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THE EFFECT OF DIGITAL LITERATURE ON STUDENTS' LEARNING INDEPENDENCE IN THE 2019 COVID SITUATION

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Abstract. This study is a quantitative study through a causal approach with the purpose of determining the effect of digital literacy on the results of students' learning autonomy in the 2019 COVID situation. This study was conducted to test the validity of the instrument using the formula Person Product Moment correlation and reliability test using Cronbach's Alpha formula. The sample in this study was 42 students of the Elementary School, which was obtained using the Taro Yamane formula. This quantitative research was continued with the requirements test of data analysis using the Normality, Homogeneity, and Linearity tests. The average value for the digital literacy variable is 84.73 and the average value for the learning independence variable is 78.29. The results showed that there was an effect of digital literacy on learning independence, which was indicated by the path coefficient (pxy) of 0.70. This shows the influence of digital literacy on learning independence, while the coefficient of determination (r2) is 0.49 or 49%. This means that the value of the influence of digital literacy on learning independence is 49%, through the regression equation Y =(10.49 + 0.8X). Based on the results of the research above, it can be concluded that there is a positive influence of digital literacy on the learning independence of students in the 2019 COVID situation.

Keywords: Digital Literacy, Independent Learning

I. INTRODUCTION

Education is an effort to mature and make humans independent through planned and realized learning activities that involve students and teachers. Teaching and learning activities are carried out in schools that aim to improve the ability of students. The learning ability of students can increase if in the learning activities carried out in class, students are more active and diligent in studying the materials taught by the teacher. Learning that can activate students uses participatory learning strategies [1][2][3]. In addition to teaching and learning activities in schools, the activities can also be carried out independently by students. Independent learning provides opportunities for students to learn according to their learning style [4][5].

Independent learning is an ability that is not much related to what kind of learning, but more to do with how the learning process is carried out. Independent learning activities are one form of learning activity that focuses more on one's learning awareness or gives more control of learning to the students themselves.

Based on the Government's policy regarding the current pandemic situation, students continue to study at home by means of an online system (system in the network) in order to catch up with the curriculum. With the implementation of the online system, it is hoped that it can break the chain of the spread of COVID-19 in Indonesia, where learning is done at home or online-based Distance Learning. Therefore, learning independence needs to be possessed by every student in order to be able to understand learning materials through various media and available learning resources and they are able to seek information independently if they do not understand. Distance learning requires students' learning independence in using teaching materials [6][7].

Independent students will be able to find the learning resources needed. Therefore, independence must be instilled in students to be able to take responsibility as a student in learning. Readiness to learn is part of the personality of students who develop from time to time through social interactions. Learning independence is the ability of students to carry out learning activities that are based on the activities, responsibilities, and motivations that exist within the students themselves.

The lack of availability of facilities and infrastructure to carry out online learning from both teachers and students is still a problem in learning. In its implementation, of course there are still obstacles including teachers who have limitations in accessing the internet, and are still not optimal in utilizing existing media. In addition, the independence of learning for students at home cannot be fully implemented properly due to limitations in participating in learning using digital media that are not owned by all students, causing new problems. In understanding the material being taught, not all students really understand, especially for lessons that require in-depth explanation. The occurrence of stacking of tasks is also a problem that is often experienced by students in undergoing online learning. There needs to be a policy from the teacher in giving assignments to students. Then the problem of the availability of learning media is also a major factor in online learning. Participants are required to have supporting facilities such as cellphones and laptops as well as the ability to operate these media.

Online learning is carried out using various media and digital-based learning resources that rely on the internet network in the implementation of learning. This digital-based learning, of course, cannot be followed spontaneously by students and teachers. Building digital literacy requires adequate knowledge of digital-based media and learning resources [8][9].1 Through digital literacy skills that students have, learning activities can continue even though they are carried out at home, because digital literacy is the knowledge and skills to use digital media, communication tools, or networks in finding, evaluating, using, creating information, and use it effectively. healthy, wise, intelligent, careful, precise, and law abiding in order to foster communication and interaction in everyday life. Learning independence must be possessed by students and needs to be developed because it is one that can support success in the learning process. Learning independence is the attitude of students who have the initiative in learning, can identify problems in learning, and can solve learning problems without depending on others. In line with the curriculum that learning is carried out with "student centered" where students are required to be active and learn independently with the problems given by the teacher whose job is as a facilitator.

