Analysis of the Influence of Distance Learning Through *E-Learning* and Digital Technology Literacy Ability on Student Learning Achievement with Self-Efficacy Mediation

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ABSTRACT: This study aims to analyze the effect of distance learning through e-learning and digital technology literacy skills on student achievement by mediating self-efficacy. This study used explanatory research with a total sample of 106 STMIK Bina Patria students. Sampling was carried out using a simple random sampling method. The data analysis technique for testing the hypothesis uses path analysis to see the direct and indirect effects of distance learning variables using e-learning, digital literacy, and self-efficacy as mediators on learning achievement. The results of this study are: (1) Utilization of e-learning (X1) has no effect on student self-efficacy (M); (2) Digital literacy (X2) has a positive and significant effect on student self-efficacy (M); (3) Utilization_of e-learning (X1) has a positive and significant effect on learning achievement in practicum courses (Y); (4) Digital literacy (X2) has no effect on learning achievement in practicum courses (Y); (5) student self-efficacy (M) has a positive and significant effect on learning achievement in practicum courses (Y); (6) Based on the Sobel test, the t count > 1.96 is obtained, which means that the variable student self-efficacy (M) mediates the utilization of e-learning (X1) and digital literacy (X2) on learning achievement in practicum courses (Y) ; (7) Based on the Sobel test, the t count > 1.96 is obtained, which means that Student Self Efficacy (M) mediates the influence of Digital Literacy*Directing* (X2) terhadap Learning Achievement in Practicum courses (Y).

KEYWORDS: e Learning, Digital Literacy, Learning Achievement, Self Efficacy -

INTRODUCTION

For centuries, lecturing is the most commonly resorted teaching practice under the traditional mode of education. To increase the competency level of the teachers many academic and training institutions organize teacher training programs. Teacher training in all fields generally includes advanced digital competency for teaching to develop skills of the teachers on Information and Communication Technology (ICT). Therefore, these topics should be part of both the foundation training of teachers and in-service training. The training should consider aspects of using ICT both as a learning tool within subject teaching and as a tool used by learners for their coursework. Thus, there is a need to develop a systematic strategy for personnel training and updating skills regularly and also provide support services and networks for teachers, embedding digital tools in the institutional learning environment (Ala-Mutka, Punie & Redecker, 2008).

The industrial revolution 4.0 has encouraged various work sectors to create and innovate, including the world of education. Creations and innovations that can be implemented in the implementation of learning in tertiary institutions are distance learning through a learning approach *online (e-learning)*. E-learning is a transformation of the conventional learning process into a digital form. This change is not limited to the content or material content, but also the system. Approach learning *online (e-learning)* is believed to be able to encourage tertiary institutions to improve services and improve the learning process more flexibly. This is because, with e-learning, the learning process is no longer limited by time, distance, geographical conditions, and the presence of students in the classroom.

Distance education has evolved from early correspondence education using primarily print-based materials (offline mode) into a worldwide movement using various technologies. It is fast becoming an acceptable and indispensable part of the mainstream educational systems in both developed and developing countries. Online learning is one of the fastest-growing trends in the application of education. Online learners are often more willing to try things out in a dynamic way than they would be face-to-face. One class of online learning models uses asynchronous communication tools (e.g., e-mail, threaded discussion boards, newsgroups) to allow users to contribute at their convenience. Synchronous technologies (e.g., webcasting, chat rooms, desktop,

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and audio/video technology) are used to approximate face-to-face teaching strategies such as delivering lectures and holding meetings with groups of learners (Means, et.al, 2009). E-learning increases return on investment because users are dividing the fixed production costs. E-learning enhances savings through decreased travel, reduced material, and improved performance (Bora & Ahmed, 2013). E-Learning solutions have been adopted for around ten years (Hegazy. et.al, 2015), and since then, new technologies have been introduced to create a much more tailored experience for students learning. Augmented reality is a major example, where an interactive experience of real-life environments is enhanced and modified by computer-generated information, which includes visual, haptic, auditory, and other aspects to create an interactive and easier way to perceive knowledge (Mualla, 2019).Every student has the main task of learning and developing themselves. Every student is expected to have good learning management, although, in reality, not all students have good learning management. Learning outcomes or student achievement can be influenced by the ability to manage each student's learning. The level of self-efficacy of students greatly affects the size of the effort they make in carrying out activities, how long a student can survive facing the challenges (difficulties) they face, and how flexible a student can be in dealing with something that is not according to their wishes. Students who have a high level of self-efficacy will be better able to face and complete their academic assignments with confidence. This is because the motivation and energy levels they have are higher than those of students who have low levels of self-efficacy. Students who have low levels of self-efficacy are generally less persistent in the academic process, easily discouraged, and prefer to avoid assignments.

