



# The Impact of E-learning on Student Learning Motivation

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Abstract: This study aims to determine the impact of e-learning on student learning motivation. Indicators of e-learning include learning and evaluation materials, community, online lecturers, collaboration and multimedia. The indicators of learning motivation include college desire, encouragement to complete college, expectations of attending lectures, awards in lectures, interesting activities during lectures and a conducive environment. Various obstacles in running e-learning such as network unpreparedness, too much task load, less than optimal interactive lecturers and so on became the basis for conducting this research. The method used in this research is descriptive and verification with a quantitative approach. Respondents in this study were 104 students. The source of data in this study is primary data with data collection techniques carried out through survey methods using questionnaires. The analytical method used in this study is the SmartPLS 3.3.3 . software. The results of this study indicate that e-learning has an effect on student learning motivation. The results of data processing show that for e-learning multimedia indicators are still not good and this shows that the learning media, both video, audio and online simulations are still not optimally used as online learning media. As for learning motivation, indicators of college desire, awards for online lectures, interesting activities and a conducive environment have not been obtained optimally by students. This shows that in conducting online lectures it is necessary to have interesting media in conveying material so that student learning motivation is mentioned.

Keywords: e-learning, learning motivation, students

# **1. Introduction**

Covid-19 has hit all corners of the world, so the World Health Organization (WHO) has declared it a pandemic. The COVID-19 pandemic has caused many sectors of life to be paralyzed, including the education sector. Indonesia as one of the affected countries is trying to find a solution so that the continuity of education does not stop. This condition, of course, forces the world of education, including universities, to carry out online lectures. Online lectures, also known as e-learning, are lecture processes using information and communication technology, in this case the internet as a learning medium that is designed and displayed in video, audio or written recordings by lecturers to be delivered to students. E-learning has been running since March 2020, but that does not mean that online learning activities have been running as expected. Universities must set the right recovery strategy in the face of this pandemic. The implementation of e-learning really requires desktops, laptops, smartphones and the internet as the main components in supporting e-learning [1]. Although the online lecture technology used is increasingly sophisticated, several problems are often encountered including difficulty in

accessing the internet, unstable electricity conditions, especially for students in rural areas. Other obstacles include the lack of interaction between lecturers and students which often slows down the learning process, lecturers tend to focus on completing course material instead of understanding the material, lecture time is reduced to not meeting teaching hours, students have difficulty concentrating and the number of assignments from material that is difficult to understand, boredom due to isolation, tends to ignore academic aspects, lecturers and students are forced to master lecture techniques using ICT (Information Communication Technology).

Several studies have been conducted regarding the implementation of e-learning as a result of the COVID-19 pandemic. The results of the study state that COVID-19 is an opportunity for the world of education to migrate in the learning process [2]. Next, it is mentioned that in online learning the activities carried out include taking online classes and doing assignments where the obstacles are not being able to focus on learning, being bored, having difficulty understanding academic material [3]. Other research states that in online learning the challenges for students are unstable networks, inadequate e-learning system support, technology and self-regulation. The challenges for lecturers include competence, operations, self-regulation, and isolation. For educational institutions, the handling is in the form of financial support and change management that is not yet optimally prepared [4]. Similarly, it is stated that to conduct e-learning, major challenges such as technology, accessibility, poor internet connectivity, and a harsh learning environment, so that online learning requires further investment so that these challenges can be minimized [5]. Other researchers mentioned that COVID-19 has helped develop strategic plans for the successful implementation of e-learning where technology becomes a positive medium towards evolution and change in learning [6]. The results of further research stated that the implementation of e-learning increased student learning motivation at Egyptian universities. The interactive features of e-learning become a medium in dealing with problems in online learning [7]. Other researchers stated that online learning has a negative impact on learning motivation due to lack of social interaction, mismatch between expectations and learning content, organizational problems and a non-conducive learning environment [8]. It is further stated that online mode learning requires adequate preparation mentally, physically, and financially to support students' learning deficiencies [9]. The results of further research stated that online learning has an effect on learning motivation during the pandemic [10]. The next research results explain that students who studied online had lower motivation than students who studied offline [11]. E-learning increased students' learning motivation because a variety of materials were delivered with interesting audio and video media [12].

