Jurnal Sinar Edukasi
JSE, Vol. 02, No. 02, June 2021: 41-48
Received: 01 January 2021; Revised: 10April 2021; Accepted: 15 May 2021

The Influence of Teachers' Learning Strategies and Student Learning Strategies on Learning Motivation and Involvement of High School Students in Learning

Keiza Panjaitan and Selviana
Universitas Jambi, Indonesia

Abstract

This study aims to analyze the influence of teachers' learning strategies, student learning strategies, learning motivation and student involvement in student learning from several high schools in Jambi Province. This study uses a quantitative approach with a data collection technique in the form of distributing questionnaires (surveys) through google forms. The respondents selected in this study are students from several high schools in Jambi Province with a sample of 150 people out of a total population of 450 people. The data analysis technique used in this study is partial Least Squares-Structural Equation Modeling (PLS-SEM) to develop a model that describes the relationship between variables. The results of this study show that the first hypothesis of teacher learning strategies has a P value of 0.000 which indicates a significant influence on learning motivation. In the second hypothesis, the student's learning strategy has a P-value of 0.000 also shows a significant influence on learning motivation. In the third hypothesis, the teacher's learning strategy has a P value of 0.045 which shows a significant influence on student involvement in learning. The fourth hypothesis of student learning strategies has a P value of 0.001 which indicates a significant influence on student involvement in learning. Finally, in the fifth hypothesis, learning motivation has a P-value of 0.000, which also shows a significant influence on student involvement in learning. Therefore, this study concludes that teacher learning strategies and student learning strategies have a positive and significant effect on learning motivation and student involvement in learning. Thus, increasing learning motivation and student involvement in learning can be achieved through teacher learning strategies and also student learning strategies.

Keywords: *teacher learning strategies, student learning strategies, learning motivation and student involvement in learning*

INTRODUCTION

To produce qualified and potential individuals, education has a very important role. According to Law No. 20 of 2003, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation, and state. Education must be able to keep up with the development of the times in technology and science (Sewang, 2015). According to Hermawan (2014), growth is the definition of learning. In order for students and teachers to develop, they must actively participate in teaching and learning. Ryan and Deci say that people can be motivated intrinsically to participate in activities

that students like because it helps students in the learning process and improves the abilities of students (Goldman et al., 2017).

Arief (2024), said that in creating the quality of human resources, including students, the role of teachers and the learning strategies used have a great influence on students' motivation to learn and their involvement in the learning process. The purpose of this article is to determine the influence between student motivation and their involvement during the learning process while at school with the learning strategies of teachers and students themselves. It is hoped that a better understanding of these dynamics will help teachers improve learning in their schools. Therefore, this investigation can be an important part of efforts to improve the quality of education as a whole. Thus, the preparation of the workforce to be able to follow these changes Education is very important, (Lee, 2018).

Teachers are required to know their responsibilities and roles in the learning process at school. These tasks include planning and conducting quality teaching activities, taking into account and assessing the learning outcomes that have been carried out, creating teaching attitudes that are appropriate to the child's learning situation and environment, and continuing to develop and improve their academic abilities and competencies on an ongoing basis (Weigel, et al., 2012). As a result, teachers must fully understand the child's learning process so that they can help and create a learning environment that suits the child. According to Hasan Langgulung (1983), teaching is the dissemination of knowledge from someone who already knows to others. Teaching is a teaching and learning activity that starts from the principle of relationship, repetition, and makes it easier for children to learn. That way, educators need to know and understand the meaning of learning theories related to their learning plans. One example of a theory that must be understood by teachers is the principle of learning. To achieve their goals, teachers must use learning strategies that make their children learning partners.

Sirait (2021), stated that the task of educators in teaching and teaching activities in schools is very important for learning success. To teach well, teachers need a lot of skills and understanding. Teaching is basically an effort to create an atmosphere that can help and make learning sustainable in the classroom (Sardiman, 2006). Sudjana (2009) stated that teaching strategies are the actions and behaviors of educators in implementing teaching objectives. This means the teacher's efforts to use various factors of his teaching, for example in evaluation, preparing tools, methods, materials and objectives, with the aim of influencing student achievement. Teachers have the ability to use their teaching strategies to influence their students to achieve learning goals to be successful. Thus, teachers have an important task when determining the quality and quantity of their teaching when carried out in getting maximum student learning outcomes.

In addition to educators who have a role and obligation, students also have a considerable role and obligation, namely learning. Slameto (2003) defines learning as a set of physical and spiritual skills in obtaining a change in attitude that becomes the acquisition of a person's experience when interacting with the environment, both in terms of knowledge, emotional, and psychomotor. During the learning process, students are expected to experience changes in knowledge, behavior, and expertise through the condition of "not yet knowing" to the state of "knowing" in the classroom. In order to succeed in learning, students also need useful study strategies that allow them to learn more effectively. Strategy is a plan to achieve a goal (Al-Muchtar et al., 2007). Teaching

and learning strategies are plans implemented by educators when providing learning materials to students (Ali Maksum, 2019).

There is one factor that can affect the success of the student learning process, namely the motivation to learn from within. Clayton Alderfer (Nashar, 2004) stated that the existence of learning motivation is support from within students to carry out the learning process which is supported through the desire to get the best grades or learning results. If students are motivated, they will learn better, the benefits of increasing students' motivation to learn are huge. High motivation can increase students' interest in the subject matter and make them more focused and engaged in learning. Motivation can increase student participation in class discussions, strengthen the relationship between learning content and daily life, and create a higher sense of confidence (Kristyani, 2020). In addition, motivated students have higher attendance, better behavior, are more engaged and enthusiastic about completing assignments, and are able to help other peers when needed. Therefore, high learning motivation can make a positive contribution to students' learning participation and ultimately improve their academic achievement. Turner & Patrick (2004) stated that students' motivation to learn is evidenced by their participation and tendency to contribute to learning.