LITERATURE REVIEW

1. Self-Efficacy

Bandura (1997: 3) defines self-efficacy as an individual's perception of his or her ability to perform the expected action. Individuals who have high self-efficacy will choose to do more effort and be more persistent. Self-efficacy has an important role in setting one's motivation. Someone believes in his ability to have high motivation and try to succeed. According to Bandura quoted from Baron and Byrne (2003), states that self-efficacy is a person's evaluation of his ability or competition to perform a task, achieve goals or overcome obstacles. Meanwhile, Luthans (2008: 202) defines self-efficacy as individual beliefs or beliefs about their ability to drive motivation, cognitive resources, and ways of acting needed to successfully carry out tasks in certain contexts. Skills and leadership and mental maturity are also needed here. Bandura (1997: 42-43) also explains that self-efficacy consists of 3 dimensions, namely magnitude or level, generality, and strength.

The experience of solving problems holds a very significant influence in shaping an individual's self-efficacy. Success or success received by an individual in dealing with a problem in his life will build positive feelings toward the individual, while failure will undermine the individual's self-confidence, especially when self-efficacy has not been strongly formed in the individual (Bandura, 1997: 79). Success and success that are always easily obtained by an individual will give a tendency for that individual to expect quick results and be easily weakened because of an obstacle or failure. The experience of an individual in facing obstacles with persistent and diligent effort is needed to form a strong belief. Business success requires the hard work of an individual in dealing with failures and obstacles. An individual will always try to rise from failure after the individual is given the belief that the individual has something to achieve success and success. Feist & Feist (2008: 416) explain the high and low levels of self-efficacy combined with a supportive and unsupportive environment. With high self-efficacy and a supportive environment, the most predictable outcome is success. With low self-efficacy and a supportive environment, humans can become depressed when they observe others completing tasks they find difficult. High self-efficacy meets an unsupportive environment, humans will usually try hard to change the environment. Low self-efficacy combined with an unsupportive environment, humans will feel apathetic, give up easily, and feel helpless.

2. E-learning

According to Allen and Seaman (2013), e-learning is learning that is structured to use an electronic or computer system so that it can support the learning process. E-learning (electronic learning) can also be said to be one aspect of the application of information and communication technology in the world of education in the delivery of learning content or electronic learning experiences using computers and computer-based media. E-learning is also defined as learning that is structured to use an electronic or computer system so that it can support the learning process (Michael, 2013). Meanwhile, Ardiansyah (2013) defines e-learning learning as a learning system that is used as a means for the teaching and learning process which is carried out without having to meet face to face directly between teachers and students.

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3. Learning Achievement

Learning achievement cannot be separated from learning activities. Learning is a process while learning achievement is the result of the learning process. Tu'u (2004: 65) states that learning achievement is mastery of knowledge or skills developed by subjects, usually indicated by test scores or scores given by the teacher. According to Syah (2010: 144) learning achievement is a level in a program, so learning achievement is a person's real ability as a result of carrying out certain business activities and the results can be measured.

4. Digital Literacy

Tang and Chaw (2016) state that digital literacy is a prerequisite skill that must be possessed by individuals to be able to learn effectively in distance learning. Blayone (2018) also explains that digital competence is a determining factor in individual readiness to learn in distance learning.