Based on the description of learning independence, it can be understood the meaning of learning independence. Yamin [10] revealed that independent learning is learning carried out by students freely determining their learning goals, learning directions, planning the learning process, learning strategies, using learning resources of their choice, making academic decisions, and carrying out activities to achieve learning goals. .

As stated by Ningsih [11], learning independence is a person's ability to manage all personal activities, competencies, and skills independently armed with the basic abilities possessed by the individual, especially in the learning process. In line with what was previously stated, Fatihah [12] revealed that learning independence is an activity of student awareness to want to learn without coercion from the surrounding environment in order to realize responsibility as a student in facing learning difficulties. In line with the previous, Triansari also revealed that learning independence is a learning activity that takes place more driven by their own volition, their own choices, and the learner's own responsibility. Not much different from Ola's [13] opinion that learning independence is a process, an educational method in which students can acquire knowledge by their own efforts, are responsible, confident, take the initiative, have a strong motivation to advance for their own good, are able to solve their own problems without depending on others.

Independent learning has characteristics that are expressed by Uno [14] the characteristics of learning independence, namely methods that are according to one's own pace are also called self-study, self-teaching, or self-directed learning. Although all these terms have different meanings, the important traits for students are self-responsibility, at one's own pace, and successful learning.

Based on several expert opinions, it can be synthesized that learning independence is a learning activity carried out by a student with encouragement from within himself responsibly and without depending on others.

Digital literacy is a person's ability to use digital media to process, analyze, and evaluate the information obtained so that it becomes useful information. Students must have digital literacy skills because they are a support in the learning process. UNESCO [15] and Setyaningsih, [16] revealed that digital literacy is an individual's interest, attitude and ability to use digital technology and communication tools to access, manage, integrate, analyze and evaluate information, build new knowledge, create and communicate with others. to participate effectively in society.

As stated by Salehudin [17] that through example in the family, the involvement of children in literacy activities and support from all family members will make children love literacy culture. If students already love literacy culture, then knowledge and skills will be formed. Liansari [18] revealed that digital literacy is knowledge and skills to use digital media, communication tools, or networks in finding, evaluating, using, creating information, and utilizing it in a healthy, wise, intelligent, careful, precise, and law-abiding manner. in order to foster communication and interaction in everyday life.

Essential Digital and Media Literacy competencies, including: 1) Access, namely finding and using media tools, 2) Analyze & Evaluate, namely understanding messages and using critical thinking to analyze message quality, 3) Create, namely compiling or producing content using creativity and confidence , 4) Reflect, namely applying social responsibility and ethical principles to identity and life experiences, 5) Act, namely working individually and collaboratively to share knowledge and solve problems in the family, [19]. Digital competence is needed so that students are trained to explore learning resources independently [20][21][22].

Based on several expert opinions, it can be synthesized that digital literacy is an individual's ability to use digital media and communication tools to access, manage, integrate, analyze, evaluate, and create information in order to foster communication and interaction in everyday life. This study aims to find out the effect of independent learning with digital literacy in the Covid-19 condition. Research is limited to aspects of online learning, how the learning process takes place and independent learning.

II. RESEARCH METHODOLOGY

This study uses quantitative research methods with a causal research design (reference). The method was chosen to find out how much influence digital literacy has on the learning independence of elementary school students.

The population in this study were 73 students who were elementary school students. The sampling technique in this study used simple random sampling with the Taro Yamane formula so that the sample in this study amounted to 42 students. The variables in this study are the independent variable (X) namely digital literacy and the dependent variable (Y) is learning independence. learn mathematics with

test questions while in critical thinking with questionnaires distributed to students. The type of scale used in the questionnaire is a Likert scale.

The data collection technique uses a questionnaire method on the variables of study habits (X) and achievement motivation (Y) as many as 40 statement items accompanied by 5 alternative answers and uses a calculation of 5 Likert scale ranges [23]. Instrument testing was conducted on 42 respondents. Calculation of the validity of the test statement item validity using the Pearson Product Moment formula. The reliability test of the research instrument used Cronbach's Alpha calculation. Then the research data must meet the analysis requirements by using the estimated standard error normality test and regression linearity test, then statistical hypothesis testing is carried out.

