IMPACT OF E-LEARNING UTILIZATION ON STUDENT DISCIPLINE AND ITS IMPLICATIONS ON STUDENT LEARNING OUTCOMES IN KAYURUNGIN JAYA STATE SCHOOL

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Abstract.

The purpose of this study was to determine the impact of using e-Learning on student discipline and its implications for student learning outcomes at the Kayuringin Jaya State Elementary School. This research method uses descriptive and verification analysis with a quantitative approach. The source of this research uses primary data. This research data collection using a questionnaire. The sample of this study was 40 students at the Kayuringin Jaya State Dasae School using a simple random sampling technique. Data analysis was carried out by descriptive analysis and path analysis. The results of this study indicate that there is a positive and significant effect between the use of e-Learning on student discipline, where the variable of the use of e-Learning has a total effect of 69.2% on student discipline. There is a positive and significant influence between the use of e-Learning and student discipline on learning outcomes, where the use of e-Learning has a total effect of 26.2% while student discipline has a total effect of 51.7% on student learning outcomes. Based on the results of the Sobel test, it was found that there was an effect of using e-Learning on learning outcomes through student discipline at the Kayuringin Jaya State Elementary School, where the indirect effect of using e-Learning on learning outcomes through Student Discipline was 15.9%.

Keywords: Utilization of e-Learning, Discipline, Learning Outcomes

Introduction

Education is a very important part of human life. The world of education is also required to make a real contribution in an effort to improve the progress of the natio[1]. In order for these goals to be realized, serious and continuous efforts are needed from every element involved in education. Education also plays an important role in every dimension of life, both in determining one's position, economic level, and social status. The success of education carried out in Indonesia will determine the quality of Indonesian people in the future. Therefore, education must always be improved, both in terms of quality and quantity. Various efforts have been made to improve the quality of national education, either by developing curriculum, increasing teacher competence, procuring books and learning tools, educational facilities and improving school management.

Magen [2] explains education is a process in order to influence students to be able to adapt as best they can to their environment and thus will cause changes in themselves. Teaching is tasked with directing this process so that the goals of the change can be achieved as desired. The main problem faced by the world of education is the low student learning outcomes. This is a correction for the performance of the world of education.

The success of a student after carrying out the learning process can be seen from student learning outcomes. The achievement has a very important function in the world of education. According to Bourner [3] learning outcomes in principle, the disclosure of ideal learning

outcomes includes all psychological domains that change as a result of students' experiences and learning processes. Basically, learning outcomes are a reflection of the results of the efforts and abilities of a student in the teaching and learning process. Student learning outcomes can be seen from reports of learning outcomes expressed in the form of numbers or cognitive values. The level of student learning outcomes can be influenced by the student learning process. According to Whitworth [4], the factors that influence student learning can be divided into three types, namely the first internal factors (factors from within students) namely the physical and spiritual conditions or conditions around students. The two external factors (factors from outside) are environmental conditions around students. The three factors of the learning approach (approach to learning) are the type of student learning effort which includes the strategies and methods used by students to carry out activities to study the subject matter.

The rapid development of information requires everyone to work hard in order to keep up with the times or stay silent and out of date. In the world of education, learning does not only rely on what is in the classroom but must be able to explore the various learning resources needed. According to Puspitarini, [5], teachers are required not only to utilize existing learning resources in schools (especially reading textbooks) but are required to study various learning resources, such as magazines, newspapers, and the internet. The generation facing educators now is Generation Z (generation Z). This generation was born from 1995 to 2010, a generation that was raised in the dominance of the use of information technology. According to Bartman,[6], educators and culturalists need to know the characteristics of Generation Z so as to provide an understanding of how and what motivates the lives they lead.