RESEARCH METHOD

In this study, researchers used this type of research *Eksplanatory Research*. According to Singarimbun (2006). "*Ekspalanatory Research*" is research that explains the causal relationship between research variables through hypothesis testing that has been formulated previously. Researchers took samples from the student population of STMIK Bina Patria Magelang. The research sample taken was 106 students. How to determine the sample in this study using *methods of simple random sampling* by collecting the necessary data from questionnaires that have been filled out online. The reason for using online data collection is that it is more time efficient because it can be done during the time of the respondent's activities and makes it easier for the respondent to fill in the data because it can be done whenever and wherever the respondent is active. The number of samples taken consisted of 5 students (4.7%) from the Informatics Management study program, 50 students (47.2%) from the Information Systems study program, and 51 students (48.1%) from the Informatics Engineering study program. In terms of gender, the sample consisted of 61 students (57.5%) male and 45 students (42.5%) female.

Data analysis techniques in hypothesis testing use path analysis (*path analysis*) because, between the independent variables and the dependent variable, there is a mediating effect. The purpose of path analysis is to see the direct and indirect effects of distance learning variables using e-learning, digital literacy, and self-efficacy on learning achievement. The equation model in this study is as follows:
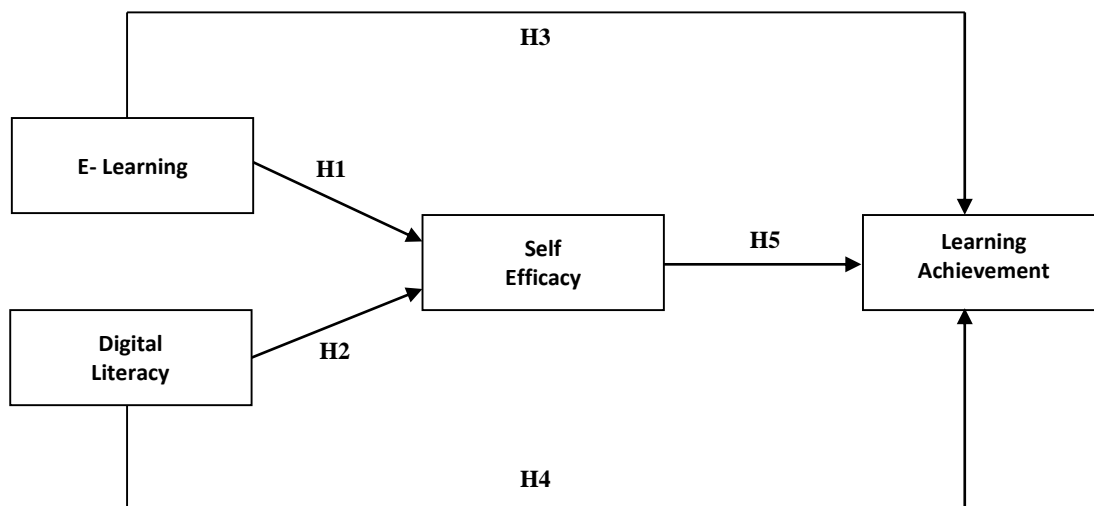

Figure 1. Research Model

$$M = b_1 X_1 + b_2 X_2 + e_1$$
$$Y = b_3 X_1 + b_4 X_2 + b_5 M + e_2$$

Information :

X_1 = E-Learning

X_2 = Digital Literacy

b_1 = Path coefficient X_1 to M

b_2 = Path coefficient X_2 to M

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b3 = Path coefficient X1 to Y
b4 = Path coefficient X2 to Y
b5 = Path coefficient M to Y
e1 = error structure 1
e2 = error structure 2

The hypothesis of this study includes the following:

H1: There is a direct influence of distance learning by using e-learning against self-efficacy.
H2: There is a direct influence on Digital literacy self-efficacy.
H3: There is a direct effect of distance learning using e-learning on learning achievement.
H4: There is a direct influence of digital literacy on learning achievement.
H5: There is a direct influence of self-efficacy on learning achievement.
H6: There is an indirect influence of distance learning by using e-learning on learning achievement with self-efficacy as a mediating variable.
H7: There is an indirect effect of digital literacy on learning achievement with self-efficacy as a mediating variable.

Variable Operational Definitions

Independent Variable (Independent Variable (X)).

An Independent variable (Independent Variable) is a variable that influences or causes changes in the emergence of the dependent variable. In this study, the independent variable is distance learning using e-learning (X1) dan digital literacy(X2).