When teachers understand learning strategies, students have learning strategies, students are motivated to learn, and involving students in learning can also be beneficial to their academic and social development. According to Rakhmalia (2014), student participation is the key that allows students to gain learning experiences and modify or increase their knowledge. When students actively participate in the learning process, they will be more motivated to learn and achieve their learning goals. Through this engagement, students not only improve their understanding of the subject matter, but also develop important skills, such as the ability to solve problems independently using existing learning strategies.

Additionally, student participation makes it easier for students to collaborate with other students, strengthen their social skills, and convey values such as cooperation and tolerance to everyone. Therefore, student involvement in learning is more than just acquiring information, but also building a deeper understanding and skills that are relevant to their future lives. Student involvement has not been separated from the involvement of teachers, who must make a plan for the teaching and learning process in order to create good stages in accordance with the goals that have been made. Garvin (Cunningham, 2019) stated that with a balanced interaction manager with students, teachers manage the stages of obtaining meaningful learning outcomes along with their learning to help students achieve their learning goals roles and responsibilities. Student involvement is very important in the learning process because it can show that students are involved in the development of cognitive skills and existing knowledge (Martin & Bolliger, 2018).

METHODOLOGY

The type of research used is a quantitative method, or known as the scientific method. because of its systematic, specific, objective, measurable, and rational nature. John Cresswell (2008) stated that quantitative research is a type of educational research in which subjects are selected, questions are custom-made, question sizes are limited, data from participants are collected measurably, and conducted objectively and impartially.

Several high school students in Jambi are the subjects of this study. Google Form media is used to distribute questionnaires on the internet to collect data. To obtain information about the purpose of the study, respondents were asked to fill out a questionnaire consisting of item numbers, questions, and seven alternative answer options. After that, data was collected from 150 respondents.

For sample preparation, this study uses a simple random technique. Furthermore, the type of data needed in this study is called primary data, which comes from respondents who are divided into questionnaire categories based on information such as full name, school origin, gender, and class. The second type of data is secondary data, where this secondary data consists of reliable information that has been obtained through various reliable sources with this research, such as books, journals, articles, and other materials. In this study, the G Power application was used which aimed to measure the small size needed in the analysis of this research. The test results showed that the population of 450 and a total sample of 150 reached a strength of 0.80. To analyze the data, SEM-PLS—which is based on Smart PLS version 4.1.0.2—is used in a variety of procedures. First, the validity and reliability of the measurement model construct are tested. Furthermore, the evaluation was carried out using a structural model. This model evaluates a direct relationship between exogenous (independent) and endogenous (dependent) variables (Hair, Hollingsworth, Randolph, & Chong, 2017).

INPUT		**OUTPUT**	
Tail(s)	One	Noncentrality parameter δ	2.5000000
Effect size f^2	0.2	Critical t	1.6552145
α err prob	0.05	Df	148
Power (1-β err prob)	0.80	Total sample size	150
Number of predictors	6	Actual power	0.8005794

In this study, the questionnaire instrument was divided into two parts. In the first part, the researcher asked participants to fill in demographic information. In the second part, the statement consists of forty variables taken by the researcher. These variables include Teacher Learning Strategies using ten items from Reigulth, CM, and Merill, MD's research; Student Learning Strategies using eleven items from Slameto's research (2003:76); and Learning Motivation using twelve items from the research of Dimyati and Mudjiono (1994:89-92). For each item, the Likert scale is used consistently: strongly disagree (one), disagree (two), slightly disagree (three), neutral (four), slightly agree (five), agree (six), and strongly agree (seven). In addition, respondents mostly received questionnaires. The statistical descriptive results shown in Table 1 show that high school students are divided by age, namely under 17 (38/25.3%) and over 17 (112/74.7%). They were also divided based on school origin, namely Jambi City High School (56/37.3%)

and Muaro Jambi High School (94/62.7%), gender, namely boys (50/33.3%) and girls (100/66.7%), and classes, namely XI (38/25.3%) and XII (112/74.7%).

RESULTS AND DISCUSSION

Description of Research Data

Table 1. Demographics

Variable	Demographics	Frequency	Percentage	Mean
Age	<17 (1)	38	25,3	
	>17 (2)	112	74,7	1,75
	Total	150	100.0	
School Origin	Jambi City High School (1)	56	37,3	
	Muaro Jambi High School (2)	94	62,7	1,63
	Total	150	100.0	
Gender	Male (1)	50	33,3	
	Female (2)	100	66,7	1,67
	Total	150	100.0	
Class	XI (1)	38	25,3	
	XII (2)	112	74,7	1,75
	Total	150	100.0	

Table 1 above is the result of statistical descriptive results, where from the demographics it can be seen that high school students are separated by age, namely: <17 (38/25.3%), >17 (112/74.7%). Then, it is also divided based on school origin, namely Jambi City High School (56/37.3%) and Muaro Jambi High School (94/62.7%), Gender, namely: male (50/33.3%) and female (100/66.7%), then in Class, namely: XI (38/25.3%) and XII (112/74.7%).

