptions. So based on this also makes the research conducted here very different from previous studies. This study aims to: (1) identify the factors that influence students' barriers to learning English; (2) Estimating the SEM-PLS model to analyze the factors that affect students' learning English barriers; and (3) analyze research results as information for teaching strategies for lecturers.

METHOD

SEM-PLS analysis

This study used the SEM-PLS data analysis method with the help of Smart PLS version 3.0 software run on a computer. PLS (Partial Least Square) is a variant-based structural equation analysis (SEM) that can simultaneously test the measurement model as well as test the structural model.

The measurement model is used to test validity and reliability, while the structural model is used to test causality (testing hypotheses with predictive models). Furthermore, Kim & Song (2010) explained that PLS is an analytical method that is soft modeling because it does not assume data must be of a certain scale of measurement, which means that the number of samples can be small (under 100 samples). Several reasons cause PLS to be used in a study. In this study the reasons are: first, PLS (Partial Least Square) is a data analysis method based on the assumption that the sample does not have to be large, that is, the number of samples less than 100 can be analyzed, and the residual distribution. Second, PLS (Partial Least Square) can be used to analyze theories that are still said to be weak, because PLS (Partial Least Square) can be used for predictions. Third, PLS (Partial Least Square) enables an algorithm using series analysis of ordinary least squares (OLS) so that algorithmic calculation efficiency is obtained (Dilalla, 2012; Anagün, 2018). Fourth, in the PLS approach, it is assumed that all variance measures can be used to explain.

Measurement Model Analysis (Outer Model)

The purpose of the measurement model according to Otoo et al. (2018) is to evaluate the validity and reliability of each construct or latent variable. Validity according to Kocakaya & Kocakaya (2014) means that the instrument can be used to measure what should be measured, while reliability according to Hwang & Kuo (2015) is to obtain the level of accuracy (reliability or constancy) of the data collection tool (instrument) used.

As described in Civelek (2018), this outer model analysis is carried out to specify the relationship between latent variables and their indicators (manifest variables), or it can be explained that the outer model defines how the relationship of each indicator (manifest variable) with its latent variables. The tests performed on the outer model are:

1) Convergent validity is assessed based on the correlation between the manifest variable value (item score) and the latent variable value (construct score) which is calculated from the loading factor value. The measure used is if the correlation between the item score/component score and the construct score is more than 0.7 it is said to be high and if the score is between 0.4 to 0.6 it is said to be sufficient (Eroglu & Mercangöz, 2013). Convergent validity is then assessed based on the Average Variance Extracted (AVE) value. AVE reflects the average communality (variance) quantity which indicates the large distribution of data in a data group where it is recommended that the AVE value is greater than 0.5.

2) Discriminant validity, Discriminant validity is used to measure the level of differentiation of a manifest variable in measuring its construct. The value of the cross-loading factor is used to measure discriminant validity by looking at and comparing the loading value of the manifest variable in the construct, it must be greater than the loading value in the other constructs.

3) Composite reliability, then evaluation of the measurement model (Outer model) can also be seen from the composite reliability (CR) value where the CR value is expected to be greater than 0.70 (Kristiana, 2018).

4) Cronbach Alpha. The reliability test is added by looking at the Cronbach Alpha value. The expected value is greater than 0.7 for all latent variables.

Structural Model Analysis (Inner Model)

The next step is to construct path diagrams, structural models, and measurement models combined in one diagram which is often called a full model path diagram. According to Savolainen et al. (2012), the first stage produces a weight estimate, the second stage produces estimates for the inner and outer models, and the third stage produces means and location estimates. In full, the relationship between the variables of this study can be seen in the following Figure 1.

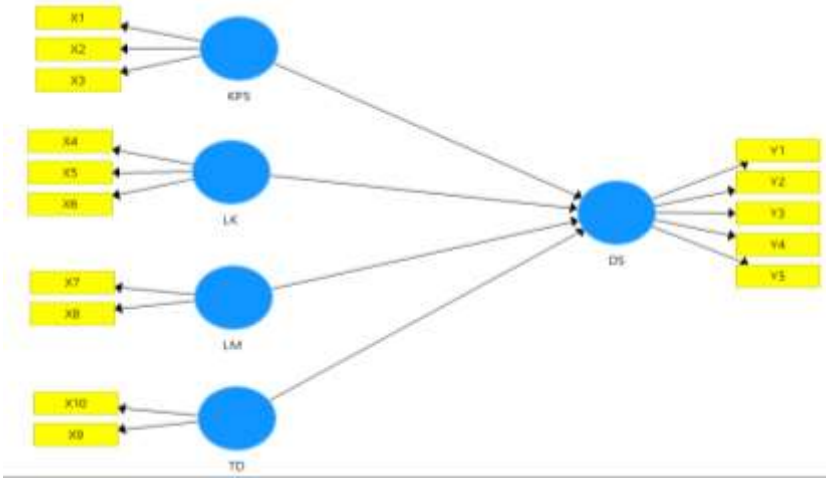

Figure 1
Relationship path diagram between research variables

The latent variables and indicators studied in this research are described in Table 1.