The pandemic condition that was sweeping the world at the beginning of 2020 has also affected the way teaching and learning have been taking place so far. The use of e-learning is becoming increasingly needed by our education world, especially during the current pandemic. Through e-learning, students can carry out the online teaching and learning process. The use of e-learning can certainly have a further impact on the realization of student discipline in the

teaching and learning process itself. If students have a strong learning ethos, then e-learning has a positive impact on student discipline in learning. The final result is expected, of course, students can obtain maximum and satisfying learning outcomes.

The problem to be studied based on the background of the problem above can be formulated as follows:

1.   How much influence does the use of e-Learning have on student discipline at the Kayurungin Jaya State Elementary School?
2.   How much influence the use of e-Learning has on student learning outcomes at the Kayurungin Jaya State Elementary School.
3.   How big is the influence of student discipline on student learning outcomes at the Kayurungin Jaya State Elementary School
4.   How much influence the use of e-Learning has on learning outcomes through student discipline at the Kayurungin Jaya State Elementary School.

LITERATURE REVIEW

A.   Utilization of E-Learning

The term e-Learning is now increasingly being used along with the increasing use of Internet technology for the delivery of learning materials. E-Learning is an abbreviation of electronic learning [7]. One general definition of e-Learning is given by Gilbert & Jones [8], namely: delivery of learning materials through electronic media such as the Internet, intranet/extranet, radio, TV, CD ROM, etc. D E-Learning is an abbreviation of electronic learning, where the teaching and learning process uses electronic media, specifically the internet as the learning system Aydin [9]. According to Sitzmann and Ely [10] *] e-Learning is not the same as conventional learning. E-Learning has the following indicators:*:

1.   Interactivity, the availability of more channels, either directly such as chat or messenger, or indirectly, such as forums, mailing lists, or guest books.
2.   Independence, flexibility in terms of providing time, place, teachers, and teaching materials. This causes learning to be more student-centered.

3.   Accessibility, learning resources become more accessible through distribution on the internet network with wider access than the distribution of learning resources in conventional learning.
4.   Enrichment, learning activities, presentation of lecture materials and training materials as enrichment, enabling the use of information technology tools such as video streaming, simulations and animations

5.   information such as video streaming, simulation and animation

B. Student Discipline

According to Dermawan [11], discipline is essentially a collection of individual and community behavior that reflects a sense of obedience, obedience, which is supported by awareness to carry out duties and obligations to achieve goals. Meanwhile, according to Keith Davis [12] discipline is defined as personal self-control to carry out everything that has been approved or accepted as a responsibility.

Marlina [13] discipline is a condition that is created and shaped through the process of a series of behaviors that show the values of obedience, obedience, loyalty, order, and attachment. According to Marina [14] the indicators of student learning discipline are: Mengatur waktu belajar dirumah

1.   Set study time at home
2.   Study hard and regularly
3.   Good attention when studying in class
4.   Self-discipline when studying in class.

C.   Learning outcomes

Learning outcomes are the most important part of learning. Furco [15] defines student learning outcomes in essence as changes in behavior as a result of learning in a broader sense covering the cognitive, affective, and psychomotor fields. Svanström [16] also mentions that learning outcomes are the result of an interaction of the act of learning and the act of teaching. From the teacher's point of view, the act of teaching ends with the process of evaluating learning outcomes. From the student's perspective, learning outcomes are the end of teaching from the peak of the learning process. According to

Sheridan,[17] there are several indicators to see student learning outcomes including;

1.   In the cognitive domain, a person can be seen from observation, memory, understanding, application, analysis, and synthesis.
2.   In the affective domain, a person can be seen from acceptance, welcome, appreciation (appreciation), internalization (deepening), and characterization (appreciation).
3.   Dalam ranah psikomotor, seseorang dapat dilihat dari keterampilan bergerak dan bertindak, kecakapan ekspresi verbal dan nonverbal.