Data Analysis

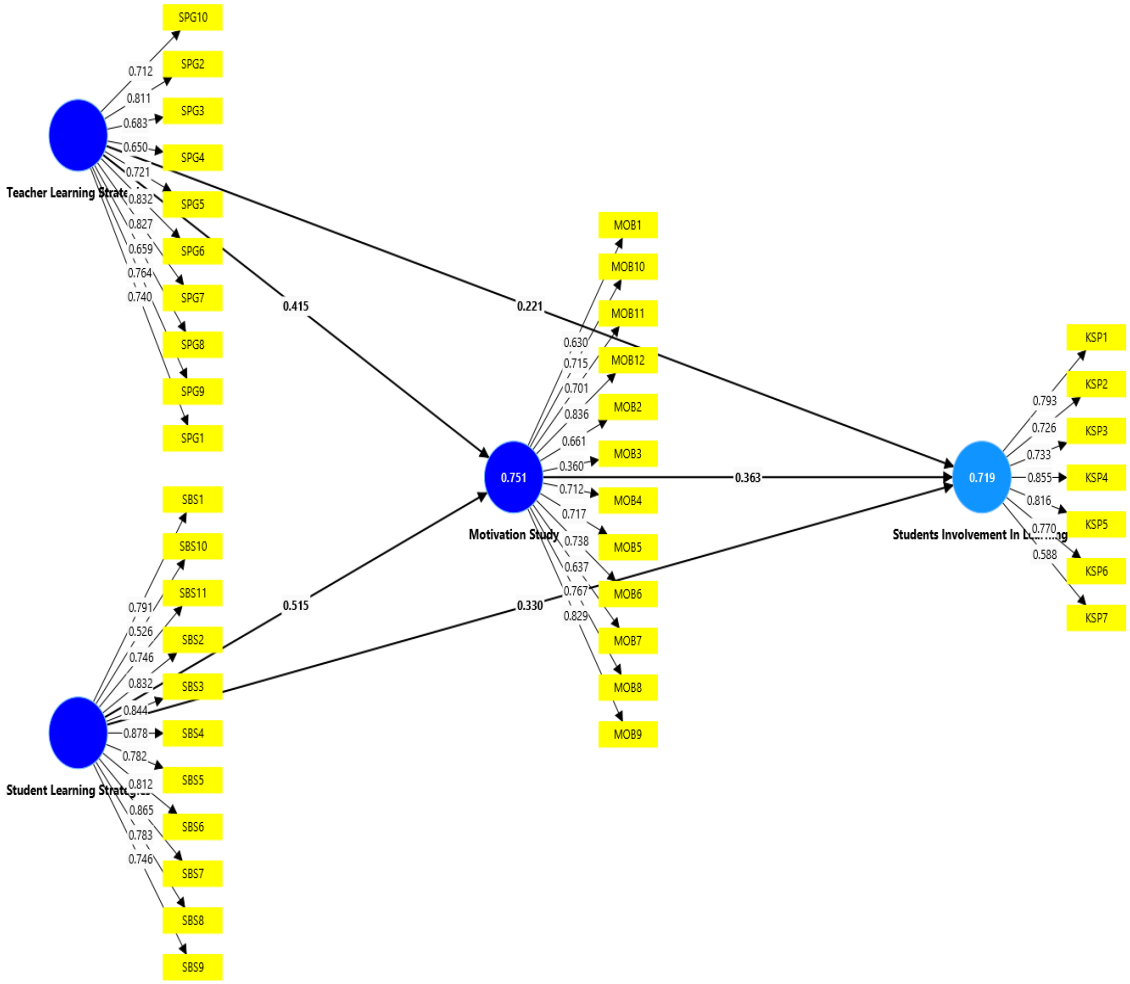
Fernanda et al. (2022) showed that PLS-SEM can be used to analyze research data that lacks or does not meet the assumption of normality. PPLS-SEM, a structural equity modeling technique based on an iterative approach, maximizes the endogenous variables described. Creswell (2002) then used PLS-SEM (partial least square equation) to analyze quantitative data.

The validity of this study was tested by the convergent validity and discrimination methods and the Smart PLS 4.1.0.2 Application. First, enter the raw data in Excel's limited comma CSV format. Once the data is entered, the next step is analysis. This stage consists of: As can be seen from the average score in the table above, the teacher's learning strategy variable has the highest score (6,593), the learning motivation variable has the second score (6,253) and the student learning strategy variable has the lowest score (4,960).

Table 2. Questionnaire Statistics Description, loading factor, VIF, AVE and Cronbach's (Joe F. Hair, Howard, & Nitzl, 2020)

Construct	Statement	Mean	Loading	VIF	Ave	Composite reliability	Cronbach's
Teacher Learning Strategies	• SPG 1 • SPG 2 • SPG 3 • SPG 4 • SPG 5 • SPG 6 • SPG 7 • SPG 9 • SPG 10	6,593 6,480 6,567 5,673 5.660 5,860 5,507 5,480 5,727	0,740 0,811 0,683 0,650 0,721 0,832 0,827 0,764 0,712	3,041 3,387 3,096 1,883 2,146 3,509 3,447 2,385 1,745	0,562	0,924	0,909
Student Learning Strategies	• SBS 1 • SBS 2 • SBS 3 • SBS 4 • SBS 5 • SBS 6 • SBS 7 • SBS 8 • SBS 9 • SBS 10 • SBS 11	4,960 5,580 5,673 5,193 5,093 5,760 5,320 5,713 5,760 5,360 5,553	0,791 0,832 0,844 0,878 0,782 0,812 0,865 0,783 0,746 0,526 0,746	2,894 4,008 3,944 4,666 3,178 3,493 3,915 3,233 2,770 1,752 2,650	0,620	0,947	0,937
Learning Motivation	• MOB 1 • MOB 2 • MOB 3 • MOB 4 • MOB 5 • MOB 6 • MOB 8 • MOB 9 • MOB 10 • MOB 11 • MOB 12	5,873 6,253 4,980 5,300 5,373 5,820 5,813 5,900 5,593 5,440 5,647	0,630 0,661 0,560 0,712 0,717 0,738 0,767 0,829 0,715 0,701 0,836	1,729 1,927 1,524 2,623 2,699 2,380 2,430 3,295 2,196 2,237 3,329	0,493	0,919	0,902
Student Engagement in Learning	• KSP 1 • KSP 2 • KSP 3 • KSP 4 • KSP 5 • KSP 6 • KSP 7	5.780 5,613 6,013 5,967 5,873 5,713 6,227	0,793 0.726 0,733 0,855 0,816 0,770 0,588	2,722 2,423 2,072 2,768 2,512 2,084 1,475	0,576	0,904	0,875

From the table above, it can be seen from the mean score which is at the highest mean level (6,593), namely in the teacher's learning strategy variable, and at the second level, namely in learning motivation (6,253) and the lowest in the student learning strategy variable (4,960).



