



RELATIONSHIP BETWEEN AN IMPLEMENTATION OF DIRECT INSTRUCTIONAL LEARNING STRATEGY TOWARDS LEARNING OUTCOMES OF STUDENTS IN COMPUTER ENGINEERING NETWORK IN SMK NEGERI 1 KUTALIMBARU

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ABSTRACT

With the development of technology, online learning situations, appropriate learning strategies are needed to deliver learning materials and motivate students based on e-learning. This paper seeks to find out the relationship between direct instructional learning strategies and learning outcomes, the relationship between motivation and outcomes, and the relationship between direct instructional learning strategies and learning motivation together with learning outcomes. This paper uses the product-moment correlation test to prove the hypothesis.

Keywords: *Direct instructional learning strategies, learning motivation, network system.*

1. INTRODUCTION

In the early days of 2020, the world was shocked by the Covid-19 virus which spread rapidly throughout the world (Astini, 2020). Due to this situation, the government has relocated all activities, including educational activities, to the country. Through the Circular Letter of the Minister of Education Number 4 of 2020 regarding the implementation of education policies during the Covid-19 pandemic. The learning process takes place in your private residence through online or distance learning to provide a meaningful learning experience. Learning in individual dormitories can focus on teaching life skills, including information about the Covid-19 pandemic.

Where online learning is one type of learning activity that can be applied anytime and anywhere (Syarifudin, 2020). However, in conducting online learning requires media that can support these learning activities. Google Classroom is a source of learning activities that can be used for online learning. Online learning activities at SMK Negeri 1 Kutalimbaru I major in computer and network engineering with systems and network management courses. In this course, you will learn not only theory but also practice. Therefore, its implementation requires a certain strategy.



High Motivation Lowers Learning Outcomes Researchers surveyed teachers of network system administration subjects and found that many students did not attend virtual classes and did not submit assignments given by their teachers during online learning. I see. Tutors say this is because students have to stare at their device screens for hours on end while studying, and because learning locations are being moved from school to home, students are less motivated to learn. Supervised directly by an educator at SMKN 1

Based on the experience of researchers who carried out School Field Introduction (PLP) activities in Kutalimbaru. From his observations, the researcher found that the more commonly used learning strategy for network system administration subjects was direct instruction using Google Classroom. When learning takes place, students often turn off the video during learning and don't focus too much on the material given.

Based on the facts and problems described, the author applies a direct didactic learning strategy with the help of Google Classroom and student learning outcomes in the subject of network system administration on computers and computers. I feel the need to explore the relationship between motivation and motivation.

This study aims to determine the relationship between direct learning strategies in the classroom, learning motivation, and student learning outcomes in the subject of Network System Administration in the Computer and Network Engineering Department of SMKN 1 Kutalimbaru.

2. THEORY BASIS.

2.1. Direct Instructional Learning Strategy

According to Trianto (2007), direct instructional learning strategy is a teaching method which is well structured in supporting the learning process of students related to well-structured declarative and procedural knowledge, which can carry out activities in stages. However, according to Arends (2012), learning strategy is a way of teaching that is designed to help students develop their basic abilities gradually.

Likewise, Killen in Iru & Arihi (2012) states that direct instructional learning is an expository learning technique that involves the whole class (from the teacher directly to the students, through lectures, demonstrations, and questions and answers). It can be concluded that direct instructional learning strategy is a teaching method designed to teach knowledge step by step by delivering lectures, demonstrations, practice, and group work. The syntax of the direct instructional learning model is determined by several stages, namely learning objectives, review of prerequisite knowledge and skills, delivery of subject matter, implementation of guidance,



providing opportunities, practicing, assessing student performance, independent training (Slavin, 2009).

2.2.Motivation to learn

Motivation itself begins with the word motive which means desire, will, need and will (Romadon and Maryam, 2019). Meanwhile, Dimyati and Mudjiono (2009) say that motivation is a psychological desire that evokes and drives human behavior. Motivation in learning activities is motivation to encourage people to learn to achieve the desired goals. According to Sadirman (1990), learning motivation is the total motivational strength of students which determines the continuity of learning activities and activates objects that are in accordance with student learning activities. Meanwhile, Clyaton Alderfer Hamdhus (2011) suggests that the concept of learning motivation is the interest of students to participate in every learning activity, learning activities are motivated by the desire to achieve the best results or learn. On the other hand, McCombs (1991) understands that learning motivation is an innate ability that is developed naturally which can be maintained or strengthened through activities that provide support, provide responsibility for directing the learning process, provide opportunities to choose activities and offer useful learning tasks. and also for individual needs.