Table 1
Latent variables and indicators used in this research

Variable	Indicator
Campus Environment (KPS)	Reading material (X1)
	Teaching Materials are too high (X2)
	Implementation of learning that is too dense X3)
Family environment (LK)	Family Economics (X4)
	Family problem (X5)
	Parents attention (X6)
Community Environment (LM)	Community Environmental Conditions (X7)
	Friendly association (X8)
Seat (TD)	Poor seating atmosphere (X9)
	Seat Distance (X10)
Self (DS)	Interest (Y1)
	Poor Health (Y2)
	Ability to follow lessons (Y3)
	Study Habits (Y4)
	Material Mastery (Y5)

In the inner model stage, estimation is carried out using the Smart PLS program. The basis used in the estimation is resampling with bootstrapping developed by Mushtaq & Khan (2012), they explain that PLS uses the bootstrapping method or random multiplication, which will result in the assumption of normality not being a problem for PLS. Apart from being related to the normality of the data, using the bootstrapping method in PLS does not require a minimum number of samples. Research with small

samples can still use PLS. Furthermore, in the structural model fit test there are two measurements that are often used, namely,

1) The value of the coefficient of determination (R^2 or R-square) is close to 1. The value of R^2 for the dependent construct shows the magnitude of the influence/accuracy of the independent construct in influencing the dependent construct. The value of R^2 explains how much the hypothesized exogenous variables in the equation are able to explain the endogenous variables. This R2 value in Partial Least Square is also called Q-square predictive relevance. The magnitude of R^2 is never negative and is at most equal to one ($0 < R^2 < 1$). The greater the value of R^2, the better the resulting model (Durdyev & Ihtiyar, 2019). The R^2 measurement used in this study is the Guilford measure as Table 2.

Table 2
Criteria for evaluating the coefficient of determination

Determination Coefficient Value			Interpretation
	<0.20		Very low
0.21	< R^2 <	0.40	Low
0.41	< R^2 <	0.60	Moderate/Enough
0.61	< R^2 <	0.80	Tall
0.81	< R^2 <	1.00	Very high

2) Q-Square predictive relevance for structural models measures how well the observed values are produced by the model and also the parameter estimates. Q-square value > 0 indicates the model has predictive relevance; conversely if the Q-Square value ≤ 0 indicates the model has less predictive relevance. The Q-Square calculation is done by the formula:

$$Q^2 = 1 - ((1 - R_1^2)(1 - R_2^2) \dots (1 - R_n^2))$$

where $R_1^2, R_2^2, \dots R_n^2$ is the R-square of the endogenous variable in the equation model. Assuming the data is distributed freely (distribution free), the Partial Least Square (PLS) predictive approach structural model is evaluated by R-square for the dependent variable, otherwise Q-squaretest for predictive relevance.

Research Hypothesis Testing

According to Davadas & Lay (2018), explaining a hypothesis is an assumption that must be tested through data or facts obtained. Shakir & Sharma (2018), states that hypothesis testing is a procedure that will produce a decision (accept/reject the hypothesis). The hypothesis is an important part of the research because, with the hypothesis, the research will be directed.

According to Davadas & Lay (2018), hypothesis testing is used to determine the effect of the independent variables on the dependent variable. To find out whether it is significant or not, a significance value of 5% (α= 0.05) is used.

1) If sig. > α (0.05), then H0 is accepted.
2) If sig. < α (0.05), then H0 is rejected.

In drawing the areas of acceptance and rejection, a comparison is made between the results of t-count and t-table with the following criteria:

1) If the value of t-count ≥ t-table then H0 is in the area of rejection, meaning that there is an influence between variables X and Y.
2) If the t-count value ≤ t-table then H0 is in the acceptance area, meaning that there is no effect between variables X and Y.