Evaluation of Confirmatory Composite Analysis (CCA) Measurement Models

Step 1: Check the filling of the indicator as well as its importance In two tests at the 5% level, the standardized load should be at least 0.708 and the bound t-statistic value should be ±1.96 (Hair, Ringle, & Sarstedt, 2011). The PLS-SEM t-statistics were obtained using the bootstrap method (Hair, Sarstedt, et al., 2012). Interval addition indicators, such as t-statistical intervals as well as intervals that do not include statistically relevant zeros, can be used (Wood (2005). Confidence intervals have the advantage of not needing to use dichotomous significance testing methods, and researchers can use other methods to find indicators of practical significance when setting confidence intervals (Cohen, 1994). To display the loading of each item, we obtained the data using SmartPLS 4.1.0.2. The filling of the 40 items is shown in Table 2 and Figure 1. Learning achievement received the highest score (KSP 4; 0.855), while Student Learning Strategy received the lowest score (SBS 10; 0.526).

Step 2: Square the individual indicator load to show the declared variance between the individual indicator variables and the associated construct. This is called the reliability indicator (Hair, Black, et al., 2019).

Step 3: There are two methods that can be used to measure the reliability of a construct: the first uses Cronbach alpha (α) and the second composite reliability (CR). The second reliability standard must receive a practicum score of at least 0.70. The reliability of composites, which have a higher weight than Cronbach alpha, is a more accurate indicator. As a result, CR must be evaluated and reported because the indicators do not have the same reliability (Hair et al., 2019). Internal consistency, such as composite and Cronbach alpha, can be too high. Items with a reliability of 0.95 or higher indicate the same idea and are therefore exaggerated. In other words, redundancy indicates that the same idea size indicators and thus do not include the diversity needed to confirm valid multi-item constructs (Hair, Risher, et al., 2019). The cronbach alpha value of the strategy variable is below 0.70 in table 2, and all constructs have good values. The composite reliability value of the teacher learning strategy variable was 0.924, the student learning strategy variable was 0.947, the learning motivation variable was 0.992, and the student involvement variable in learning was 0.875. The teacher's learning strategy variable was 0.909, the student's learning strategy variable was 0.937, and the student's learning strategy variable was 0.937.

Step 4: The validity of convergence can be measured on Average Variance Extracted (AVE). To generate AVE, the average reliability of the construct indicator is obtained by calculating the average of the published variants between the construct and each of its indicators. Using AVE, a reflective indicator that should be greater than 0.5 (50%), the validity of the convergence of each variable measured. This is done based on the principle that variable gauges must have a great influence. An AVE value of 0.5 or more indicates that the variable can represent 50% or more of the variable items (Hair et al., 2017). Table 2 shows that the AVE of the PLS-SEM procedure is greater than 0.500. The variable "Learning Motivation" had the lowest AVE of 0.493, which accounted for 55% of the variation. However, the variable "Student Learning Strategies" had the highest AVE of 0.620, which accounted for 70% of the variation. Thus, the AVE value helps the validity of convergence.

Step 5: Validity of Discrimination: A construction (AVE) is valid when the variant shared in it is greater than the variant shared in between. The heterotrait-monotraite (HTMT) correlation method should be used (Henseler, Ringle, & Sarstedt, 2015). Researchers can understand their HTMT results with a cut-off score of 0.85–0.90. Finally, Franke and Sarstedt (2019) It is recommended to conduct significance testing with confidence intervals to further evaluate the validity of the HTMT ratio and discrimination. Table 4 shows all HTMT values with values less than 0.90, which shows a large difference. The Fornell-Larcker Criterion and Heterotrait-Monotraite (HTMT) cross-loading methods in the Smart PLS 4.1.0.2 application were used to test the validity of discrimination (Henseler et al., 2015).

Table 3. Fornell-Larscher Criterion

	Motivation learn	Student Engagement in Learning	Student Learning Strategies	Teacher Learning Strategies
Motivation learn	0,702			
Student Engagement in Learning	0,808	0,759		
Student Learning Strategies	0,820	0789	0,788	
Teacher Learning Strategies	0,793	0,751	0,735	0,743

Each variable is defined in its loading and cross-finding criteria, as well as the Fornell-Larcker discriminatory validity criteria. Table 4 shows that the AVE value for each variable is greater than the AVE value for all other variables. Therefore, the root AVE value of the form to be tested has a high discriminatory validity value (Hair et al., 2011). As a result, this research is worth doing. The results of the validity test of the research discrimination using the heterotrait-monotrait ratio method are shown in Table 4 below.

Table 4. Heterotraite-Monotraite Ratio (HTMT)