Based on the explanation above, the researcher is interested in taking a study entitled The Impact of e-learning on Student Learning Motivation. The difference between this study and other studies is the impact of e-learning on student motivation. Elearning includes learning materials and evaluation questions, community, namely developing online communities to obtain support and sharing information, online lecturers, namely the direction from lecturers by answering problems faced by students, opportunities for collaboration and multimedia, namely the use of audio and video in delivering learning materials [13]. The learning motivation includes desires and desires, drives and needs, expectations, rewards, interesting activities and a conducive learning environment [14].

# 2. Method

In this study for data collection using a survey method through a questionnaire with the media google form. The analytical method used is descriptive and verification. Descriptive analysis presents the frequency distribution table of respondents' answers to each statement given along with the percentage value. The analysis is then continued by making interpretations of the answers to each statement based on the percentage value of the actual score with the ideal score, and then looking for the percentage score for each variable.

The determination of the interpretation of the percentage value of the score is guided by the score interval obtained from the difference between the maximum value (5) and the minimum value (1), then divided into 5 categories so that the interval value is 0.80 and the following interpretation guidelines are obtained [15].

Table 1.
Guidelines for Interpretation of Statements and Variable Percentage Scores

Ν	Score	Interpretasion
0	Interval	
1	1,00 - 1,80	Very not good
2	1,81 – 2,60	Not good
3	2,61 – 3,40	Pretty good
4	3,41 - 4,20	Good
5	4,21 – 5,00	Very Good

Verikative analysis the aim of knowing the

using SEM PLS with effect of e-learning on

student learning motivation. Structural equation modeling (SEM) is a powerful multivariate analysis method, which allows interaction between theory and data. PLS is a powerful technique in analyzing latent variables that have several indicators on SEM. PLS is an alternative approach that shifts from a covariance-based SEM approach to a variance-based approach [16]. The PLS design is intended to overcome the limitations of other SEM methods when data has problems such as measuring data with a certain scale, small sample sizes, missing values, abnormal data and multicollinearity.

# 3. Research Results and Discussion

In this section the author will describe the results of research related to the analysis of the influence of E-Learning (X) on Learning Motivation (Y). The data that has been collected is coded (coding), processed using descriptive analysis to determine the respondents' responses to each of the variables studied, then continued with Structural Equation Modeling (SEM) analysis with 104 respondents.

# E-Learning Variabel (X)

The results of the descriptive analysis present the distribution of respondents' answers to each statement submitted.Variable X (E-Learning) is represented by 14 statements, then divided into five indicators.

			Та	ble 2							
I	Distribution of Respondents' Answers to Indicators of Learning & Evaluation Materials										
	X1. Study Material & Evaluasion										
	1 Has it been	Alway	Facilit	Ouite	Less	Not	Tota	Av			

1	Has it been	Alway	Facilit	Quite	Less	Not	Tota	Av
	easy for	S	ated	Facilit	Facilit	Facilit	1	era
	online lecture	facilit		ated	ated	ated		ge

			ated								
	materials to	f	18	44	34	6	2	104	2.0		
	be facilitated?	%	17%	42%	33%	6%	2%	100 %	7 7		
	Is the content of the material in		Very suitab el	Suitab el	Quite Suitab le	Less Suitab le	Not Suitab le	Tota l	Av era ge		
<u>_</u>	accordance	f	26	54	20	4	0	104			
2	2 eith the Semester Learning Plan?	%	25%	52%	19%	4%	0%	100 %	3,9 8		
3	Are course materials		Alway s Evalu ated	Evalu ated	Quite Evalu ated	Less Evalu ated	Not Evalu ated	Tota l	Av era ge		
	diwdys owaluatod2	f	16	34	40	14	0	104	2 5		
	evaluateu:	%	15%	33%	38%	13%	0%	100 %	0		
	Average										