The t-count value is found using the t-count calculation formula and the t-table value is found in the t-distribution table with the following conditions, α = 0.05 and dk = (n-k-1). The Figure 2 following is a picture showing the areas of acceptance and rejection:

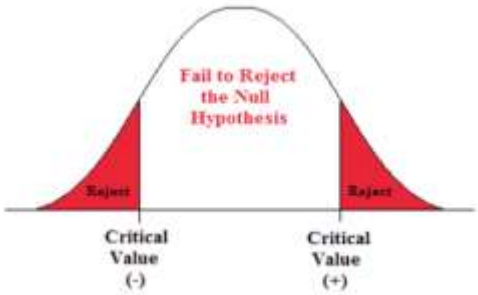

Figure 2
Regional test of acceptance and rejection of the hypotheses

FINDINGS

Analyzed Data

As discussed previously, that in this study analyzed the factors that influence the difficulty of learning English for Padjadjaran University students. The data analyzed were obtained by distributing questionnaires containing 36 items of statements concerning self (students) and learning difficulties, to 11500 respondents. Furthermore, the collected data were analyzed using the SEM approach. Data variables in the outline consist of 5 factors, namely: Campus Environment, Family Environment, Community Environment, Seating, and Self. Campus environment; communication in the campus environment using the mother tongue (Indonesian). Family environment; communication in the family environment using the local language. Community Environment; Communication within the community uses local languages and Indonesian. Seat; communication in lecture seats using a mixture of regional and Indonesian languages. Self; less discipline to practice communication using English.

Furthermore, descriptive statistical tests were carried out on these 5 factors using the overall mean square analysis method. Based on the test results showed that the Campus Environment, Family Environment, Community Environment, Seating, and Self that occurred were good according to the respondents' perceptions. Thus, this data set can be used for analysis using the SEM approach as follows.

Estimating PLS Model

From the data obtained through a questionnaire using the Partial Least Square estimation method with the PLS algorithm, the full model path diagram is obtained in Figure 3.

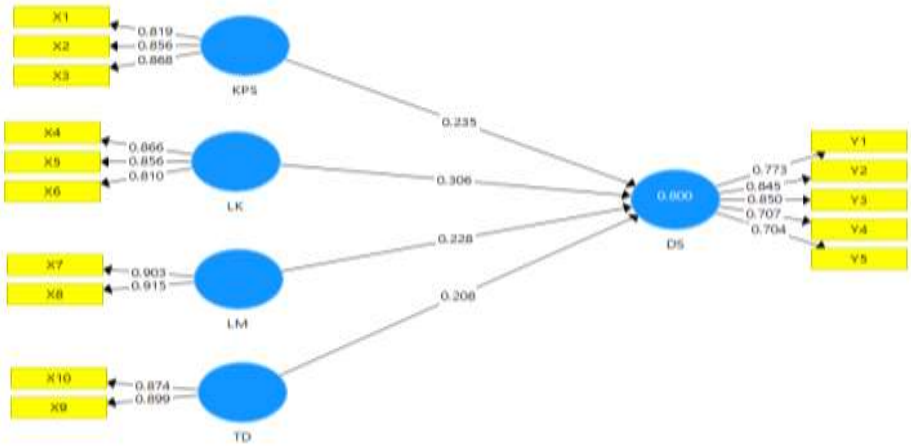

Figure 3
Coefficient of standardization of structural modeling

Source: SmartPLS Data Processing 2.0, 2023

Measurement Model (Outer Model)

1) Assessing the Outer Model or Measurement Model

The outer model is a measurement model consisting of manifest variables and paths that connect with latent variables. There are three criteria in the use of data analysis techniques with SmartPLS to assess the outer reflective construct model, namely Convergent Validity, Discriminant Validity, and Composite Reliability.

a. Convergent validity

The convergent validity of the measurement model with reflexive indicators is assessed based on the correlation between the item score/component score estimated by the SmartPLS Software. The individual reflexive measure is said to be high if it correlates more than 0.70 with the construct being measured. But according to Zain et al. (2013). In this study, a loading factor limit of 0.70 will be used. manifest variables that have a loading factor value of less than 0.70 will be reduced from the model.

The following Table 3 of the processing results of the PLS algorithm describes the outer loading of each manifest variable in measuring each construct in this study. If the measurement of validity with outer loading can be fulfilled, then further testing can be carried out.

Table 3
Outer loadings (measurement model)

	DS	KPS	LK	LM	TD
X1		0.819			
X2		0.856			
X3		0.868			
X4			0.866		
X5			0.856		
X6			0.810		
X7				0.903	
X8				0.915	
X9					0.899
X10					0.874
Y1	0.773				
Y2	0.845				
Y3	0.850				
Y4	0.707				
Y5	0.704				

Source: Data Processed by Researchers with SmartPLS 3.0, 2023

Table 3 shows that there is no loading factor value below 0.70 so all manifest variables in this study can be used.

b. Composite Reliability

The next measure of convergent validity is construct reliability testing. In testing construct reliability, two measurements were used, namely composite reliability and Cronbach alpha. The construct reliability, both composite reliability and Cronbach alpha, was measured to vary from 0 to 1, with 1 being a perfect estimate of reliability, but the construct was declared reliable if the value of composite reliability and Cronbach alpha was greater than 0.7. In the following Table 4, the reliability of the construct variables studied is presented.