RESEARCH METHODS

This study uses a quantitative approach. The method used by the author in this research is the descriptive verification method. Literally, descriptive research is research that intends to make a description of situations or events. While the verification method, according to Sugiyono [18] is a research question that is asking between two or more variables. The purpose of this research is to test or verify a theory rather than develop it. So in this study, it is necessary to propose a theory. Researchers determined this research as a quantitative study because the research to be conducted is to find out whether there is an effect of the use of e-Learning on Student Discipline and its impact on Learning Outcomes at the Kayurungin Jaya State Elementary School. The verification analysis method used in this study is to analyze the causal relationship between variables and test the hypothesis in this study systematically, then the analytical tool used is path analysis using SPSS 23.0 software.

The data of this study were obtained using a questionnaire/questionnaire. The population in this study were all students at the Kayurungin Jaya State Elementary School. The sample for the study was 40 students at the Kayurungin Jaya State Elementary School using a simple random sampling technique, namely a random sampling technique. With path analysis, an estimation of the causal influence between variables and the position of each variable in the path will be carried out either directly or indirectly. Significant models look based on the coefficient beta ($\square\square$) significantly to the track. The path analysis model in this study can be described in the following equation:
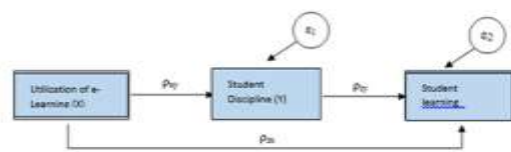
Figure 1. Structural Model

Based on the structural model path equation in the diagram above, the equation is set as follows:

Substructure 1: $Y = \rho_{y1x}X + \varepsilon_1$

Substructure 2: $Z = \rho_{zx}X + \rho_{zy}Y + \varepsilon_2$

Information :

X = Utilization of e-Learning

Y = Student Discipline

Z = Learning Outcomes

ρ_{yx} = coefficient between the lines Y and X

ρ_{zx} = The path coefficients between the variables Z and X

ρ_{zy} = Koefisien jalur antara variabel Y dan Z

ε = *Error*

Based on the path analysis is able to obtain how the direct and indirect effects. The direct effect is the effect from one independent variable to the dependent variable without going through another variable which is called the intervening variable. Basically, path analysis is a form of structured linear regression analysis that deals with standardized variables in a closed system that is formally complete. This path analysis can be viewed as a structural analysis that discusses causal relationships between variables in a closed system[19]

According to Sugiyono [20], the hypothesis is a temporary answer to the research problem formulation, where the research problem formulation has been stated in the form of questions. It is said to be temporary because the answers given are only based on theory. The hypothesis is formulated based on a framework of thought which is a temporary answer to the formulated problem. The following are the hypotheses in this study:

H₁: There is an effect of using e-Learning on student discipline

H₂: There is an effect of using e-Learning on student learning outcomes

H₃: There is an effect of using e-Learning on student learning outcomes

RESEARCH RESULT

Based on the descriptive analysis carried out, the findings of the percentage scores of each variable of e-Learning Utilization, Student Discipline, and Learning Outcomes are shown in Table 1.

Table 1. Descriptive Analysis

Variable	Indicator	Actual Score	%	Criteria
Utilization of e-Learning	Interactivity	255	63.8	Enough
	Independence	264	66.0	Enough
	Accessibility	262	65.5	Enough
	Enrichment	263	65.8	Enough
	Total Utilization of *e-Learning*	**1044**	**65.3**	**Enough**
Student Discipline	Set study time at home	267	66.8	Enough

Variable	Indicator	Actual Score	%	Criteria
	Study hard and regularly	268	67.0	Enough
	Good attention when studying in class	275	68.8	Well
	Self-discipline when studying in class	270	67.5	Enough
	Total Student Discipline	**1080**	**67.5**	**Enough**
Student learning outcomes	Cognitive	275	68.8	Well
	Affective	260	65.0	Enough
	Psychomotor	258	64.5	Enough
	Total Student Learning Outcomes	**793**	**66.1**	**Enough**

Based on the descriptive analysis above shows the variable Utilization of e-Learning, the indicator that has the highest percentage score regarding student independence with a percentage of 66.0% but there are still students who are less interactive when learning with e-Learning where the indicator has the lowest percentage of 63,8% this is because there are still students who are constrained because of internet signals, internet quotas or inadequate gadgets.