Table 2 show that respondents' answers to the lecture material felt that they were easily facilitated (42%), for the content of the material in accordance with the Semester Lesson Plan (52%), and for the evaluation of the learning material they got a score (38%). Overall, the average score for the Learning and Evaluation Materials indicator is 3.72. This value is in the interval 3.40 - 4.20 which indicates that the respondents stated that the Learning and Evaluation Materials have been carried out well

	Distribution of Respondents' Answers to Community Indicators												
	X2. Community												
	Do online		Very	Easy	Quite	Less	Not	Total	Aver				
	lectures		easy		Easy	Easy	Easy	10141	age				
	make it	f	10	18	30	38	8	104					
4	easier for students to form a learning communi ty	%	5 10%	17%	29%	37%	8%	100 %	2,85				
-	Is the course material infomatio		Very comple te & Easy	Comple te & Easy	Quite Comple te & Easy	Less Compl ete & Easy	Not Complet e & Easy	Total	Aver age				
5	n	f	18	38	34	12	2	104					
	complete and easy to obtain?	%	6 17%	37%	33%	12%	2%	100 %	3,56				
6	Is the course		Very easy to	Easy to share	Qiute easy to	Difficu lt to	Very difficult	Total	Aver age				

Table 3

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	material		share		share	share	to share			
	easy to	f	32	44	20	6	2	104		
	share between friends?	%	6 31%	42%	19%	6%	2%	100 %	3,94	
Average 3										

Table 3 show that it can be seen that the respondent's answer is that it is not easy for students to form a learning community (37%), for lecture material information is complete and easy to obtain (38%), and for lecture material it is easy to share between friends (44%). Overall, the average score for the Community indicator is 3.45. This value is in the interval 3.40 - 4.20 which indicates that the respondents stated that the implementation of E-learning in the Community indicator was declared Good.

	Table 4		
Distribution of Respondents	Answers to	Online Lecturer	Indicators

X3. Online Lecturer												
	Do lecturers provide		Very guiding	Guidin g	Quite guiding	Less guiding	Not guidin g	Tot al	Av era ge			
	7 online guidance	f	22	56	20	6	0	10 4	3,9			
	to students?	%	21%	54%	19%	6%	0%	10 0%	0			
	Are lecturers actively		Very active directin g	Active directi ng	Quite active directin g	Less aktive directin g	Not active directi ng	Tot al	Av era ge			
	o involved in directing	f	16	48	36	2	2	10 4	3,7			
	students?	%	15%	46%	35%	2%	2%	10 0%	1			
	Do lecturers provide additional knowledge online?		Always given additon al knowle dge	Given additio nal knowle dge	Quite given addition al knowle dge	Less given additon al knowle dge	Not given addito nal knowl edge	Tot al	Av era ge			
		f	22	44	28	8	2	10 4	3,7			
_		%	21%	42%	27%	8%	2%	10 0%	3			
				Avera	ge				3,7 8			

Table 4 show that respondents' answers for indicators of lecturers providing online guidance to students (54%), lecturers are actively involved in directing students (46%), and lecturers provide additional knowledge online (44%). Overall, the average score for the online Lecturer indicator is 3.78. This value is in the interval 3.40 - 4.20 which indicates that the respondents stated that the implementation of E-Learning in the Online Lecturer indicator was declared Good.

## Table 5

Distribution of Respondents' Answers to Collaborating Indicators											
X4. Collaboration											
	Do students get messenger		Always interact with lecturer	Interac twith lecture r	Quite interact with lecturer	Less interact with lecturer	Not interact with lecturer	Tot al	Ave rag e		
1	sokftware	f	16	46	26	12	4	104			
0	support in interacting with lecturers in real time?	%	15%	44%	25%	12%	4%	100 %	3,5 6		
	Do students get messenger		Always interact with student	Interac t with student	Quite interact with student	Less interact with student	Not interact with student	Tot al	Ave rag e		
	software	f	26	40	24	12	2	104			
1	support that makes it easy for students to interact with other students in real time?	%	25%	38%	23%	12%	2%	100 %	3,7 3		
	Average										

Table 5 show that respondents' answers for students get messenger software support in interacting with lecturers in real time (44%), messenger software support makes it easier for students to interact with other students in real time (38%). Overall, the average score for the Cooperating indicator was 3.64. This value is in the interval 3.40 - 4.20 which indicates that the respondents stated that the Implementation of E-Learning in the Cooperation indicator was declared Good.