So it was found that learning motivation is a desire or desire to participate in learning activities that arise from students themselves or from students' external factors to achieve good learning outcomes.

Djamarah (2011) states that motivation can be seen from two perspectives, namely intrinsic motivation from within a person and extrinsic motivation from outside himself. Internal motivation is an attraction that does not require external stimuli to be active or effective because everyone has a desire, and external motivation is a driving force that works and is effective because of external stimuli. Uno (2008) suggests that internal and external learning motivation indicators can be classified into six, namely the desire and willingness to succeed, learning desires and needs, goals and expectations, respecting learning, interesting activities during learning, and motivating activities. learning environment.

2.3. Learning outcomes

Arsyad (2005) suggests that learning outcomes are changes in human behavior that can be caused by changes in skills, attitudes or knowledge levels. These changes are planned, including knowledge, skills and attitudes. Meanwhile, according to Suprijono (2013), learning outcomes are the transition of behavior as a whole, not just aspects that are hidden from humans.



Where there is an opinion from the other side, Sudjana (2006) suggests learning outcomes, namely the skills and knowledge that students gain after having a learning experience. Learning outcomes can be divided into three areas: psychomotor, cognitive and affective. These three areas are the objectives of the assessment of learning outcomes. It can be concluded that learning outcomes are the results obtained by students by improving themselves in learning and learning activities and by changing their behavior and attitudes.

According to Slameto (2010), two factors can affect the learning outcomes achieved, namely personal or internal factors and factors arising from personal or external factors. Self or internal factors include two aspects, namely psychological and physical. The external factor itself or external includes three aspects, namely school, community and family.

3. METHOD

Based on these questions, three formulations of questions are formulated to be answered to produce an initial answer, which is called the research hypothesis. Data collection was carried out on certain populations identified by researchers, namely students of class XII and XI majoring in Computer and Network Engineering at SMK Negeri 1 Kutalimbaru. Sampling was carried out using the proportional stratified random sampling method. H. Sampling if the population has the same educational background and is stratified (Sugishirono, 2017).

This type of research is a descriptive analysis of causality, where the concept of causality is related to the relationship between variables (Sugishirono, 2017). In this study, the independent variables are direct learning strategies and learning motivation in the classroom, and the dependent variable is student learning outcomes at the 2020 School of Computer and Network Engineering, Department of Computer and Network Engineering, SMK Negeri 1 Kutarimbaru. 2021 academic year.

The study began with the researcher making observations about the actual state of the research subject at this time. Questionnaires were then distributed to students to obtain data on direct instructional learning strategies and learning motivation, and based on data collection on student learning outcomes, data on student learning outcomes.



4. RESEARCH RESULTS AND DISCUSSION

4.1. Validity and Reliability Test

Table 1. Content Validity Test

Validator	Percentage	Validation Criteria
Monika Sari Damanik	76.25%	Tall

Table 2. Reliability Test

Variable	N of Items	Cronbach's
Learning strategies <i>Direct Instructional</i>	10	0.867
Learning Motivation	10	0.766

The research instrument was declared valid and reliable to be used in this study.

4.2. Normality Assumption Test

Normality using the Kolmogorov-Smirnov test using SPSS 25. Decision making is based on a significant value > 0.05 , so it can be concluded that the data for the research variables are normally distributed.

Table 3. Data Research

Variable	Value of Sig.	Information
Learning strategies <i>Direct Instructional</i>	0.051	Normal
Learning Motivation	0.75	Normal

Based on the significance value, the data is normally distributed. Then the normality test was carried out with the following PP Plot.