This study uses product moment data analysis techniques, because the research data is interval scale and this study aims to examine the effect of one independent variable on one dependent variable, namely the influence of digital literacy on learning independence..

Figure 1. Constellation Chart of Research Problems

III. RESULT AND DISCUSSION

The description of the research data is grouped into two parts, which consist of the dependent variable data group, namely, learning independence (Y), and the independent variable data, digital literacy (X) which is described in the form of descriptive statistics. Description of each data, namely the lowest score, highest score, score range, mean (mean), median value (median), frequently occurring value (mode), standard deviation (SD), sample variance, and total score.

Table 1. Descriptive Statistical Data of Research Results Variables X and Y

Elements of Statistics	Variabel X	Variabel Y
Minimum Score	70	64
Maximum Score	104	99
Score Range	34	35
Mean	84,73	78,29
Median	85,57	82,46
Modus	88,9	78,96
Standard Deviation (SD)	8,36	9,58
Varians (G^2)	69,95	91,82
Total Score	3559	3288

Based on the data obtained, it shows that the score of learning independence is known in the range of 64 to 64 by 30% as many as twelve students are categorized as high, a range of 70 to 75 is 7.14% as many as three students are categorized as low, a range of 76 to 81 is 30, 9% as many as thirteen students are categorized as high, a range of 82 to 87 is 14.28% as many as six students are categorized as moderate, a range of 88 to 93 is 14.8% as many as six students are categorized as moderate, a range of 94 to 99 is 4.76 % as many as two students categorized as low.

Furthermore, the data obtained shows that the digital literacy score, it is known that in the range of 70 to 75 by 16.6%%, seven students are categorized as moderate, ranging from 76 to 81 is 23.8%, ten students are categorized as high, and the range is 82 to 87. 19.04% of eight students were categorized as moderate, a range of 88 to 93 was 23.8% as many as ten students were categorized as high, a range of 94 to 99 was 11.9% as many as five students were categorized as low, a range of 100 to 104 was 4, 7% as many as two students categorized as low.

The standard error normality test of the estimate is carried out to determine whether a data distribution is normal or not, to test it using the Liliefors test on the digital literacy variable (X) and the learning independence variable (Y) with the condition that it is rejected if Count is greater than L'Table or accepted if L_{count} is less than L_{table}.

Table 2. Summary of Digital Literacy Data Normality Test on Independent Learning

Estimated Standard Error	Price L L_{hitung}	L_{tabel}	Conclusion
Variabel X dan Y	0,034	0,133	Normal
Normal Terms $L_{hitung} < L_{tabel}$			

Based on the results of the calculation of the error normality test for learning independence data (Y) and digital literacy (X) using the Liliefors test, the L0 value is 0.034 while Lt with N = 42 with a real level of 0.05 obtained Lt is 0.133 because L0 is 0.034 < Lt 0.133 then accept H0 which means the Estimated Error data (Y-"Y") comes from a population with a normal distribution.

Table 3. Summary of Digital Literacy Homogeneity Test (X) on Learning Independence (Y)

No	Tested variant	Number of Samples	F_{hitung}	F_{tabel}	α = 0,05
1	Y - X	42	1,31	4,07	Homogen
Significant level test $F_{hitung} < F_{tabel}$					

To clarify the effect of the digital literacy variable (X) on the independent learning variable (Y) which is based on the results of the significance test calculation and is expressed in the form of a regression equation, namely = a +

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bX . the effect of X on Y is expressed in the form of = (10.49 + 0.8 X) where X is significant. It can be seen in the following scatter diagram:

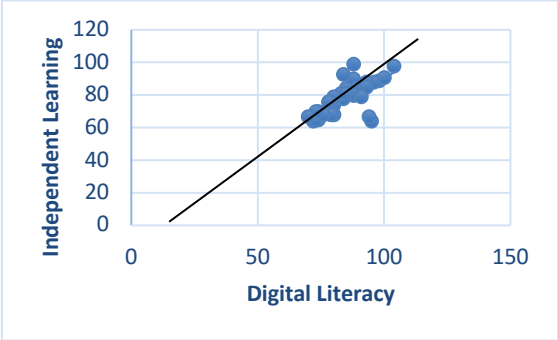

Figure 2. Scatter Diagram of the Effect of Digital Literacy Variables (X) on Independent Learning (Y).