	Distribution of Respondents' Answers to Multimedia Indicators											
	X5. Multimedia											
1 2	Are students provided with video		Alway s provid ed video media	Provide d video media	Quite provide d video media	Less provided video media	Not provide d video media	To tal	Av era ge			
	learning media?	f	12	24	32	24	12	10 4	3,0			
		%	12%	23%	31%	23%	12%	10 0%	0			
1	Are		Alway	Provide	Quite	Less	Not	То	Av			
3	student		S	d audio	provide	provided	provide	tal	era			
	provided		provid	media	d audio	audio	d audio		ge			

Table 6 Distribution of Respondents' Answers to Multimedia Indicators

	with audio		ed audio media		media	media	media			
	learning media?	f	14	20	26	30	14	10 4	2,9	
	%	13%	19%	25%	29%	13%	10 0%	0		
1 4	Are students provided learning media in the form		Alway s provid ed online simulat ion	Provide d online simulat ion	Quite online provide d simulat ion	Less provided online simulatio n	Not provide d online simulati oan	To tal	Av era ge	
	of online simulation	f	16	26	38	18	6	10 4	3,2	
	s?	%	15%	25%	37%	17%	6%	10 0%	7	
Average										

Table 6 show that respondents' answers for the availability of learning media in the form of video (31%), for learning media in the form of audio (29%) and for the availability of learning media in the form of online simulations (37%). Overall, the average score for the Multimedia indicator is 3.06. This value is in the interval 2.60 - 3.40 which indicates that the respondents stated that the implementation of E-Learning in the Multimedia indicator was declared quite good.

From the five indicators above, the following is a summary of respondents' responses regarding the E-Learning variable.

ation of Respondents Responses About E-Learning (Va					
	Average	Interpretas			
Indicator	Value	ion			
X1. Study material &					
Evaluation	3,72	Good			
X2. Community	3,45	Good			
X3. Online lecturer	3,78	Good			
X4. Collaboration	3,64	Good			
		Pretty			
X5. Multimedia	3,06	Good			
E-Learning variable					
average	3,53	Good			

Table 7
Recapitulation of Respondents' Responses About E-Learning (Variable X)

Overall, the average score for the E-Learning variable is 3.53. This value is in the interval 3.40 - 4.20 which indicates that the respondents stated that the implementation of E-Learning was declared Good. The highest indicator score was achieved by the Online Lecturer indicator (3.78; Good) while the lowest indicator score was achieved by the Multimedia indicator (3.06; Fairly Good).

# Learning Motivation Variable (Y)

The results of the descriptive analysis present the distribution of respondents' answers to each statement submitted for Variable Y (Learning Motivation) which is represented by 6 statements, each of which represents one indicator, with the following results

	Y. Learning Motivation								
Do student have the desire to online		Always desire	Desire	Quite desire	Less desire	Not desire	To tal	A ve ra ge	
	f	14	18	32	24	16	10 4	2,	
	lecturer?	%	13%	17%	31%	23%	15%	10 0 %	9 0
1	Do student have the drive and need		Always have the drive and need for online learning	Have the drive and need for online learning g	Quite have the drive and need for online learning	Less have the drive and need for online learning	Not have the drive and need for online learning	To tal	A ve ra ge
complete online lecturer ?	online	f	24	38	32	10	0	10 4	3,
	lecturer ?	%	23%	37%	31%	10%	0%	10 0 %	7 3
Do student have hope in attanding		Always have hope in attandin g online lecturer	Have hope in attandin g online lecturer	Quite have hope in attanding online lecturer	Less have hope in attandin g online lecturer	Not have hope in attandin g online lecturer	To tal	A ve ra ge	
7	online lecturer?	f	24	28	34	12	6	10 4	3,
		%	23%	27%	33%	12%	6%	10 0 %	5 0
1 8	Do student get award for their attention to lecturer?	f	Always get award for their attention to lecture 12	Get award for their attention to lecture 34	Quite get award for their attention to lecture	Less get award for their attentio n to lecture 20	Not get award for their attention to lecture 8	To tal	A ve ra ge
		1	12	01	50	20	0	4	2