Table 4
Composite reliability and cronbach alpha

Variable	Cronbach's Alpha	Composite Reliability	Critical Value	Explanation
Self (DS)	0.836	0.884	0.7	Reliable
Campus Environment (KPS)	0.804	0.884		Reliable
Family Environment (LK)	0.798	0.881		Reliable
Community Environment (LM)	0.791	0.905		Reliable
Seating (TD)	0.728	0.880		Reliable

Source: Data Processed by Researchers with Smart PLS 3.0, 2023

The results of construct reliability testing are given in Table 4, showing that all constructs have a value greater than 0.7, this makes all constructs in this study usable.

Besides being seen from the factor loading value, convergent validity can also be seen from the Average Variance Extracted (AVE). In this study, the AVE value of each construct was above 0.5. Therefore, there is no problem of convergent validity in the model being tested. The Table 5 following shows the AVE value in this study:

Table 5
Average variance extracted (AVE)

Variable	Average Variance Extracted (AVE)	Critical Value
Self (DS)	0.606	
Campus Environment (KPS)	0.718	
Family Environment (LK)	0.713	0.5
Community Environment (LM)	0.827	
Seating (TD)	0.786	

Source: Data Processed by Researchers with Smart PLS 3.0, 2023

Based on Table 5 the AVE values produced by all reflective constructs are all above 0.50 so that they meet the requirements of convergent validity and reliability.

c. Discriminant Validity

Discriminant validity is carried out to ensure that each concept of each latent variable is different from the other variables. At the Discriminant Validity stage, a test must be carried out on each indicator of each variable, the test is carried out by looking at the cross-loading value, and it is expected that the cross-loading value is higher than other variable indicators in the same model. Table 6 below is the form of the cross-loading model in this study.

Table 6
Discriminant validity

	DS	KPS	LK	LM	TD
X1	0.654	0.819	0.605	0.648	0.596
X2	0.705	0.856	0.748	0.660	0.603
X3	0.735	0.868	0.736	0.733	0.677
X4	0.695	0.657	0.866	0.632	0.665
X5	0.728	0.775	0.856	0.717	0.700
X6	0.694	0.652	0.810	0.616	0.569
X7	0.717	0.705	0.714	0.903	0.665
X8	0.762	0.756	0.700	0.915	0.717
X9	0.736	0.659	0.738	0.704	0.899
X10	0.662	0.652	0.613	0.642	0.874
Y1	0.773	0.617	0.617	0.573	0.570
Y2	0.845	0.702	0.777	0.688	0.685
Y3	0.850	0.743	0.727	0.765	0.717
Y4	0.707	0.580	0.574	0.553	0.548
Y5	0.704	0.542	0.524	0.555	0.525

Source: Data Processed by Researchers with Smart PLS 3.0, 2023

An indicator will be said to be valid if it meets the discriminant validity requirements where the loading value is higher than the other indicator loading values, in Table 5 the cross-loading value of each variable is higher than the other variables in the model, thus the indicator has can be said to be valid by fulfilling the requirements of discriminant validity.

Structural Model (Inner Model)

The structural model is a model that relates exogenous latent variables with endogenous latent variables or the relationship of endogenous variables with other endogenous variables. The following is a summary of the values used in the structural model:

1) R-Square

The R-Square or R^2 value for the dependent construct shows the magnitude of the influence or accuracy of the independent construct in influencing the dependent construct. The value of R^2 in Table 6 explains how much the hypothesized exogenous variables in the equation are able to explain the endogenous variables.

Table 7
Path coefficient and R-Square

Track	R Square
KPS, LK, LM, TD → DS	0.800

Source: Smart PLS Data Processing 2.0, 2023

Based on Table 7 shows the R^2 value in the Campus Environment, Family Environment, Community Environment, and Seating models for Self an R^2 value of 0.800 is categorized as "high".

2) Q-Square Predictive Relevance

Inner model testing can also be seen from the Q^2 value. The Q^2 value is calculated by obtaining the two R-Square values. Q-square predictive relevance for structural models measures how well the model produces the observed values. Q-Square must be > 0, which indicates the model has good predictive relevance (Ghazali, 2014: 45). Q^2 value with the following formula:

$$Q^2 = 1 - (1 - R_1^2)$$

$$Q^2 = 1 - (1 - 0.800)$$

$$Q^2 = 0.800$$

Based on the results of calculating the value of Q^2, it can be seen that Q^2 is 0.800. This shows that the independent variable has a good categorical prediction level of the dependent variable. So based on the Q^2 value, it is known that the research model has good predictive relevance because Q^2 is greater than zero.