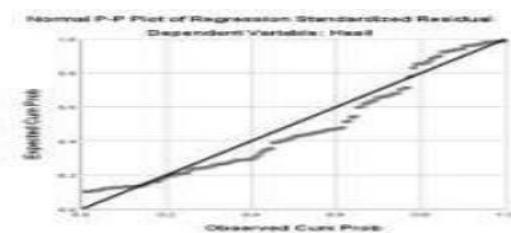


Figure 1. P-Plot Normality Test

The scattered data stretches around the line and accompanies the direction of the line so that it meets the normality assumption.



4.3. linearity

The basis for decision making is based on the deviation from linearity value. Data is declared linearity if it has a significance value of deviation from linearity > 0.05 .

Table 4.Linearity Test

Variable	Value of Sig. <i>Deviation from linearity</i>	Information
Learning strategies <i>Direct Instructional</i>	0.216	Normal
Motivation to learn	0.432	Normal

The results of the linearity test showed a significant deviation from the linearity value of the direct teaching strategy variable $0.216 > 0.05$. In addition, it is concluded that there is a linear relationship between the variables of direct teaching and learning strategies and learning outcomes. Thus, the significance value of the deviation from the linearity of the learning motivation variable is $0.32 > 0.05$. Therefore, it can be concluded that there is a linear relationship between the variables of learning motivation and learning outcomes.

4.4. Multicollinearity

The regression model is declared good if it does not have multicollinearity symptoms or there is no relationship between independent variables.

**Table 5.**Multilinearity Test

Variable	Tolerance	VIF	Information
Strategy Learning <i>Direct</i> <i>Instructional</i>	0.723	1,383	Not occur Multicollinearity
Motivation to learn	0.723	1,383	Not occur Multicollinearity

The direct instructional learning strategy variable got a tolerance value of $0.723 > 0.10$ and $VIF\ 1.383 < 10$. So it can be concluded that the direct instructional learning strategy variable does not occur multicollinearity symptoms. Meanwhile, the learning motivation variable got a value of $0.723 > 0.10$ and $VIF\ 1.383 < 10$. So it can be concluded that the learning motivation variable also has no symptoms of multicollinearity.

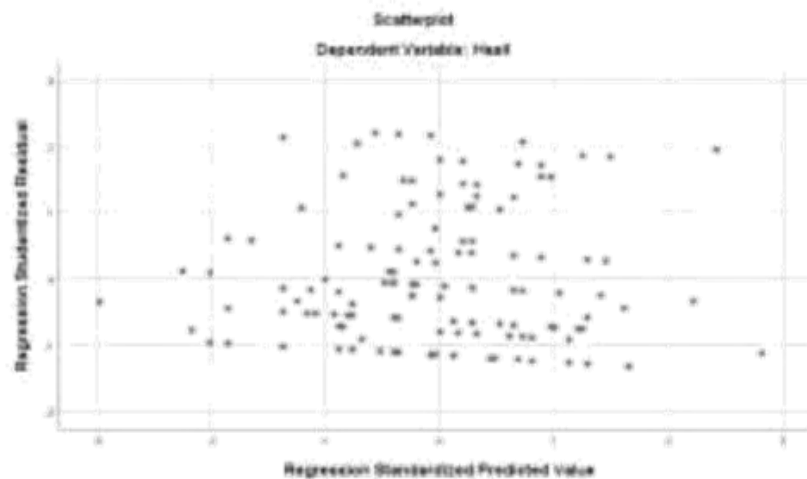


Figure 2. Heteroscedasticity Test Scatterplot

If the data does not form a pattern and spreads around the number 0, it can be concluded that the data does not show heteroscedasticity. Furthermore, the Glejser test was carried out to determine the signs of heteroscedasticity by comparing a significance value greater than 0.05 as a requirement to perform a regression test.

Table 6. Heteroscedasticity Test

Variable	Significance Value	Information
Learning strategies <i>Direct Instructional</i>	0.130	There are no symptoms heteroscedasticity
Motivation to learn	0.910	There are no symptoms heteroscedasticity



The direct learning strategy variable got a significance value of 0.130 and the learning motivation variable got a significance value of 0.910. From this it can be concluded that the direct learning strategy and learning motivation variables do not show signs of heteroscedasticity.