	Tat	ole 8				
Distribution of Respondents'	Answers	to Lear	ming Moti	vation V	<sup>7</sup> ariables (	(Y)
<b>T</b> 7 <b>T</b>						

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		%	12%	33%	29%	19%	8%	10 0 %	1
1 9	Do students find intersting activities during		Always find interstin g activitie s during online lectures	Find interstin g activitie s during online lectures	Quite find interstin g activities during online lectures	Less find interstin g activitie s during online lectures	Not find interstin g activities during online lectures	To tal	A ve ra ge
	online lectures?	f	12	24	34	22	12	10 4	3,
		%	12%	23%	33%	21%	12%	10 0 %	0 2
2 0	Do students still get a conducive learning environmen t during online		Always get a conduci ve learning environ ment during online lectures	Get a conduci ve learning environ ment during online lectures	Quite get a conduciv e learning environ ment during online lectures	Less get a conduci ve learning environ ment during online lectures	Not get a conduci ve learning environ ment during online lectures	To tal	A ve ra ge
	lectures?	f	16	20	36	18	14	10 4	3,
		%	15%	19%	35%	17%	13%	10 0 %	0 6
Average							3, 2 4		

Table 8 show that respondents' answers for indicators of having a desire and desire for online lectures (32%) availability of learning media in the form of audio (29%), having hope in attending online lectures (33%), getting awards for their attention to lectures (33%), to get interesting activities during online lectures (33%) and to get a conducive learning environment during online lectures (35%).

Of the five indicators above, the following is a summary of respondents' responses regarding the E-Learning variable

Table 9
Recapitulation of Respondents' Responses About Learning Motivation
(Variable V)

Indicator	Average Value	Interpreta tion
		Pretty
Y1. Desire to online lecturer	2,90	good
Y2. Drive and need complete	3,73	Good

online lecturer		
Y3. Hope in attanding online		
lecturer	3,50	Good
Y4. Award for their attention to		Pretty
lecturer	3,21	good
Y5. Intersting activities during		Pretty
online lectures	3,02	good
Y6. Conducive learning		
environment during online		Pretty
lectures	3,06	good
Average variables of learning		Pretty
motivation	3,24	good

Table 9 show that the overall average score for the Learning Motivation variable is 3.24. This value is in the interval 2.60 – 3.40 which indicates that the respondents stated that the Learning Motivation is categorized as Good Enough. The highest indicator score was achieved by the Encouragement indicator to complete online lectures (3.73; Good) while the lowest indicator score was achieved by the online college desire indicator (2.90; Fairly Good).

#### Structural Equation Modeling (SEM) Analysis

Structural Equation Modeling (SEM) analysis in this study was used to determine the effect of E-Learning on Learning Motivation, using SmartPLS 3.3.3 software. There are two main stages in SEM analysis with SmartPLS, namely the analysis of the outer model and the analysis of the inner model which will be described as follows.

#### **Testing the Measurement Model (Outer Model)**

In the analysis phase of the measurement model (outer model), there are two things to be analyzed, namely validity analysis (Convergent Validity, Discriminant Validity) and reliability analysis (Cronbach's Alpha, and Composite Reliability). The following presents the results of data processing using the SmartPLS application which can explain the analysis of the measurement model (outer model).