In accordance with the results of the calculation of the regression equation analysis in the scatter diagram, it shows a correlation that there is a positive influence of the digital literacy variable on learning independence. The truth of the regression results above is used to test the hypothesis regarding the presence or absence of a positive influence of digital literacy (X) on learning independence (Y).

Testing the linearity of digital literacy regression (X) on learning independence (Y), the value of Fcount = -0.99, while Ftable (α = 0.05) = 2.05 with dk in the numerator (k-2) = 21 and dk in the denominator (n-dk) = 21. For testing the null hypothesis (H0) is rejected if the linear regression hypothesis Fcount> Ftable (α = 0.05) and if Fcount < F table (α = 0.05) it means that Ha is accepted. Thus Fcount < Ftable (α = 0.05) = -0.99 < 2.05 means that the linear hypothesis is accepted. In conclusion, digital literacy data on learning independence has a linear relationship pattern.

Based on the calculation of the path coefficient, the value of r = 0.70 which means it has a strong influence. This shows that there is an influence of digital literacy on learning independence, so it can be proven that one of the efforts to increase learning independence is digital literacy.

Table 4. Results of Testing the Significance of the Path Coefficient of Digital Literacy Variables (X) on learning independence (Y)

N	Path Coefficient	Coefficient of Determination	Significance		Conclusion
			t_{hitung}	t_{tabel}	
42	0,70	0,49	6,21	1,684	Positive and Very Significant Relationship

Significance test level requirements $t_{hitung} > t_{tabel}$

The results of the calculation of the significance test are depicted in the following H0 rejection and acceptance curves:

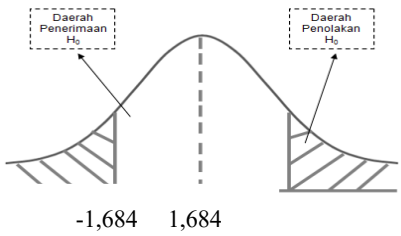

Figure 3. Rejection and Acceptance Curve H0.

Based on the calculation results obtained tcount = 6.21 with ttable (α = 0.05) = 1.684. Thus, tcount > t table (α = 0.05) = 6.21 > 1.684, which means that the digital literacy path coefficient on learning independence is significant, so it can be concluded that there is a positive and significant effect of digital literacy on learning independence.

The effect of digital literacy on learning independence statistically indicated by the results of the significance test and regression with the regression equation Y= 10.49 + 0.8X. This means that every increase in learning independence is 0.8 units. The strength of the influence of digital literacy on learning independence is indicated by the path coefficient of 0.70. Digital literacy encourages students to explore learning resources [24][25]. The coefficient price shows that there is a strong influence of the digital literacy variable on learning independence. The magnitude of the contribution of digital literacy to learning independence is indicated by a coefficient (r2) of 0.49 with a coefficient of determination of 49%. This means that the increase in learning independence is influenced by the digital literacy level of 49% while the remaining 51% is influenced by other factors of learning independence (Y).

The results of this research are reinforced by the findings of Muna's research[26] which shows that digital literacy can affect student achievement. Besides having an effect on achievement, digital literacy also affects the independence of students as is done by researchers. Based on the results of hypothesis testing data analysis, it was obtained that there was a positive influence of digital literacy on learning independence. Learning independence is influenced by digital literacy factors by 49%, while 51% of students' learning independence is influenced by other factors of learning independence (Y). Digital abilities of students encourage students to find and read learning resources according to the topics studied [27][28].

IV. CONCLUSION

Based on the results of data processing and discussion, it can be concluded that there is a positive and significant influence between digital literacy on the learning independence of elementary school students. This is shown based on the results of the calculation of the path coefficient of 0.70 which indicates the influence of the digital literacy variable on the learning independence of students which can be categorized as strong, which means that digital literacy plays a major role in increasing students' learning

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independence, especially in online learning situations such as today. this. Digital literacy skills can make students not always dependent on teachers and can carry out distance learning optimally because they are able to use learning media well so that students have independence in learning. This is proven by the existence of a functional relationship between digital literacy and learning independence of students through the regression equation = 10.49 + 0.8X, meaning that if digital literacy increases by one unit, the learning independence of students will increase by 0.8. With the results of the coefficient of determination r2 = 0.49 which indicates that digital literacy contributes 49% to the learning independence of students, 51% is influenced by other factors.

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