Influence of Interest and Discipline on Student Learning Outcomes

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The study aims to assess the effect of students' learning outcomes on interests and disciplines. This research is a quantitative method. Data is collected using poll dissemination methods. Quantitative analysis methods, findings in this study, data analysis show that students' interest in high categories, discipline categories is very high, and learning outcomes are in very high categories as well. The study also found an influence of interest on students' learning outcomes. There is also a disciplinary effect on students' learning outcomes. Implications for research and practice results suggest that discipline and interest have a major influence on learning outcomes, in this case Digital Simulation subjects.

Keywords: interest and discipline, student learning, learning outcomes

INTRODUCTIONS

Learning plays an important role in the development of a nation (Garcia et al., 2019; Shepard & Shepard, 2000; Zhong et al., 2016) Learning is seen as a method of enhancing the capabilities of intelligent, insightful, and responsible human resources(Alexander et al., 2009; D. C. Berliner, 2001; De Houwer et al., n.d.). For developing countries such as Indonesia, learning is very beneficial in realizing the quality of the next generation of our nation which is expected to be able to bring transformation into an advanced nation that is always supported by good learning(Ilma & Pratama, 2015; Welch, 2007; Wijaya, 2015). The purpose of national learning in Indonesia is contained in the Education Law in Indonesia Number 20 of 2003 which explains, "The role of national learning is to improve skills and shape national personalities and civilizations to educate the life of the nation, aiming to improve students' abilities and instill core, religious personalities, fresh and healthy, knowledgeable, creative, independent, democratic and responsible (UU Sisdiknas, 2003). To achieve a better education, it is necessary to apply assessments to be labeled as the result of student learning. In educational institutions learning outcomes can be seen in student reports. Evaluated learning outcomes including affective, cognitive, and psychomotor (M Enamul Hoque, 2016; Md. Enamul Hoque, 2019; Munadi, 2019)." Therefore, learning outcomes are the results of measurements that have been tried and expressed in the form of symbols, letters and sentences that describe the results achieved from a certain period of education.

The success of the student learning process will not be achieved by chance. About it along with strategies or circumstances that must be considered in the education process. Education is a session of changing everyone's behavior (Arbianingsih et al., 2018; Heggart & Yoo, 2018). One aspect that must be prepared is that the student himself has the will to learn, discipline(Mardiyah, 2018). Learning outcomes in the form of positive turnover of students from various aspects such as the results of learning activities.

The discipline in learning is one of the external aspects that influences students' learning outcomes. Discipline has a position that can influence, urge, organize, rise, shape and replace certain behaviors in accordance with the values instilled, encouraged and exemplified (Gorbunovs et al., 2016; McIntosh et al., 2018; Spector, 2016). Discipline Definition is: The beginning, process or result of concentrating or regulating willpower, drive, or interest to achieve desire or to achieve more efficient action. Second, it can complete the action with tenacity, active and concentrated, despite obstacles. Third, direct and authoritative attitude control with punishment or reward. Fourth, resist impulses by unsafe and very painful methods.

Discipline does not mean keeping students quiet and just obeying the rules, but discipline puts more emphasis on how students can actively participate in school programs. Discipline is essentially an attempt to improve students' understanding of compliance. By instilling discipline in students, it is expected that students can learn well and avoid things that are considered less useful. Markers of discipline in education are indicated by: Early behavior and discipline in exploring teaching and learning activities in the classroom. Second, discipline in the field of school / laboratory learning. Third, the discipline of learning at home.

Other aspects that affect students' learning outcomes are an interest in teaching and learning activities or an interest in learning. Learning interest is a 2-way bond between teacher and student with some norms such as media to achieve learning goals, or in other words Learning interest, is an interest between teacher and student that is created and intertwined with the goals of learning values. The problem of factors given above to achieve learning outcomes as expected. Learning outcomes are used as an aspect to ensure the success and failure of learning. Learning outcomes cover all subjects recommended to students. Research focuses on digital simulation subjects. Similar research has been conducted previously under the title The Effects of Discipline on Deep Approaches to Student Learning and College Outcomes in the study, the results of which are an in-depth approach to learning more prevalent in Biglan's soft, pure, and lively field compared to their peers. The biggest difference between soft and hard fields. We also found that seniors who engaged more frequently in deep learning behavior reported greater educational gain, higher grades, and greater satisfaction with college, and that the strength of these relationships was relatively consistent across discipline categories (Nelson Laird et al., 2008). Research titled Application of constructivism - based Student 'Worksheet to increase Student Activities and learning Outcomes. In the study, the results

obtained were an increase in students ' learning value in chemistry subjects with average posttest and pre-test scores were 19.77 and also 72.15. (Susilawati et al., 2020). Another research has also been conducted under the title Self-discipline as a Key Indicator to Improve Learning Outcomes in e-learning Environment the results of the study are e-learning environments make the learning process more efficient and interesting. However, the possibility of learning anytime and anywhere in an e-learning environment requires additional attention to motivate students to acquire knowledge and prevent dropouts. (Gorbunovs et al., 2016) from early observations at vocational school in Pontianak City, the research in SMK was chosen because researchers wanted to know the influence of student interest on digital simulation subjects. The influence of student discipline on learning outcomes and the influence of students' interests and disciplines on learning outcomes.

Given the case of discipline and interest in learning in supporting educational processes that affect learning outcomes and limited reports or research on the influence of discipline in education and students' learning interests in vocational schools in Pontianak, the alibi for conducting this research is expected to share solutions or considerations of efforts tried in schools to improve student learning outcomes at vocational schools in Pontianak.