Figure 1 Measurement Model Source: Data that has been processed

## **Description:**

- X1. Study material & Evaluation
- X<sub>2</sub>. Community
- X<sub>3</sub>. Online lecturer
- X<sub>4</sub>. Collaboration
- X<sub>5</sub>. Multimedia

- Y<sub>1</sub>. Desire to online lecturer
- Y<sub>2</sub>. Drive and need complete online lecturer
- Y<sub>3</sub>. Hope in attanding online lecturer
- Y<sub>4</sub>. Award for their attention to lecturer
- Y<sub>5</sub>. Intersting activities during online lectures
- Y<sub>6</sub>. Conducive learning environment during online lectures

## **Convergent Validity**

Validity testing is carried out to determine whether the measuring instrument used can perform its function properly. Validity describes a measure that can accurately describe the concept to be measured. To measure the validity in SmartPLS, it can be seen in the value of the loading factor for each dimension and for each variable seen from the results of Convergent Validity, which dimensions and variables are considered valid if they have a correlation value of more than 0.7. However, for research in the early stages of developing a measurement scale, the loading factor > 1.96 then an indicator is declared valid. The results of testing the loading factor and convergent validity are presented in the table 10:

Latent Variable	Indicat or	Loading Factor	t coun t	Descript ion
	X.1	0,774	13,51 9	Valid
	X.2	0,813	21,57 2	Valid
X. E-Learning	X.3	0,889	33,53 8	Valid
	X.4	0,772	13,83 1	Valid
	X.5	0,763	16,30 0	Valid
	Y.1	0,798	18,12 0	Valid
	Y.2	0,798	23,41 6	Valid
Y. Motivasi	Y.3	0,851	32,24 5	Valid
Belajar	Y.4	0,821	20,19 9	Valid
	Y.5	0,770	15,68 4	Valid
	Y.6	0,837	23,85 9	Valid

 Table 10

 Convergent Validity Test Results / Outer Loading

Source: Data that has been processed

The loading factor value above shows the magnitude of the relationship between each latent variable to each of its dimensions. The loading factor value can be seen directly in the output outer setting on the results of the SmartPLS algorithm. Based on the results of the convergent validity test, it is stated that all indicators are valid because they have a loading factor value that has exceeded the minimum standard of 0.5 and produces a t-count that exceeds the critical point of 1.96 so that all indicators are declared valid and can be continued to the next analysis stage.

Table 11

Average Variance Extracted (Convergent Validity) Test Results

Variabel Latent	AVE
X. E-Learning	0,64 6
Y. Motivasi Belajar	0,66 1

Source: Data that has been processed

The second Convergent Validity measure is the Average Variance Extracted (AVE) value, the variable is declared valid if the AVE value exceeds 0.5. Based on the results of the AVE above, it can be concluded that the two latent variable constructs have good validity (AVE > 0.5) which means that the information in each latent variable can be reflected through its manifest variable (indicator).

Table 12. Cross Loading Dimension Test Results (Discriminant Validity)

Indicato r	X. E- Learning	Y. Learning Motivation
X.1	0,774	0,667
X.2	0,813	0,661
X.3	0,889	0,585
X.4	0,772	0,488
X.5	0,763	0,698
Y.1	0,557	0,798
Y.2	0,705	0,798
Y.3	0,634	0,851
Y.4	0,637	0,821
Y.5	0,612	0,770
Y.6	0,664	0,837

Source: Data that has been processed

The cross loading value is obtained by comparing the magnitude of the relationship of each dimension to the variable, or as reflected by the factor loading value, with the magnitude of the relationship of each dimension to other variables. To get valid results, the magnitude of the relationship of each dimension to the variable must be greater than the relationship of each dimension to other variables. Based on the cross loading table, the results show that the factor loading of each dimension on the latent variable is proven to be greater than the relationship to the other latent variables so that it can be concluded that discriminant validity is met.

#### Crobach's Alpha & Composite Reliability

After the validity test is met, the next step will be to test the reliability of the measurement model by taking into account two criteria, namely Cronbach's Alpha & Composite Reliability obtained by looking at the output overview on the results of the SmartPLS algorithm. The recommended value to meet the reliability of the measurement structure is above 0.700. The following are the results of Cronbach's Apha & Composite Reliability test on each research variable

Table 13 Cronbach's Alpha & Composite Reliability . Test Results (Discriminant Validity)								
Latent Variable	Latent Cronba Composi Ch's Reliabili Value Descripti Alpha							

X. E-Learning	0,862	0,866	> 0,700	Reliabel
Y. Motivasi Belajar	0,897	0,899	> 0,700	Reliabel
DCiajai				

Source: Data that has been processed

Table 13 shows that the results of Cronbach's Alpha & Composite Reliability test are declared reliable where all variables have values exceeding the recommended values, this shows that the measurement model has good reliability. Based on the test results above, it can be stated that the measurement model is valid and reliable so that it meets the requirements for further analysis (inner model and hypothesis testing).