Variabel Intervening (M)

Other variables are variables *intervening in* the type of variables that affect the relationship between the independent variables and the dependent variables to be an indirect relationship. The intervening variable in this study is self-efficacy (M)

Dependent Variable (Dependent Variable (Y))

The dependent variable is the variable that is affected or is the result, because of the independent variables (Sugiyono, 2008). The dependent variable in this study is learning achievement.

RESEARCH RESULTS AND DISCUSSION

1. Multiple Linear Regression Analysis Equation 1

Table 1. Results Of Equation Data Analysis 1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,013	,334		3,032	,003		
	Utilization_of_eLearning	,164	,088	,186	1,860	,066	,602	1,662
	Digital_Literacy	,480	,099	,483	4,832	,000	,602	1,662

a. Dependent Variable: Student_Self_Efficacy

Based on the results of data analysis that has been carried out by calculation, then based on the results of the t-test Utilization of eLearning in Table 1. shows the results of the t-test with $t_{(0.05; 103)}$, obtained some 1.983 (t table). Test the significance of the regression coefficient with the t-test obtained t count = 1.860 (1.860 <1.983) then t count <t table with a significance of 0.066. Because the significance value obtained exceeds 0.05 and shows that the calculated t value is smaller than the t table, the t value obtained is not significant, this means that the utilization of the e-learning variable (X1) does not affect student self-efficacy (M) student of STMIK Bina Patria Magelang.

For the calculation of digital literacy t-test results in Table 1. shows the results of the t-test with $t_{(0.05; 103)}$, obtained some 1.983 (t table). Test the significance of the regression coefficient with the t-test obtained t count = 4.832 (4.832 > 1.983) then t count > t table with a significance of 0.000. Because the significance value obtained is less than 0.05 and indicates that the calculated t value is greater than the t table, the t value obtained has a positive and significant effect, this means that the digital literacy variable (X2) has a positive and significant effect on student self-efficacy (M) students of STMIK Bina Patria Magelang.

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Table 2. Regression Data Analysis Results From Equation 1

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,617[a]	,381	,369	,47144	,381	31,701	2	103	,000	1,550

a. Predictors: (Constant), Digital_Literacy, Utilization_of_eLearning

b. Dependent Variable: Student_Self_Efficacy

Based on the results of Table 2. the first regression equation is obtained as follows:

Student self-efficacy = 1.013 + 0.164 utilization of e-learning + 0.480 digital literacy + e. The result of the coefficient of determination (R^2) is based on the results of Table 2. A value of 0.381 (38.1%) is obtained, meaning that the contribution of the utilization of e-learning and digital literacy variables as independent variables can explain variations in changes in the student self-efficacy variable as the dependent variable of 38.1%.

Table 3. F-Test Results Equation Data 1

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14,092	2	7,046	31,701	,000[b]
	Residual	22,892	103	,222		
	Total	36,984	105			

a. Dependent Variable: Student_Self_Efficacy

b. Predictors: (Constant), Digital_Literacy, Utilization_of_eLearning

Table 3 shows the results of the F test of 31.701 with F table = 3.08, then F count > F table so that it can be concluded that the model accuracy test on the utilization of e-learning and digital literacy variables has an effect on student self-efficacy in STMIK Bina Patria Magelang students.

2. **Multiple Linear Regression Analysis Equation 2**

Table 5. Results Of Regression Data Analysis Equation 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,007	,282		-,023	,981		
	Utilization_of_eLearning	,209	,072	,215	2,885	,005	,582	1,718
	Digital_Literacy	,029	,089	,026	,320	,749	,490	2,039
	Student_Self_Efficacy	,741	,080	,672	9,287	,000	,619	1,616

a. Dependent Variable: Learning_Achievement_in_Practicum_courses

Table 5. Results Of Regression Data Analysis Equation 2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,818[a]	,669	,659	,38154	,669	68,768	3	102	,000	2,163

a. Predictors: (Constant), Student_Self_Efficacy, Utilization_of_eLearning, Digital_Literacy

b. Dependent Variable: Learning_Achievement_in_Practicum_courses

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Based on the results of Table 4. the first regression equation is obtained as follows:

Learning achievement in practicum courses = - 0,007 + 0,209 utilization of e-learning + 0,029 digital literacy + 0,741 student self-efficacy + e. The result of the coefficient of determination (R^2) is based on the results of Table 5. A value of 0.669 (66.9%) is obtained, meaning that the contribution of the variables utilization of e-learning, digital literacy, and student self-efficacy as independent variables can explain variations in changes in the learning achievement in practicum courses variable as the dependent variable of 66 .9%.