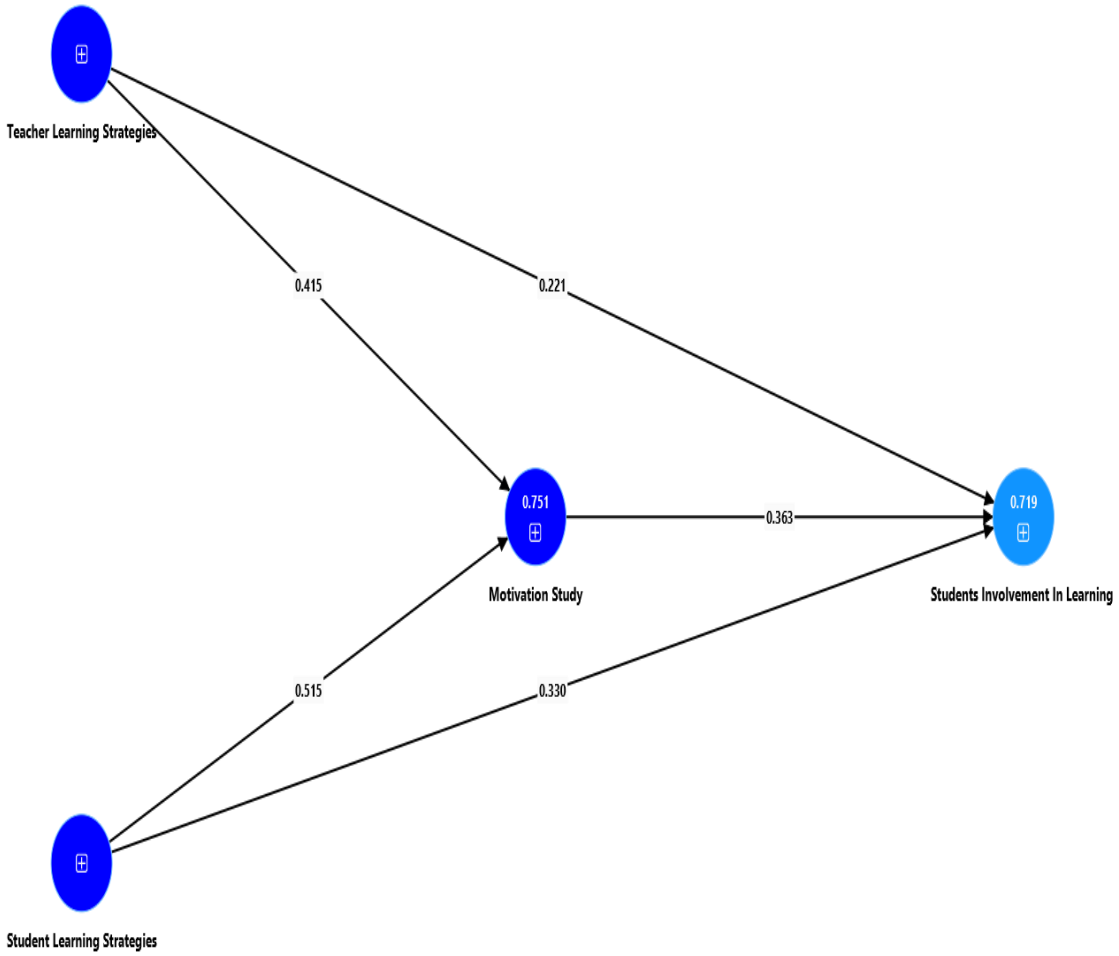
	Learning Motivation	Student Engagement in Learning	Student Learning Strategies	Teacher Learning Strategies
Learning Motivation				
Student Engagement in Learning	0,895			
Student Learning Strategies	0,881	0,865		
Teacher Learning Strategies	0,865	0,826	0,783	

Experts argue that cross-loading and the Fornell-Larcker criteria are insensitive when assessing the validity of discrimination. An alternative method for evaluating the validity of discrimination is HTMT, which relies on a multi-property matrix and a multi-method measurement method. To ensure that there is a difference between the two reflective variables, the HTMT value must be less than 0.9 (Henseler et al., 2015). Since the total value is less than 0.9, it can be concluded that the research instrument used is valid (data above).

Structural Model Assessment

Step 1: Evaluation of the results of the structural model relies heavily on the basic concepts of multiple regression analysis. So the first step is to determine whether or not multicollinearity is high which is a problem. By evaluating the structural model construct, this is considered a structural model problem that shows high multicollinearity. By changing the same coefficient sign and value, the size of the beta coefficient can be

changed. The VIF value can be used as a formative construct indicator; Multicollinearity may not matter if the score is below 3.0. An alternative method is to examine the bivariate relationship between construct scores. The path coefficient as well as the size coefficient can be affected by multicollinearity if the bivariate relationship is greater than 0.50. When multicollinearity seems to be a problem, merging separate constructions into theoretically similar and supportive lower-level constructions is the suggested solution (Cenfetelli & Bassellier, 2009). Variable Inflation Factor (VIF) was used to measure the collinearity of this study; The VIF value was no more than 5.0, which suggests that there was no multicollinearity problem between the variables used in this study (Hair et al., 2017).



Step 2: Checking the size and significance of the line coefficients is the second step if multicollinearity is not an issue. Using this method, researchers can investigate the suspected relationship between these constructs. The path coefficient is a standardized value that can range from +1 to -1, but rarely exceeds +1 or -1. This is especially true for complex models that have many independent constructions integrated in the structural model. The lower the line coefficient, the lower the power to see the dependent (endogenous) construct and vice versa, the stronger the ability to predict the dependent

construct. The hypothesis model describes all the variables of the research, including teacher learning strategies, student learning strategies, learning motivation, and student involvement in learning.

Table 5. Summary of Hypothesis Test Results

Hypothesis	Path Coefficient	P value	
Q1: Is there an influence of teachers' learning strategies on learning motivation?		**0.000**	Supported
Q2: Is there an influence of students' learning strategies on learning motivation?		**0.000**	Supported
Q3: Is there an influence of teachers' learning strategies on student engagement in learning?		**0.045**	Supported
Q4: Is there an influence of student learning strategies on student engagement in learning?		**0.001**	Supported
Q5: Is there an influence of learning motivation on student engagement in learning?		**0.000**	Supported

Step 3: The determination coefficient is the most commonly used metric in assessing structural prediction models, such as multiple regression models. This suggests that R2 cannot be inferred to the population. In addition, prediction is only a measure of the predictive ability for the sample of data used to calculate the results (Rigdon, 2012; Sarstedt et al., 2014). The minimum R2 value is 0, but it is rare to find a lower value. The R2 value increases with the number of independent variables (constructs) in the structural model, as shown by multiple regression with dependent variable constructs. The highest R2 value is 1, but this happens only slightly. To know the R2 size of a structural model, the researcher must look at similar empirical studies that are relevant and This is based on the assumption that the construct of the dependent variable and the independent variable are completely related. Although rare, the highest R2 value is 1. To evaluate the R2 size of the structural model, researchers should review similar relevant empirical studies, assuming the context of the study is not too different, and use these results as a guideline. Finally, the R2 value is adjusted in view of several fields. It systematically changes the R2 value according to the sample size and the number of predicted constructs. Adjusted R2 is useful when researchers include too many non-essential predictor constructs into structural models, as happens in multiple regression (Hair et al., 2017). For example, if the R2 values are 0.75, 0.50, and 0.25, then the model shows the variability of strong, moderate, and weak endogenous variables (Sarstedt et al., 2017). In the research of Hair et al. (2020), the R2 values were 0.67, 0.33, and 0.19, which indicate strong, medium, and weak strength levels. As shown in the data in Table 6, the measurements made in this study using the determination coefficient (R2), learning motivation was tested; Student involvement in learning is also tested with a strong determination test. So, based on the results of the measurements carried out by this study, the learning motivation variable has a significant role in explaining the observed variability.