4.5. Hypothesis testing

Table 7. Test the correlation of direct instructional learning strategies on learning outcomes

Variable	Pearson Corellation	Sig. (2 tails)	tcount
Strategy Learning <i>direct instructional</i>	0.005	0.414	-0.819

Based on the value of the correlation coefficient, it means that there is a positive correlation. In other words, the higher the value of direct classroom learning strategies, the value of learning outcomes also increases. However, based on the correlation coefficient interval table, the value of 0.005 is very low. The error rate of 5% shows a significant relationship for the value of $\text{sig} < 0 > 0.05$. Subsequent calculations using the t-test resulted in a tcount of -0.819. If the error rate is 5%, the value is 0.05. With $\text{Db} = n - 2 = 129$, we get 1,657 tables. Then, tcount and t_t , so it can be concluded that there is no significant relationship between the direct variables of learning strategies and learning outcomes.

**Table 8.**Correlation test of learning motivation on learning outcomes

Variable	<i>Pearson</i> <i>Correlation</i>	Sig. (2- tailed)	tcount
Motivation study	0.001	0.798	-0.256

Based on the value of the correlation coefficient, this means that there is a positive correlation direction. That is, the higher the value of learning motivation, the higher the value of learning outcomes. However, based on the correlation coefficient interval table, the value of 0.001 is very low. The error rate of 5% shows a significant relationship for the value of $\text{sig} < 0 > 0.05$. In addition, the calculation using the t-test produces a tcount of -0.256. If the error rate is 5%, the value is 0.05. With $\text{Db} = n - 2 = 129$, we get 1,657 tables. tcount and It, it can be concluded that there is no significant relationship between the variables of learning motivation and learning outcomes.

Table 9. Direct instructional learning strategy correlation test
and learning motivation on learning outcomes

R	R Square	Sig.Fchange	<i>fcount</i>
0.74	0.006	0.702	0.354



Based on the value of the correlation coefficient, there is a positive relationship, meaning that the higher the concentration value and the learning environment, the higher the value of learning outcomes. sign For $<0>0.05$ the relationship between direct learning learning strategies with learning motivation and learning outcomes is not significant. With a coefficient of determination of 0.006, it means that the direct teaching and learning strategy variables and learning motivation have an effect on learning outcomes of 0.6%, and 99.6% are influenced by other factors. The F-test calculation resulted in fcount of 0.35 and ftable of 3.07. So it can be concluded that there is no significant relationship between the variables of direct learning learning strategies and learning motivation on learning outcomes.

5.CONCLUSION

1. In the Department of Computer and Network Engineering at SMK Negeri 1 Kutalimbaru, there is no significant positive relationship between direct didactic learning strategies and learning outcomes in System and Network Administration subjects. This is indicated by the Pearson correlation value of 0.005. This shows that the two variables are positively related, but not significantly related based on a significance value of 0.414. Then based on the results of the t test, the t value is $-0.819 < 1.657$ (Table). From this, we can conclude that there is no significant relationship between direct teaching and learning strategies and learning outcomes.
2. SMK Negeri 1 Kutalimbaru Department of Computer and Network Engineering, there is no positive and significant relationship between learning motivation and learning success in the subjects of system and network administration. This is indicated by the Pearson correlation value of 0.001. This shows that the two variables are positively related, but not significantly related based on a significance value of 0.798. Then based on the results of the t-test, the t-count value was $-0.256 < 1.657$ (table). From this it can be concluded that there is no significant relationship between learning motivation and learning outcomes.
3. There is no positive and significant relationship between direct didactic learning strategies with learning motivation and learning outcomes in the System and Network Administration course at the Computer and Network Engineering School of SMK Negeri 1 Kutalimbaru. This is indicated by the r value of the multiple correlation test result of 0.074 which shows a positive relationship between variables, but based on a significance value of 0.702 there is no significant relationship. Then fcount is $0.354 < 0.354$ based on the results of the f-test. 3.07 (alignable). Furthermore, the value of R-squared is 0.06. This means that the direct learning strategy variables and learning motivation affect learning outcomes by 0.6%, while other variables affect 99.4%. Based on the results of the above discussion, suggestions for further research is that researchers can examine other variables that can affect learning outcomes, in addition to direct



learning strategies and learning motivation, because there are many variables that influence it. In this study, the questionnaires were distributed and filled out online, so the researcher lacked control to monitor or examine the research subjects while they were completing the questionnaires.

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