In the Student Discipline variable, the respondent's perception of good student attention when studying with e-Learning in the classroom has the highest percentage score of 68.8% but regarding managing study time at home has the lowest percentage of 66.8%. In the Learning Outcomes variable, respondents' perceptions of learning outcomes in the Cognitive domain have the highest percentage score of 68.8% but learning outcomes in the psychomotor domain have a low percentage

score of 64.5% this is due to the lack of student activity due to e-Learning learning when pandemic.

From the description above, it shows that the variables of e-Learning Utilization, Student Discipline and Learning Outcomes only show sufficient criteria. Thus the perception of students at the Kayurungin Jaya State Elementary School regarding the Utilization of e-Learning, Student Discipline, and Learning Outcomes during this pandemic is considered less than optimal.

The next analysis is verification analysis, this analysis was conducted to determine the effect of the use of e-Learning on Student Discipline and its implications on student learning outcomes at the Kayurungin Jaya State Elementary School. A series of path analysis processes include testing the assumption of normality, analysis of path coefficients and coefficients of determination, analysis of direct and indirect effects, and hypothesis testing.

Normality Assumption Test

By using SPSS 23 software , the results of the Kolmogorov-Smirnov (KS) test are as follows:

Table 2. Kolmogorov Smirnov Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual	Unstandardized Residual
N		40	40
Normal Parameters[a,b]	Mean	.0000000	.0000000
	Std. Deviation	2.10422505	3.38852601
Most Extreme Differences	Absolute	.103	.133
	Positive	.103	.133
	Negative	-.058	-.089
Test Statistic		.103	.133
Asymp. Sig. (2-tailed)		.200[c,d]	.072[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

From the results of the Kolmogorov Smirnov test, it can be seen that the significance value of the unstandardized residual in the substructure model 1 and 2 has a significance greater than 0.05, thus it can be concluded that the data is normally distributed.

Path Coefficient Analysis and Coefficient of Determination

Sub Structure 1: Utilization of e-Learning on Student Discipline

Based on the results of path analysis assisted by SPSS, the following results are obtained:

Table 3. Testing the Path Coefficient of Sub Structure 1

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)		1.199	.238
	Pemanfaatan e-Learning	.832	9.231	.000

Based on the testing of the path coefficients of substructure 1, the standardized coefficients on the Utilization of e-Learning on Student Discipline are as follows:

$$Y = 0{,}832(X) + \varepsilon_1$$

The magnitude of the residual coefficient (ε_1) and the magnitude of the effect can be known through the calculation results as follows:

Table 4. Substructure Determination Coefficient 2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.832[a]	.692	.683	3.43282

a. Predictors: (Constant), Pemanfaatan e-Learning

b. Dependent Variable: Disiplin Siswa

Based on the table above, it can be seen that the effect of the use of e-Learning on Student Discipline has a coefficient of determination of 0.692. These results indicate that the variable Utilization of e-Learning has an effect of 69.2% on Student Discipline, while the remaining 30.8% is influenced by other variables outside the known model.