Hypothesis test

Hypothesis testing is carried out on the direct influence of the Campus Environment, Family Environment, Community Environment, and Seating on Oneself. In addition to knowing the relationship between environmental variables and oneself on student's learning difficulties, as follows. Visually, the path diagram for hypothesis testing is depicted in the following Figure 4.

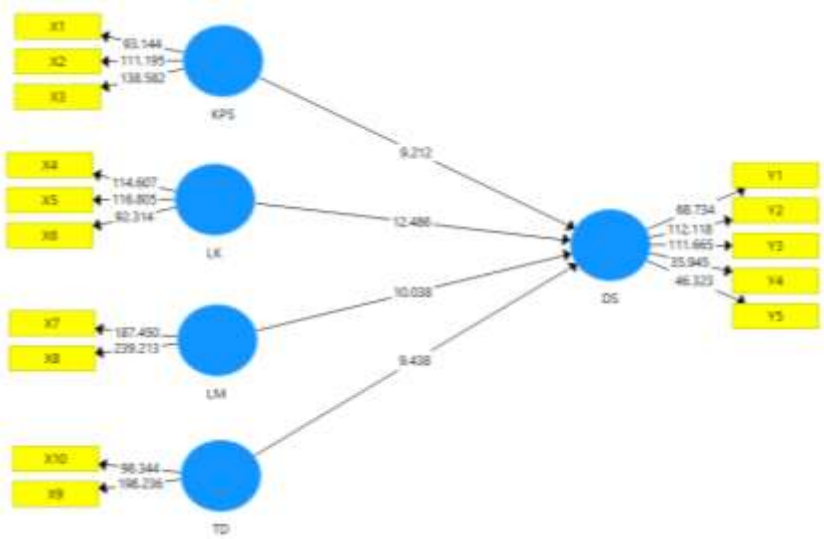

Figure 4
Hypothesis testing path diagram
Source: SmartPLS Data Processing 2.0, 2023

After running bootstrapping, the values in the path diagram are the values for the t-test related to significance. If the t value of the structural equation ≥ 1.96 and a significant value < 0.05, then H0 is rejected, or there is a significant influence between the independent and dependent variables. Hypothesis testing is done as follows:

Direct Influence

In this study, there are 4 (four) hypotheses on direct influence on oneself. The results of tests carried out with the help of the SemPLS software are given in Table 8.

Table 8
Hypothesis testing results (Direct effect on oneself)

Hypothesis	Track	Path Coefficient	T Statistics	T Table	Sig.	Explanation
H_1	The Campus Environment influences Oneself	0.235	9.346	1.96	0.000	H_0 is rejected
H_2	Family environment influences self	0.306	12.208	1.96	0.000	H_0 is rejected
H_3	The Community Environment influences Oneself	0.228	9.923	1.96	0.000	H_0 is rejected
H_4	Seating affects Oneself	0.208	9.263	1.96	0.000	H_0 is rejected

Source: Smart PLS Data Processing 2.0, 2023

From Table 8, the results of hypothesis testing are obtained with the following details:

a. The campus environment has a positive effect on oneself

In testing the first hypothesis, the t_{count} value of 9,346 is greater than the t_{table} of 1.96 and a significant value (0.000) <0.05 so that H_0 is rejected, which means that the Campus Environment has a significant effect on Oneself, with a positive path coefficient indicating that the Campus Environment The campus has a positive effect on oneself, meaning that the better the campus environment is felt by respondents, the better the student's self will be

b. The family environment has a positive effect on oneself

In testing the second hypothesis, the t_{count} value of 12,208 is greater than the t_{table} of 1.96 and a significant value (0.000) <0.05 so that H_0 is rejected, which means that the family environment has a significant effect on oneself, with a positive path coefficient indicating that the environment Family has a positive effect on oneself, meaning that the better the family environment felt by respondents, the better the student's self will be.

c. The Community Environment has a positive influence on Oneself

In testing the third hypothesis, a t_{count} value of 9,923 is greater than a t_{table} of 1.96 and a significant value (0.000) <0.05 so that H_0 is rejected, which means that the Community Environment has a significant effect on Oneself, with a positive path coefficient indicating that the Environment The community has a positive effect on oneself, meaning that the better the community environment felt by respondents, the better the student's self will be.

d. Seating has a positive effect on Oneself

In testing the fourth hypothesis, the t_{count} value of 9,263 is greater than the t_{table} of 1.96 and a significant value (0.000) <0.05 so that H_0 is rejected, which means that Seating has a significant effect on Self, with a positive path coefficient indicating that Place

Sitting has a positive effect on oneself, meaning that the better the seat felt by the respondent, the better the student's self will be.