Table 6. F-Test Results Equation Data 2

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30,032	3	10,011	68,768	,000[b]
	Residual	14,848	102	,146		
	Total	44,880	105			

a. Dependent Variable: Learning_Achievement_in_Practicum_courses

b. Predictors: (Constant), Student_Self_Efficacy, Utilization_of_eLearning, Digital_Literacy

Table 6 shows the results of the F test of 68.768 with F table = 2.69, then F count > F table so that it can be concluded that the model accuracy test on the utilization of e-learning variable, digital literacy, student self-efficacy influences learning achievement in practicum courses students of STMIK Bina Patria Magelang. The results of this study are in line with research conducted by Suryani et.al (2020) which states that the Sig. (2– tailed) between Self-Efficacy (X1) and Learning Outcomes (Y) is 0.000 <0.05, which means that there is a significant correlation between Self-Efficacy (X1) and learning outcomes (Y). Similar results were also conveyed by Christiana (2018, 2020) who stated that academic self-efficacy is interpreted as the belief that an individual has, that he or she can achieve academic success. The same thing was conveyed by Murphy (in Johnson, 2017) who stated that academic climate and academic self-efficacy were positively correlated with student academic performance, as evidenced by some 276 students who had confidence and completed assignments as a prerequisite for taking the exam.

Based on the results of data analysis that has been carried out by calculation, then based on the results of the t-test Utilization of elearning (X1) in Table 4. shows the results of the t-test with $t_{(0.05; 102)}$, obtained some 1.984 (t table). Test the significance of the regression coefficient with the t-test obtained t count = 2.885 (2.885 > 1.984) then t count > t table with a significance of 0.005. Because the significance value obtained is less than 0.05 and indicates that the calculated t value is greater than the t table value, the t value obtained has a positive and significant effect, this means that the utilization of the e-learning variable (X1) has a positive effect and significant to learning achievement in practicum courses (Y) for STMIK Bina Patria Magelang students. However, the results of this study contradict the results of the study which concludes that the implementation of learning using *e-learning* website-based is less effective in improving student learning outcomes at STMIK Asia Malang (Islamiyah and Widayanti, 2016).

For the calculation of digital literacy t-test results (X2) Table 4. shows the results of the t-test with $t_{(0.05; 102)}$, obtained a figure of 1.984 (t table). Test the significance of the regression coefficient with the t-test obtained t count = 0.320 (0.320 <1.984) then t count < t table with a significance of 0.749. Because the significance value obtained exceeds 0.05 and shows that the t count value is smaller than the t table, the t value obtained is not significant, this means that the digital literacy variable (X2) has no effect on learning achievement in practicum courses (Y) for STMIK Bina Patria Magelang students.

For the calculation of student self-efficacy (M) t-test results in Table 4. show the results of the t-test with $t_{(0.05; 102)}$, obtained some 1.984 (t table). Test the significance of the regression coefficient with the t-test obtained t count = 9.287 (9.287 > 1.984) then t count > t table with a significance of 0.000. Because the significance value obtained is less than 0.05 and indicates that the calculated t value is greater than the t table, the t value obtained has a positive and significant effect, this means that the variable student self-efficacy (M) has a positive and significant effect on learning achievement in practicum courses (Y) for STMIK Bina Patria Magelang students. The results of this study are by research conducted by Lampert (2007) concerning the relationship between academic self-efficacy, academic self-concept, and academic achievement indicating that academic self-efficacy is a significant predictor that can be used in predicting academic achievement compared to academic self-concept.