Table 6. R Square

	R Square	R Square Adjusted
Learning Motivation	0,751	0,748
Student involvement in learning	0,719	0,713

Step 4: The predictive ability of the second structural model is measured by the size of the effect. This measure calculates the predictive power for each independent construction incorporated in the model. This value is calculated automatically by SmartPLS after removing all predictor constructs from the model. As a result, the new R2 is calculated without the predictor construct; then, the R2 value with the predictor and the R2 value without the predictor are seen in the model. Removed constructs can serve as significant predictors of dependent constructs, as indicated by the difference in R2 values (Hair et al., 2017). The value of the f2 effect factor is broken down into small, medium, or large. Values below 0.02 and 0.15 are considered small, values above 0.15 and 0.35 are considered moderate, and values above 0.35 are considered large. In addition, the effect size is used as a prediction metric in the sample. The value of f2 is shown in table 7 below, and the results show that the teacher's and students' learning strategies do not have a significant impact on student engagement in learning.

Table 7. Effect Size (F2)

	Motivation Learn	Student Engagement in Learning	Student Learning Strategies	Teacher Learning Strategies
Motivation Learn				
Student Engagement in Learning				
Student Learning Strategies	0.490			
Teacher Learning Strategies	0.318			

Step 5: The third metric used in looking at predictions is the Q2 value, or blindfolding (Geisser, 1974). In Chapter 2, values greater than zero have meaning, while values below zero indicate that the prediction is irrelevant. Furthermore, cross-validation (Q2), also known as the Q-box test, is used to assess the significance of the PLS-SEM predictive model. Q2 values higher than 0.25 and 0.50 indicate a moderate or large forecast correlation; if the Q2 value is less than 0, then the model has no significant prediction value. Conversely, if the Q2 value is greater than 0, then the model has the ability to accurately predict certain variables (Sarstedt et al., 2017). Table 8 shows measurements made with validated sequential redundancy (Q2).

Table 8. *Q2* Square

	RMSE	MAE	Q²_predict
Learning motivation	0.518	0.403	0.744
Student involvement in learning	0.599	0.414	0.665

DISCUSSION

This study has the main objective that has been prepared in detail in understanding, identifying and evaluating various factors that play a role in influencing residual involvement in several high schools in Jambi Province. The research sample consisted of 150 student respondents in several high schools in Jambi province who were selected in a certain way. In this study, the researcher explained in detail each hypothesis relevant to the research question, discussed the relationship between the variables that have been mentioned and tested the strength of the relationship. In this study, the influence of each variable studied, namely teacher learning strategies (X1), student learning strategies (X2), learning motivation (Z) and student involvement in learning (Y) is described. A hypothesis is a provisional answer to a research question until it is proven on the data that has been collected must be measured concretely in using available measuring equipment (Arikunto, 2006: 71). Overall, a hypothesis means that the hypothesis is less than true (but not necessarily true) and can be recognized and made true as long as it is supported with reality. (Arikunto, 2000). A hypothesis is a provisional conjecture in an investigative question in which it must be tested in a concrete way. The existence of a hypothesis that is a temporary conjecture can tell the influence such as how it affects the thing you want to investigate. Thus is a provisional explanation of the influence between complicated events. Below are five hypotheses tested in the investigation.

H1: The influence of Teacher Learning Strategies (X1) on Learning Motivation (Z). The implementation of current learning strategies requires an increase in the active participation of students in the learning process at school. Thus, educators must be able to recognize the characteristics and problems of students and decide and implement the next strategy that is in harmony with the student's situation. Students' learning difficulties and what is needed to motivate students and how to organize their learning to maximize learning outcomes (Yuanita, 2020). Teachers' efforts to introduce the learning process in illustrations of their daily activities or teachers' efforts to ensure that teachers will be useful in learning a special subject that has a considerable impact on students' learning motivation (Nurani et al., 2003: 1.9). The use of pedagogic strategies during learning activities is very important because it can facilitate the learning process and obtain efficient achievements. If there is no definite strategy, it will create chaotic continuity, it will be difficult to achieve the learning goals that have been made well, and learning cannot be carried out efficiently and effectively

H2: The Influence of Student Learning Strategies (X2) on Learning Motivation (Z) For students, learning strategies facilitate the learning process and facilitate understanding of the content of the lesson. If students' learning strategies are good, they will also be more motivated to learn. On the contrary, the decline in student learning strategies causes a decrease in student learning motivation. There is one factor that can create student learning motivation is in choosing the appropriate learning strategy and can

make students feel weaving and joy during learning (Savitri et al. 2022). Students who have a desire to do something will try to learn it with enthusiasm, try their best to achieve maximum results. This means that motivation plays a role in increasing students' perseverance and resilience in learning (Hamzah, 2011).

H3: The Influence of Teachers' Learning Strategies (X1) on Student Engagement in Learning (Y1). Teachers typically support this involvement through various teaching and adaptation efforts. Involvement can be overcome through a learning plan that is important because it adjusts to the needs of the students being taught (Christanty and Cendana, 2021). Educators can align their teaching in the classroom by using equivalent teaching strategies to classroom situations and environments and pay attention to the learning environment to reduce the environment where students are more comfortable and active when learning (Lin, Chen, & Liu, 2017). The teaching strategy of each teacher in the teaching and learning process is designed to make it easier for students to know their learning that is going on in class, which makes students' encouragement to play a role in learning.