Relationship between Environmental Variables and Self to Student Learning Barriers

After analyzing the structural model, then to analyze the factors that influence the learning barriers variable, is done using Pearson's correlation for each research variable indicator on the learning barriers variable. According to Mushtaq & Khan (2012), the guidelines for providing an interpretation of the correlation coefficient are as Table 9.

Table 9.
Interpretation of the correlation coefficient

Coefficient Intervals	Relationship Level
0.00 – 0.199	Very low
0.20 – 0.399	Low
0.40 – 0.599	Currently
0.60 – 0.799	Strong
0.80 – 1.000	Very strong

The results of the correlation analysis are presented in Table 10, which is a correlation matrix for each indicator of each research variable on learning difficulty variables.

Table 10
Results of hypothesis testing (Direct effect on student learning barriers)

Variable	Indicator	Great Relationship	Category	Relationship Direction	Sig. Value	Conclusion
Campus environment	Reading material	0.539**	Currently	One-way Relationship	0.00	Significant
	Teaching Materials are too high	0.561**	Currently	One-way Relationship	0.00	Significant
	Implementation of learning that is too dense	0.539**	Currently	One-way Relationship	0.00	Significant
Family environment	Family Economics	0.498**	Currently	One-way Relationship	0.00	Significant
	Family problem	0.550**	Currently	One-way Relationship	0.00	Significant
	Parents attention	0.466**	Currently	One-way Relationship	0.00	Significant
Community Environment	Community Environmental Conditions	0.610**	Strong	One-way Relationship	0.00	Significant
	Friendly association	0.632**	Strong	One-way Relationship	0.00	Significant
Seat	Poor seating atmosphere	0.594**	Currently	One-way Relationship	0.00	Significant
	Seat Distance	0.493**	Currently	One-way Relationship	0.00	Significant
Self	Interest	0.536**	Currently	One-way Relationship	0.00	Significant
	Poor Health	0.520**	Currently	One-way Relationship	0.00	Significant
	Ability to follow lessons	0.618**	Strong	One-way Relationship	0.00	Significant
	Study Habits	0.414**	Currently	One-way Relationship	0.00	Significant
	Material Mastery	0.604**	Strong	One-way Relationship	0.00	Significant

Information: *significant at the 5% level

Table 10 shows that all indicators in each research variable influence learning difficulties. This is because these indicators have a p-value of less than 5%. The indicators with a strong relationship category with learning difficulty variables are the Conditions of the Community Environment, Friendly Association, Ability to follow lessons, and mastery of the material.

DISCUSSION

Based on the results of the data analysis provided in Table 10, the discussion can be presented as follows:"

The Campus Environment Variable. The campus environment plays a crucial role in English language learning, specifically studied here among Universitas Padjadjaran students. The role of the environment is to provide a platform or means for students to express and apply their learned English language skills in daily communication. The campus environment significantly influences students' motivation to enhance their abilities, particularly in speaking skills, which is one of the abilities that measures the extent to which students can apply the English language. This is because when learning a language, the most important aspect is practicing the actual use of the language, aligning with the goal of language learning: the ability to use the language in everyday life. Therefore, environmental factors such as reading materials, teaching materials, and the density of learning implementation are significant, indicating their crucial role in determining students' interest and motivation to improve their English speaking abilities.

The Family Environment Variable. Family economic factors, family issues, and family attention are also significant influences. The lack of support from the family environment is due to the family's lack of knowledge about the English language, which is a problem for students. They are unable to express themselves using English when in the family environment because there is no one who understands what they mean. As a result, they only speak English when studying the language on campus.

The Community Environment Variable. The community environment also has a significant impact on English language learning for students. Every student experiences interacting with the community wherever they are. When interacting with family, school, or the community, a student uses language as a means of communication. For students who interact a lot with the community that primarily uses a local language (not English) in their daily lives, it will somewhat hinder English language learning. Language is also a means of socializing. Since a student begins to communicate with others, language is required. Language can be considered as something important in human life. Without language, a student will not be able to communicate with their friends. If a student's social interactions and friendships involve using a local language (not English), it will also hinder the progress of their English language usage.