3. Intervening Test

In this study, the goal that will be proven is the relationship between the variables of the utilization of eLearning and digital literacy with learning achievement in practicum courses through the mediation of student self-efficacy variables, therefore it is necessary to test direct and indirect effects. The step taken is to calculate the path coefficient with two regression equations, namely: a)

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Student Self Efficacy = α +*b1* Utilization of eLearning +*b2* Digital Literacy + e. b) Learning Achievement in Practicum courses = α + *b3*Utilization of eLearning + b2 Digital Literacy + *b3*Student Self Efficacy + e. The results of the calculation of the regression analysis of equations 1 and 2 can be obtained from the path analysis below:
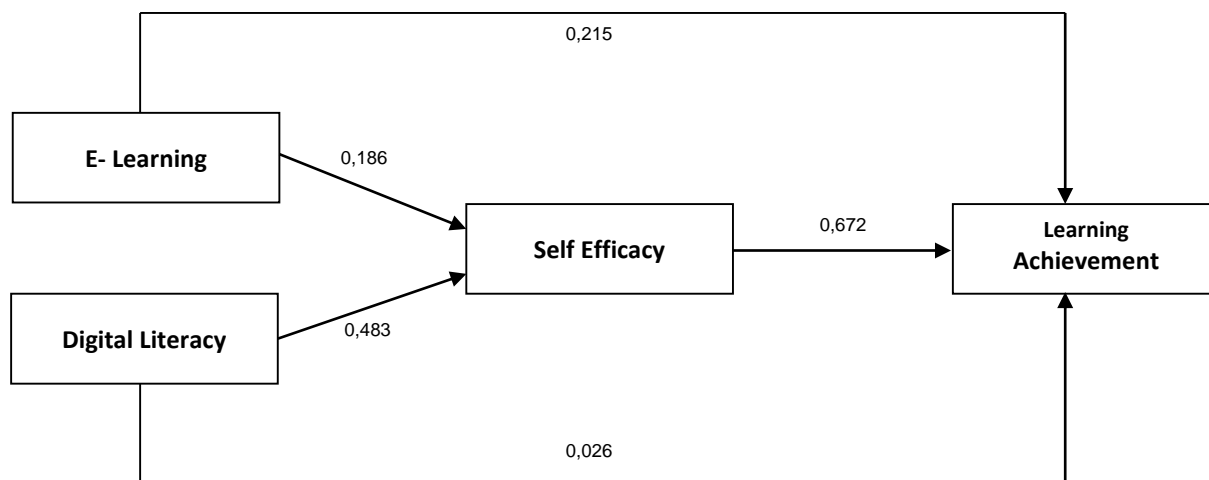

Figure 2. Intervening Test Model

Effect of X1 on Y through M:

The magnitude of the Direct Influence is 0.215

The magnitude of the indirect effect is 0.186 x 0.672 = 0.125

Total Influence = 0.215 + (0.186 x 0.672) = 0.340

Effect of X2 on Y through M:

The magnitude of the Direct Influence is 0.026

The magnitude of the indirect effect is 0.483 x 0.672 = 0.325

Total Influence Amount = 0.026 + (0.483 x 0.672) = 0.350

4. The Effect of Student_Self_Efficacy Mediation Variable (M) Mediating Utilization of eLearning Variable (X1) on Learning Achievement in Practicum Courses (Y)

Baron & Kenny (1986), stated "The mediating variable is the variable that influences the relationship between the independent variables and the dependent variable". The mediation hypothesis test was carried out with the Sobel test developed by Sobel. The Sobel test was carried out by testing the strength of the indirect effect (*indirect effect*) independent variable (X1) to the dependent variable (Y) through the mediating variable (M). Then the magnitude *standard error* indirect effect (*indirect effect*) Sat can be calculated by the Sobel formula *test* as follows :

$Sab= \sqrt{b^2Sa^2 + a^2Sb^2 + Sa^2Sb^2}$

Based on the beta value and standard error in Table 1 *Coefficient* Utilization of eLearning *directing* (X1) on Student Self Efficacy (M), and Table 4*Coefficient* Student Self Efficacy (M) on Learning Achievement in Practicum Courses (Y), obtained beta values and standard errors for each Utilization of eLearning variable*Directing* (X1) and Student Self Efficacy (M) as follows:

= 0,186 : Coefficient*direct effect* variabel Utilization of eLearning *Directing* (X1) on the mediating variable Student Self Efficacy (M);

= 0,672 : Coefficient*direct effect* variabel mediasi Student Self Efficacy (M) terhadap variabel dependen Learning Achievement in Practicum Courses (Y).