#### Structural Model Testing (Structural Model / Inner Model)

In the analysis stage of the structural model (inner model), there are two things that become testing tools, namely the R-square (R2) analysis, Goodness of Fit (GoF) and t-statistical tests to test the partial hypotheses obtained using Bootstraping calculations on the SmartPLS application.

#### **R-square (R2) analysis**

R-square (R2) analysis was carried out on each endogenous latent variable which showed the magnitude of the influence received by the endogenous latent variable from each exogenous variable that contributed to it. The greater the value of R2 indicates the greater the influence received by the endogenous variable

Analysi	Table 14 is of R-square (R2) on Endogenous Variables			
	Endogen Variable	R Square		
	Y. Learning Variable	0,616		

Source: Data that has been processed

Table 14 show that the variable of Learning Motivation (Y) is influenced by E-Learning (X) of R2 = 61.6%.

#### Goodness of Fit (GOF)

To test the overall model quality, Goodness of Fit is used. The calculation results are as follows:

$$GoF = \sqrt{AVE \times R^2}$$

$$GoF = \sqrt{0,654 \times 0,616}$$
  
 $GoF = 0,634$ 

The classification of GoF values is 0.1 (GoF) small/low, 0.25 (GoF) moderate and 0.36 (GoF) large. Based on the above calculations, the model in this study has a GoF value of 0.634.

This value proves that this research model has a large (good) performance of the measurement model and structural model.

## **Hypothesis Testing**

Hypothesis testing is used to test the presence or absence of the influence of the independent variable on the dependent variable. In SmartPLS to test the significance of the path coefficient using bootstrap with a significance level of 5%. The results of the calculations to test the hypothesis are presented in the following figures and tables:



Figure 2 Calculated T Value (Inner Model)

			Н	Table 16. ypothesis Te	sting		
Ну	vpothesi s	Orignial Sample (O)	Sample Mean (M)	Standar d Deviatio n (STDEV )	T Statistics ( O/STDEV  )	p- value	Conclutio n
Х	Y	0,785	0,795	0,049	15,996	0,000	Tolak H <sub>0</sub>
			6 D			.1.0	DI 6 0 0 0 (0)

Source: Data that has been processed with SmartPLS 3.3.3 (2021)

Description

X : E-Learning

Y : Learning Motivation

The interpretation of the process and results of testing the hypothesis above is as follows:

# Hypothesis

H<sub>0</sub>: E-Learning has no effect on Learning Motivation

H<sub>a:</sub>E-Learning has an effect on Learning Motivation

The results of the analysis using SmartPLS 3.3.3 that with a significance level of 5% can be seen from the original sample value of 0.785 (positive). The resulting statistical T value of 15.996 is greater than the t-table value (1.960) and the P-value 0.000 <0.05. Thus, the results of testing the hypothesis are H0 is rejected and Ha is accepted, meaning that E-Learning is proven to have a significant effect on Learning Motivation.

# Conclusion

The covid pandemic has changed the face-to-face learning process to face-to-face. It's not an easy thing to change habits that have been ingrained for so long, so collaboration from all components is needed to find the ideal learning method. The results showed that e-learning had an effect on learning motivation. The dimensions of learning materials, learning communities, online lecturers, learning together and multimedia are in good criteria for the e-learning variable. This shows that all e-learning components are met. As for the variables of learning motivation represented by the dimensions of desire for online lectures, encouragement to complete online lectures, expectations of attending online lectures, awards in lectures, interesting activities during online lectures and a conducive environment, the criteria are quite good. From the results of the study, it can be said that in conducting online lectures, more efforts are needed to motivate students so that learning provides optimal results

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