H4: The Influence of Student Learning Strategies (X2) on Student Engagement in Learning (Y). This hypothesis is the same as Khalid (2015) research that student learning strategies can predict student participation in learning, especially if the student learning strategy is also greater student participation when learning. The presence of learning strategies can affect student participation in learning, this is due to this. Student participation in the classroom is important because it not only affects student success, but also student character development. Active student participation is seen when students answer questions and teacher teachings, listen, listen and understand the teacher's direction, are able to answer and always participate in doing the teacher's work or questions (Khasanah, 2016).

H5: Learning Motivation (Z) affects Student Engagement in Learning (Y). In this hypothesis, based on research data, it can be explained that learning motivation greatly affects student participation in learning. The explanation is the same in the previous investigation by Amalia and Hendrian (2017) concluded that learning motivation can affect student participation, low learning motivation is usually only behavioral, not emotional or cognitive, and high learning motivation is not only affective in nature. He seems committed to learning, but he also has a great passion for learning and a great desire to know. Motivation is also related to student participation in the learning process, the achievement of high student participation cannot be separated from the role of student learning motivation, Suryadin, (2022).

CONCLUSION

This study was conducted to study and see the components that can be influenced on learning motivation and student involvement in the learning process in some Jambi Province Senior High Schools. Five hypotheses were proposed in the investigation, including the influence of teachers' learning strategies (X1), student learning strategies (X2) and learning motivation (Z) on learning engagement (Y). It can be seen in this survey data that all of these variables have a fairly high influence on learning motivation and student learning engagement.

The conduct of this investigation has findings that state that teachers' learning strategies have a considerable influence on the desire for motivation to learn. The more effective and good the teacher's learning strategy, the higher the motivation of students to

learn. The findings are in accordance with the findings of research that has been carried out which states that the existence of teacher learning strategies has a significant role in influencing students' desire to learn.

Furthermore, student learning strategies also have a considerable influence on learning motivation. Students with tricks in the learning process also tend to have greater motivation to learn. Similarly, the investigation that has been carried out states that the existence of learning strategies in and owned by students will play an important role in increasing their motivation to learn.

In addition, teachers' learning strategies also affect student involvement in lessons. The existence of an effective teacher learning strategy will be very important for student involvement in lessons. This is because if teachers can use effective strategies, they will help with student involvement in the learning process.

In addition, the results found that learning motivation can affect student involvement in learning. Students with considerable motivation to learn tend to be involved in the learning process. This is the same as the findings of the investigation that have been carried out say that there is a good relationship with student motivation in the learning process and student involvement in learning. Overall, the findings of this study show that teacher learning strategies, student learning strategies, learning motivation, and student involvement in learning significantly affect student involvement in the learning process. The results show that these components are very important for increasing student engagement in learning in the research that has been conducted.

REFERENCES

Ali Maksum, H. J. (2019). Teaching and Learning Strategies in an Effort to Improve Religious Education Learning Outcomes. edureligia, Vol. 3, No. 1, January – June, p. 17.

Al-Muchtar, Suwarna, et al. (2007). PKn. Jakarta Learning Strategy: Open University.

Amalia, R., & Hendriani, W. (2017). The Effect of Academic Resilience and Learning Motivation on Student Engagement in Mukim Students of Nurul Islam Islamic Boarding School, Karangcempaka Sumenep. Journal of Educational and Developmental Psychology, 6, 1–13.

Anitah, S. (2007). *PKN Learning Strategy*. Jakarta: Open University, 1.

Ariani, L. 2019. Student Engagement in Schools is one of the efforts to increase student success in school. Journal UMBJM.

Arief, M., Saleh, M., Amin, S. J., Hamdanah, H., & Saepudin, S. (2024). TEACHERS' COMPETENCE IN IMPROVING QUR'AN MEMORIZATION ABILITY IN LEARNING QUR'AN HADITH FOR MAN 2 PAREPARE STUDENTS. *Journal of Education and Teaching Review (JRPP), 7*(2), 5512-5520.

Arikunto, Suharsimi. (2000). Research Management. Jakarta: Rineka Cipta.

Arikunto, Suharsimi. (2006). Basics of Educational Evaluation. Jakarta: PT. Bumi Aksara.

Cenfetelli, R. T., & Bassellier, G. (2009). Interpretation of formative measurement in information systems research. MIS Quarterly, 33(4), 689–708.

Christanty, Z. J., & Cendana, W. (2021). Teachers' efforts increase the involvement of K1 students in synchronous learning. COLLASE (Creative of Learning Students Elementary Education), 4(3), 337-347.

Cohen, J. (1994). The world is round (p. 05). American Psychologist, 49(12), 997–1003.

Cunningham, A. (2019). Envisioning Christian presence and practice in online teaching contexts. International Journal of Christianity and English Language Teaching, 6, 3–19.

Ministry of National Education. *Law of the Republic of Indonesia Number 20 of 2003*. About the National Education System. Article 1 Paragraph 1.

Dimyati and Mudjiono. (1994). *Learning and Learning*. Jakarta: Ministry of Education and Culture.

Djamarah. (2006). *Teaching and Learning Strategies*. Jakarta: PT Rineka Cipta.

Fernanda, J. W., Luthifiana, V., & Akhyar, M. K. (2022). Analysis of the Partial Least Square Structural Equation Model (PLS-SEM) for Modeling the Admission of the Inter-School Joint Information Network System (JIBAS). J Statistics: Scientific Journal of Theory and Application of Statistics, 15(2), 292-297.

Fredrick, J. A. (2014). Eight Myths Of Student Disengagement.

Fredrick, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School Engagement: Potential of the Concept, State of the Evidence. *American Educational Research Association Stable*, 74(1), 59-109.

Frelberg, H. J. and Driscoll, A. (1992). *Teaching Media A Systematic Approach, New Jersey: Prentice Hall*.

Geisser, S. (1974). A predictive approach to the random effects model. Biometrics, 61(1), 101–107.

Goldman, Z. W., Goodboy, A. K., & Weber, K. (2017). College Students' Psychological Needs and Intrinsic Motivation to Learn: An Examination of Self-Determination Theory. Communication Quarterly, 65(2), 167–191.