The Seat Variable. In classroom management, arranging seating is one of the easily manageable class management tasks as it doesn't take much time for preparation. Through seating arrangements, classroom management can be executed more effectively by understanding the strengths and weaknesses of each seating formation. Seat arrangements that do not consider the classroom atmosphere and the distance between seats may result in less effectiveness in English language learning. There are several seating options that can be tailored to the students' needs and learning objectives.

The Self Variable. Lack of interest in learning English, poor health resulting in low enthusiasm for learning, difficulty in paying attention during lessons, undisciplined study habits, and a limited understanding of the material taught by the lecturer significantly pose obstacles for students in learning English. Fear of grammar mistakes and embarrassment if laughed at by others while speaking English are also major barriers for students. They prefer to remain silent rather than speak in English due to the fear of grammar mistakes, which demotivates them from using the English language.

Finally, the results of the analysis of research indicators as factors influencing the difficulty in learning English are highly beneficial in providing insights for educators and program managers, as well as for the students themselves. For teaching staff, this information can serve as a basis for continuously developing teaching strategies and presenting learning materials that are easily understood by students. For learning program managers, this information can be a foundation for constantly improving learning facilities and infrastructure, such as increasing the number of reading materials and arranging seating and teaching schedules that are not too dense on specific days. For students, this information can be used as a consideration for choosing a positive social and community environment to practice learning, especially English, which is taught each semester.

CONCLUSION

In this paper, research has been carried out on the Structural Equation Model (SEM) based on Partial Least Square (PLS), to analyze the factors that influence the difficulty of learning English for students at Padjadjaran University. Based on the identification results, it can be concluded that the factors that influence students' difficulties in learning English include: Campus Environment (KPS), Family Environment (LK), Community Environment (LM), and Seating (TD), which significantly affect Self (DS) student. The estimation results show that the Structural Equation Model (SEM) based on Partial Least Square (PLS) estimator gives an R-Square determination value of 0.90 or 90%, which can explain the influence of the Campus Environment, Family Environment, Community Environment, and Seating, on the student self, so that it is 10% influenced by other factors. The results of the research can be used as information for learning program managers, lecturers as teachers, and students as learning citizens, so that they always improve their performance in order to reduce the level of barriers to learning English.

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REFERENCES

Anagün, S.S. (2018). Teachers' Perceptions about the Relationship between 21st Century Skills and Managing Constructivist Learning Environments. *International Journal of Instruction, 11*(4), 2018, 825-840.

Anburaj, G. & Christopher, G. (2015). Barriers in Teaching English. *IOSR Journal of Humanities And Social Science (IOSR-JHSS), 20*(9), 67-70.

Albelbisi, N.A. & Yusop, F.D. (2019). Factors Influencing Learners' Self –Regulated Learning Skills in a Massive Open Online Course (MOOC) Environment. *Turkish Online Journal of Distance Education* (*TOJDE*), July 2019, Volume 20, Number 3: 1-16.

Al-Sheeb, B., Hamouda, A., & Abdella, G. (2019). Modeling of Student Academic Achievement in Engineering Education Using Cognitive and Non-Cognitive Factors. *Journal of Applied Research in Higher Education*, *11*(2), 178-198.

Banditvilai, C. & Cullen, R. (2018). Problems and Obstacles in Learning English as a Foreign Language. *International Journal of Social Science and Humanity*, *8*(12), *December 2018*, 289-294.

Çelik, Ö. & Kocaman, O. (2016). Barriers Experienced by Middle School Students in the Process of Learning English. *International Journal of Psychology and Educational Studies*, *3*(1), 31-46.

Civelek, M.A. (2018). *Essentials of Structural Equation Modeling*. Zea E-Books. 64. https://digitalcommons.unl.edu/zeabook/64.

DeFreitas, S.C. & Rinn, A. (2013). Academic Achievement in First Generation College Students: The Role of Academic Self-Concept. *Journal of the Scholarship of Teaching and Learning*, *13*(1), 57 – 67.

Durdyev, S. & Ihtiyar, A. (2019). Structural Equation Model of Factors Influencing Students to Major in Architecture, Engineering, and Construction. *Journal of Professional Issues in Engineering Education and Practice*, *145*(2), 05018019, 1-8.

Dilalla, F.L. (2012). Structural Equation Modeling: Uses and Issues. *Research Gate*, October 2012. DOI: 10.1016/B978-012691360-6/50016-1.

Davadas, S.D., & Lay, Y.F. (2018). Factors Affecting Students' Attitude Toward Mathematics: A Structural Equation Modeling Approach. *EURASIA Journal of Mathematics, Science and Technology Education,14*(1), 517-529.