= 0,088 : *Standard Error* from a.

= 0,080 : *Standard Error* from b.

By entering the values a,b. Sa, and Sb in the Sobel equation above, the value of Sab = 0.061 is obtained. To obtain the calculated t value of the indirect effect of the Utilization of eLearning variable*Directing* (X1) which is mediated by the variable Student Self Efficacy (M) on Learning Achievement in Practicum Courses (Y) using the equation t count = ab / Sab. By entering the values of a, b, and Sab above, the value of t count = is obtained at 2.049. t count value (2.049) is greater (>) than 1.96 so it can be concluded that student self-efficacy (M) mediates the effect of utilization of e-learning *Directing* (X1) on learning achievement in practicum courses (Y). Thus the H6 hypothesis is accepted, and the data supports the model.

5.   The Effect of Mediating Student Self-Efficacy Variables (M) Mediating Digital Literacy Variables (X2) on Learning Achievement in Practicum Courses (Y)

Based on the Beta and Standard Error values in Table 1 *Coefficient* Digital Literacy *Directing* (X2) on Student Self Efficacy (M), and Table 4 *Coefficient* Student Self Efficacy (M) on Learning Achievement in Practicum courses (Y), obtained Beta and Standard Error values for each Digital Literacy variable*Directing* (X2) and Student Self Efficacy (M) as follows:

= 0,483 : Coefficient*direct effect* variabel Digital Literacy *Directing* (X2) on the mediating variable Student Self Efficacy (M);

= 0,672 : Coefficient*direct effect* variabel mediasi Student Self Efficacy (M) terhadap variabel dependen Learning Achievement in Practicum courses (Y).

=   0,099   : *Standard Error* from a.

= 0,080 : *Standard Error* from b.

By entering the values a,b. Sa, and Sb in the Sobel equation above, the value of Sab = 0.077 is obtained. To obtain the calculated t value of the indirect effect of the Utilization of eLearning variable*Directing* (X1) which is mediated by the variable Student Self Efficacy (M) on Learning Achievement in Practicum courses (Y) using the equation: t count = ab / Sat. By entering the values of a, b, and Sab above, the value of t count = is obtained at 4.218. t count value (4.218) is greater (>) than 1.96 so it can be concluded that Student Self Efficacy (M) mediates the influence of Digital Literacy *Directing* (X2) towards Learning Achievement in Practicum courses (Y). Thus the H7 hypothesis is accepted, and the data supports the model.

RESEARCH CONCLUSION

The conclusions in this study are: (1) Utilization of e-learning (X1) has no effect on student self-efficacy (M) of STMIK Bina Patria Magelang students; (2) Digital literacy (X2) has a positive and significant effect on student self-efficacy (M) of STMIK Bina Patria Magelang students; (3) Utilization_of e-learning (X1) has a positive and significant effect on learning achievement in practicum courses (Y) for STMIK Bina Patria Magelang students; (4) Digital literacy (X2) has no effect on learning achievement in practicum courses (Y) for STMIK Bina Patria Magelang students; (5) student self-efficacy (M) has a positive and significant effect on learning achievement in practicum courses (Y) for STMIK Bina Patria Magelang students; (6) Based on the Sobel test, the t count > 1.96 is obtained, which means that the variable student self-efficacy (M) mediates the utilization of e-learning (X1) and digital literacy (X2) on learning achievement in practicum courses (Y) STMIK Bina Patria Magelang students; (7) Based on the Sobel test, the t count > 1.96 is obtained, which means that Student Self Efficacy (M) mediates the influence of Digital Literacy *Directing* (X2) terhadap Learning Achievement in Practicum courses (Y).

Advice that can be given to the management of STMIK Bina Patria Magelang is that in increasing learning achievement in practicum courses, it is necessary to pay attention to good utilization of e-learning, digital literacy, and student self-efficacy because based on the results of this study, these three factors have a significant influence significant to learning achievement in practicum courses.

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