Gulo. (2002). *Teaching and Learning Strategies*. Jakarta: PT. Grasindo.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. Journal of Marketing Theory and Practice, 19(2), 139–151.

Hair, J. F., Black, W. C., Anderson, R. E., & Babin, B. J. (2019). Multivariate data analysis (8th ed.). London: Cengage Learning.

Hair, Joe F., Howard, M. C., & Nitzl, C. (2020). Assess the quality of the measurement model in PLS-SEM using confirmation composite analysis. Journal of Business Research.

Hair, Joe F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: It is indeed a silver bullet. Journal of Marketing Theory and Practice.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2012). Partial least squares: The better approach to structural equation modeling? Long Range Planning, 45(5–6).

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. European Business Review, 31(1), 2–24.

Hair Jr., J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. International Journal of Multivariate Data Analysis, 1(2), 107.

Hamdu, G., & Agustina, L. (2011). The effect of student learning motivation on science learning achievement in elementary school. *Journal of Educational Research*, 12(1), 90-96.

Hamzah, U. (2011). Motivation and Measurement Theory. Jakarta: Bumi Aksara.

Handelsman, M. M., Briggs, W. L., Sullivan, N., & Towler, A. (2005). A measure of College Student Course Engagement. *The Journal of Educational Research*, Vol. 98 (No. 3), 184-191.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing the validity of discrimination in the modeling of variance-based structural equations. Journal of the Academy of Marketing Sciences, 43(1), 115-135.

Hermawan, A. (2014). The concept of learning and learning according to al-ghazali. *Qathrunâ, 1*(01), 84-98.

John W. Creswell. (2008). *Educational Research, Planning, Conducting, and Evaluating Quantitave and Qualitative Research*, (New Jersey USA: Pearson Education Inc.,), p. 46.

Khasanah, F. (2016). Increasing student learning activity through a STAD-type cooperative learning model (Students Teams Achievement Division). Scientific Journal, 18(2), 48–57.

Kristiyani, T. (2020). *Self-regulated learning: Concepts, implications and challenges for students in Indonesia*. Sanata Dharma University Press.

Langgulung, Hasan. (1983). In Syamrin, M. P. I and Syahrul, S. P. I (2021). Teaching Management.Yogyakarta: Deepublish.

Lee, K. (2018). Everyone already has their community beyond the screen: Reconceptualizing online learning and expanding boundaries. Educational Technology Research and Development, 66(5), 1255–1268.

Lin, M.-H., Chen, H.-C., & Liu, K.-S. (2017). A study of the effects of digital learning on learning motivation and learning outcome. Eurasia Journal of Mathematics, Science and Technology Education, 13(7), 3553–3564.

Martin, F., & Bolliger, D. U. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. Online Learning Journal, 22(1), 205–222.

Nashar. (2004). *The Role of Motivation and Early Ability in Learning Activities*. Jakarta: Delia Press.

Nurani, Yuliani, et al. (2003). Learning Strategies. Jakarta: UT Publishing Center.

Rakhmalia, Mia. (2014). "The Use of Center and Circle Learning Models in Increasing Student Engagement in Integrated Early Childhood Posts." *Modeling Journal of PGMI Study Program* 36-46.

Reigulth, C.M. and Merill, M.D *Classes of Variable Instrutional, Educational Technology* (1983), pp. 2-5.

Rigdon, E. E. (2012). Rethinking partial least squares path modeling. In praise of simple methods. Long Range Planning, 45(5–6), 341–358.

Roestiyah. (2008). *Teaching and Learning Strategies*. Jakarta: PT Rineka Cipta.

Sardiman. (2006). *Interaction and Motivation of Teaching and Learning*. Jakarta: PT Raja Grafindo Persada.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Modeling of the structural equation of the smallest square of the partial. Market research handbook, 26(1), 1-40.

Savitri, A. S., Sallamah, D., Permatasari, N. A., & Prihantini, P. (2022). The Role of Learning Strategies on Student Learning Motivation. Journal of Sociology and Humanities Education, 13(2), 505-511.

Sewang, A. (2015). Education Management. Wineka Media.

Shernoff, D., & Schmidt, J. (2008). Further evidence of an engagement-achievement paradox among US high school students. Journal of Youth and Adolescence, 37, 564-580.

Sirait, J. E. (2021). Analysis of the influence of teacher competence on learning success at Bethel Tanjung Priok Elementary School, North Jakarta. *Diegesis: Journal of Theology*, *6*(1), 49-69.

Skinner, E. A., & Pitzer, J. R. (2012). Developmental Dynamics of Student Engagement, Coping and Everyday Resilence. *Handbook of Research on Student Engagement*, (February 2016) 1-840.

Slameto, (2003). Learning and the Factors That Influence It. Jakarta: PT. Rineka Cipta.

Sugiyono. (2013). *Qualitative Quantitative Research Methods and R&D*. Bandung: Alfabeta.

Suryadin, T. (2022). Student Learning Motivation and Student Involvement in Physical Education Online Learning. JOURNAL RESPECS (Research Physical Education and Sports), 4(1), 33-39.

Turner, J. C., & Patrick, H. (2004). Motivational influences on student participation in classroom learning activities. Teachers College Record, 106(9), 1759–1785.

Uno, H. B. (2019). *Motivation Theory and its measurement: Analysis in the Field of Education*. Jakarta: PT. Bumi Aksara.

Weigel, D.J., Weiscr, D.A., Bales, D.W., & Moyses, K.J. (2012). *Identifying Online Preference and Needs of early Childhood Profesionals*. Early Childhood Research and Practice, Volume 14 No. 2.

Wood, M. (2005). Bootstrapped confidence intervals as an approach to statistical.

Yuanita, D. I. (2020). Implementation of Active Learning Strategies in Increasing Students' Learning Motivation in Elementary Schools. Bidayatuna Journal, Vol. 3(1): 145-163.