Sub Structure 2: Utilization of e-Learning and Student Discipline on Learning Outcomes

Berdasarkan pada hasil analisis jalur dibantu dengan SPSS diperoleh hasil sebagai berikut:

Based on the results of path analysis assisted by SPSS, the following results are obtained:

Table 5. Testing the Path Coefficient of Sub Structure 2

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)		1.112	.273
	Pemanfaatan e-Learning	.321	2.302	.027
	Disiplin Siswa	.598	4.293	.000

Based on the testing of the path coefficients of substructure 1, the standardized coefficients on the Utilization of e-Learning and Student Discipline on Learning Outcomes are as follows:

$$Z = 0{,}321\ (X) + 0{,}598\ (Y) + \varepsilon_2$$

The magnitude of the residual coefficient (ε_2) and the magnitude of the effect can be known through the calculation results as follows:

Table 6. Coefficient of Determination of Substructure 2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.882[a]	.779	.767	2.16035

a. Predictors: (Constant), Disiplin Siswa, Pemanfaatan e-Learning

b. Dependent Variable: Hasil Belajar Siswa

Based on the table above, it can be seen that the influence of the use of e-Learning and Student Discipline on Learning Outcomes has a coefficient of determination of 0.779. These results indicate that the variable Utilization of e-Learning and Student Discipline has an influence of 77.9% on Learning Outcomes, while the remaining 22.1% is influenced by other variables outside the known model.

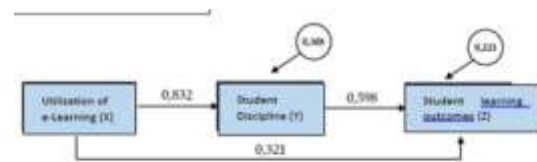Based on the two equations above, the path of each variable can be described in Figure 4.1 as follows,

Figure 2. Structural Model Path Coefficient

Direct and Indirect Influence

The amount of direct and indirect influence on each independent variable on the dependent variable can be seen in the table below.

Table 7. Direct and Indirect Effects

Jalur	*Pengaruh Langsung*	*Pengaruh Tidak Langsung*	*Pengaruh Total*	*R-Squared*
X → Y	$(0,832)^2 = 0,692$	-	0,692	0,692
Y → Z	$(0,598)^2 = 0,358$	0,598 x 0,832 x 0,321 = 0,159	0,517	0,779
X → Z	$(0,321)^2 = 0,103$	0,321 x 0,832 x 0,598 = 0,159	0,262	

Based on the table above, it is known that the variable The use of e-Learning has a direct effect on influencing student discipline by 69.2%. Meanwhile, on learning outcomes, the direct effect of using e-Learning is 10.3% smaller than the indirect effect of 15.9% through Student Discipline. While Student Discipline on Learning Outcomes has a direct effect of 35.8%, greater than the indirect effect of 15.9% through e-Learning Beneficiaries. Thus, it shows that in influencing Learning Outcomes, Student Discipline has a higher effect than the use of e-Learning. Overall, it can be concluded that if the use of e-Learning is carried out properly, supported by high student discipline, it will affect high learning outcomes as well.

Hypothesis test

1.   The Effect of Using e-Learning on Student Discipline at Kayurungin Jaya State Elementary School

The results of testing the first hypothesis, namely the use of e-Learning on student discipline, obtained the value of sig. (0,000) <0.05 so that H 0 is rejected, which means that the existence of positive and significant influence between the use of e-Learning to discipline students in State Primary School Kayurungin Jaya, wherein the variable use of e-Learning provides a total effect of 69.2% to the Discipline Students with a positive path coefficient, which means that the better learning by utilizing e-Learning media will have a high impact on student discipline, and conversely the worse learning using e-Learning media will have a low impact on student discipline.

2. The Effect of the Utilization of e-Learning on Learning Outcomes at the Kayurungin Jaya State Elementary School

The results of testing the second hypothesis, namely the use of e-Learning on learning outcomes, obtained the value of sig. (0,027) <0.05 so that H 0 is rejected, which means that the positive influence and significant correlation between the use of e-Learning on learning outcomes in Kayurungin Jaya Elementary School, where the variable Utilization of e-Learning provides a total effect of 26.2% of the student of the result learning with a positive path coefficient which means that the better learning by utilizing e-Learning media will have a high impact on student learning outcomes, and conversely the worse learning by utilizing e-Learning media will have an impact on low e-Learning utilization.