Elastika, R.W., Sukono, Dewanto, S.P. (2021). Analysis of Factors Affecting Students' Mathematics Learning Using SEM as Information for Teaching Improvement. *International Journal of Instruction*, *14*(4), 281-300.

Eroglu, E. & Mercangöz, A. (2013). A Path Model for Analyzing Undergraduate Students' Achievement. *Journal of WEI Business and Economics-December*, *2*(3), 1-8.

Fin, L.S. & Ishak, Z. (2012). A Priori Model of Students Academic Achievement: The Effect of Gender as Moderator. *Procedia - Social and Behavioral Sciences*, *65*(2012), 1092-1100.

Hwang, G-J., & Kuo, F-R. (2015). A Structural Equation Model to Analyse the Antecedents to Students' Web-Based Problem-Solving Performance. *Australasian Journal of Educational Technology*, *31*(4), 400-420.

Kristiana, I.F. (2018). Teacher Efficacy in the Implementation of Inclusive Education: A Literature Review. *Journal of Educational, Health and Community Psychology*, *7*(2), 139-152.

Kocakaya, S. & Kocakaya, F. (2014). A Structural Equation Modeling on Factors of How Experienced Teachers Affect the Students' Science and Mathematics Achievements. *Hindawi Education Research International*, *2014*(8), 1-8.

Khan, I.A. (2016). Barriers in the Learning of English: An Exploratory Study. *British Journal of Education, Society & Behavioural Science, 15(2),* 1-10.

Kim, M. & Song, J. (2010). A confirmatory structural equation model of achievement estimated by dichotomous attitudes, interest, and conceptual understanding. *Eurasia Journal of Mathematics, Science and Technology Education*, *6*(4), 271-285.

Koç, M. (2016). Learning Analytics of Student Participation and Achievement in Online Distance Education: A Structural Equation Modeling. *Educational Sciences: Theory & Practice*, *17*(6), 1893–1910.

Mushtaq, I. & Khan, S.N. (2012). Factors Affecting Students' Academic Performance. *Global Journal of Management and Business Research*, *12*(9), 17-22.

Nauzeer, S. & Jaunky, V.C. (2019). Motivation and Academic Performance: A SEM Approach. *International Journal of Environmental & Science Education*, *14*(1), 41-60.

Nezhad, A.S. & Vahedi, M. (2011). The Role of Educational Psychology in Teacher Education Programs. *Procedia Social and Behavioral Sciences*, *30*, 327-330.

Nifriza, I. & Yenti, D. (2021). Students' Barriers in Learning English Through Online Learning. *Linguistic, English Education and Art (LEEA)*, *5*(1), 39-46.

Otoo, D., Iddrisu, W.A., Kessie, J.A., & Larbi, E. (2018). Structural Model of Students' Interest and Self-Motivation to Learning Mathematics. *Hindawi Education Research International*, *2018*(10), 1-10.

Poole, S.M. (2011). The Relationship Between External Accountability Policy and Internal Accountability: A Cross-State Analysis of Charter and Traditional Public Schools. Journal of School Choice. *Journal of School Choice, 5*(3), 261-280.

Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O-P. (2012). Understanding Teachers' Attitudes and Self-Efficacy in Inclusive Education: Implications For Preservice and in-service teacher education, *European Journal of Special Needs Education, 27*(1), 51-68.

Shakir, M. & Sharma, S. (2018). Using Educational Psychology for Better Teaching-Learning Environment. *International Journal of Education*, *2017*(8), 20-28.

Sembiring, M.G. (2014). Student Satisfaction and Persistence: Imperative Features to Retention in Open and Distance Learning. *Research Gate*, DOI: 10.1108/AAOUJ-10-01-2015-B002.

Sembiring, M.G. (2015). Validating student satisfaction related to persistence, academic performance, retention and career advancement within ODL perspectives. *Open Praxis*, *7*(4), 325–337.

Wonglorsaichon, B., Wongwanich, S. & Wiratchai, N. (2014). The Influence of Students School Engagement on Learning Achievement: A Structural Equation Modeling Analysis. *Procedia - Social and Behavioral Sciences*, *116*(2014), 1748-1755.

Yada, A., Tolvanen, A., & Savolainen, H. (2017). Teachers' Attitudes and Self-efficacy on Inclusive Education: A Comparative Analysis between Japan and Finland. *Paper*. Conference:ECER 2017, *European Educational Research Association*, 1-5.

Zain, O.M., Jan, M.T., & Ibrahim, A.B. (2013). Factors Influencing Students' Decisions In Choosing Private Institutions of Higher Education in Malaysia: A Structural Equation Modelling Approach. *Asian Academy of Management Journal*, *18*(1), 75–90.