3. The Influence of Student Discipline on Learning Outcomes at Kayurungin Jaya State Elementary School

In testing the hypothesis regarding the effect of using e-Learning on learning outcomes through student discipline, it is carried out by calculating the Sobel test (Sobel, 1982) as follows:

$$t = \frac{ab}{S_{ab}}$$

Where, $S_{ab} = \sqrt{b^2 sa^2 + a^2 sb^2 + sa^2 sb^2}$

Note:

a = Path coefficient X to Y (0.832)

b = Path coefficient Y to Z (0.598)

sa = Standard error of X against Y (0.092)

sb = Standard error of Y to Z (0.102)

sab = Standard error of X and Y to Z

So:,

$S_{ab} = \sqrt{b^2 sa^2 + a^2 sb^2 + sa^2 sb^2}$

$S_{ab} = \sqrt{\begin{array}{l}(0,598)^2(0,092)^2 + (0,832)^2 \\ (0,102)^2 + (0,092)^2(0,102)^2\end{array}}$

$S_{ab} = 0,102$

So that the t-value of the Sobel test statistic is as follows:

$$t = \frac{0,832 \times 0,598}{0,102} = 4,898$$

Based on the test Sobel above obtained t-count equal to 4.898 by taking a significance level of 5%, then the value of the t-table of the 2,024 that t-count value is greater than 2,024 then H 0 is rejected, which shows the Discipline Students are able to explain the indirect relationship between the use of e-Learning on learning outcomes at Kayuringin Jaya Elementary School or the effect of using e-Learning on learning outcomes through student discipline at Kayuringin Jaya Elementary School, where the indirect effect of using e-Learning on learning outcomes is 15.9% through Student Discipline.

5. CONCLUSIONS & SUGGESTIONS

Based on the results of data analysis and discussion that has been described previously regarding the effect of the use of e-Learning on Student Discipline and its impact on Learning Outcomes at the Kayurungin Jaya State Elementary School, the following conclusions are obtained:

1. There is a positive and significant influence between the use of e-Learning on student discipline at the Kayurungin Jaya State Elementary School, where the variable of the use of e-Learning has a total effect of 69.2% on student discipline.
2. There is a positive and significant influence between the use of e-Learning on learning outcomes at the Kayurungin Jaya State Elementary School, where the variable Utilization of e-Learning has a total effect of 26.2% on student learning outcomes.
3. There is a positive and significant influence between student discipline on learning outcomes at the Kayurungin Jaya State Elementary School, where the student discipline variable has a total effect of 51.7% on student learning outcomes.
4. There is an effect of the use of e-Learning on learning outcomes through student discipline at the Kayurungin Jaya State Elementary School, where the indirect effect of the use of e-Learning on learning outcomes through Student Discipline is 15.9%.

Based on the results of the research and the conclusions that have been presented, the suggestions that the writer will put forward are,

1.   For the Kayurungin Jaya State Elementary School, it is expected to be able to prepare supporting facilities, competencies and training for teachers regarding the use of e-learning so that the learning process goes well and every material can be delivered properly.

2.   Parents of students at the Kayurungin Jaya State Elementary School during the covid-19 pandemic are expected to always be willing to play their role in assisting, directing, and guiding their children in completing the learning process. In conditions like this, it will be understood together that the importance of education starts from the first place in the formation of children's character, namely the family.

3.   For students at the Kayurungin Jaya State Elementary School, they are expected to follow the lessons according to the teacher's instructions, asking questions that have not been understood so that they can improve learning outcomes.

4.   For the next researchers, it is expected to add independent variables and add research samples to re-proven the variables in this study and are expected to add other wider research objects to strengthen the results of the study.

5.   In addition, it is hoped that this research can be developed by using other methods in examining the effect of e-Learning Utilization on Student Discipline and its impact on Learning Outcomes, so that the information obtained can be more varied than the questionnaire whose answers are already available.

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