RESEARCH METHODOLOGY

The study was conducted at a Vocational High School in Pontianak City. The study was conducted in September 2019. The procedure used is a quantitative procedure as stated by Creswell and Sugiyono. Researchers test theories by ascertaining hypotheses and gathering information to support or refute them. Hypothesis with. The variables in the study were X1, X2 learning interests such as free variables and student learning outcomes (Y) such as bound variables. The population in this study was a class X student at vocational school in Pontianak with a total of 119 students. In contrast, the sampling method used is a simple method of random sampling.

Information collection using the document method tried by collecting various documents related to research problems in the form of student learning documents, as well as the questionnaire method is to share a set of written statements to respondents to answer. The instrument in the study is a closed questionnaire that provides information relating to the discipline in education as well as an interest in student learning outcomes. The questionnaire in the study was the Likert scale, in the form of statement items accompanied by columns that displayed alternative levels in sorting out existing answers. Processing of validity and reliability tests is assisted by the SPSS 22 program. Information analysis methods include descriptive statistical analysis as well as testing of information analysis requirements consisting of normality testing, linearity tests, Heteroskedasticities Tests, and test multicollinearity .Hypothesis testing includes simple regression analysis as well as multiple regression analysis.

RESEARCH RESULTS

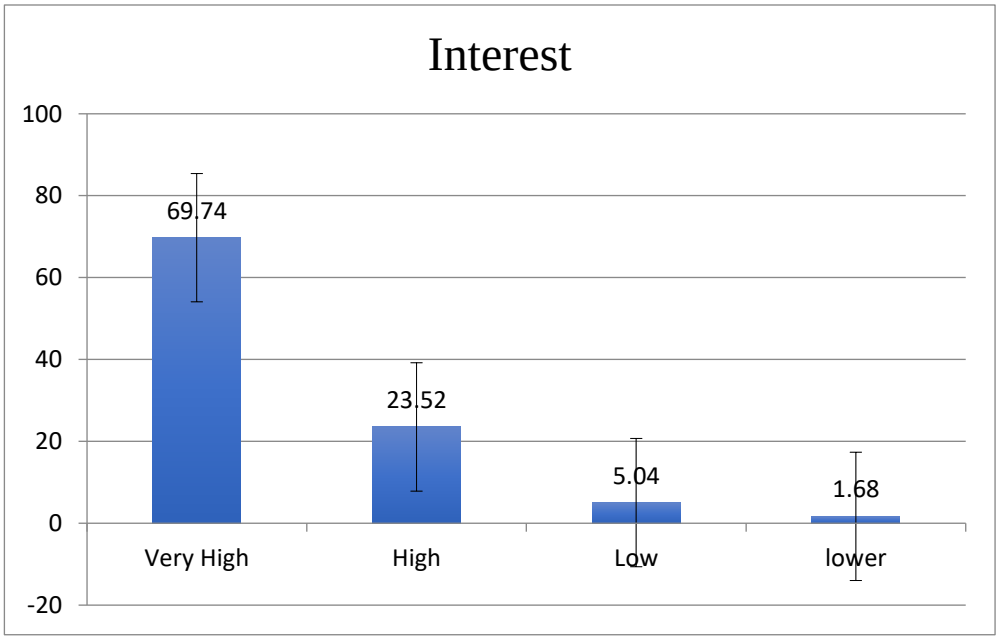
Learning interest data obtained from questionnaires with 26 questions with the number of respondents as many as 119 students in class X vocational school in Pontianak. Based on the questionnaire score that has been obtained, then descriptive analysis is carried out to get *the average* (mean), middle value *(median),* data that often appears (mode), standard deviation (standard *deviation),* variant *(variance).* Here are the results of research interests gained in 119 subjects:

TABLE 1
DESCRIPTIVE INTEREST ANALYSIS RESULTS

Statistics		
N	Saw	119
	Lost	0
Mean		74,50
Median		75,00
Mode		75
Std. Deviations		6,873
Variance		47,235
Leanings		-1,078
Std. Skewness Error		,222
Kurtosis		3,033
Std. Kurtosis Error		,440
Minimum		43
Maximum		88
Sum		8866

From table 1, it can be concluded that the average value is 74.50, the median is mode 75.00 75.00, the standard deviation is 6.873, the variance is 47.235, the minimum value is 43, the maximum value is 88. In determining the number of interval classes used the rule stage the number of interval classes = 1 +3.3 log *n, where n is the* number of respondents.

FIGURE 1
CATEGORIES OF INTEREST IN LEARNING



Based on the figure of 1 category of interest aspects, it can be concluded that the interest of students studying at vocational schools in Pontianak has a very high level of interest. This can be seen from the score of 69.74% in the very high category represented by 83 respondents, 23.52% in the high category represented

by 28 respondents, 5.04% in the low category represented by 6 respondents, 1.68% in the very low category represented by 2 respondents.

DESCRIPTIVE VARIABLES OF LEARNING DISCIPLINE

Learning interest data was obtained from a questionnaire with 16 questions with 119 respondents. Based on the questionnaire score that has been obtained, then descriptive analysis is carried out to get *the average* (mean), middle value *(median),* data that often appears (mode), standard deviation (*standard deviation),* variance *(variance).* Here are the results of research interests gained in 119 subjects:

TABLE 2
RESULTS OF DESCRIPTIVE DISCIPLINE ANALYSIS

Statistics		
N	Saw	119
	Lost	0
Mean		50,51
Median		51,00
Mode		48[a]
Std. Deviations		4,742
Variance		22,489
Leanings		-,264
Std. Skewness Error		,222
Range		19
Minimum		39
Maximum		58
Sum		6011

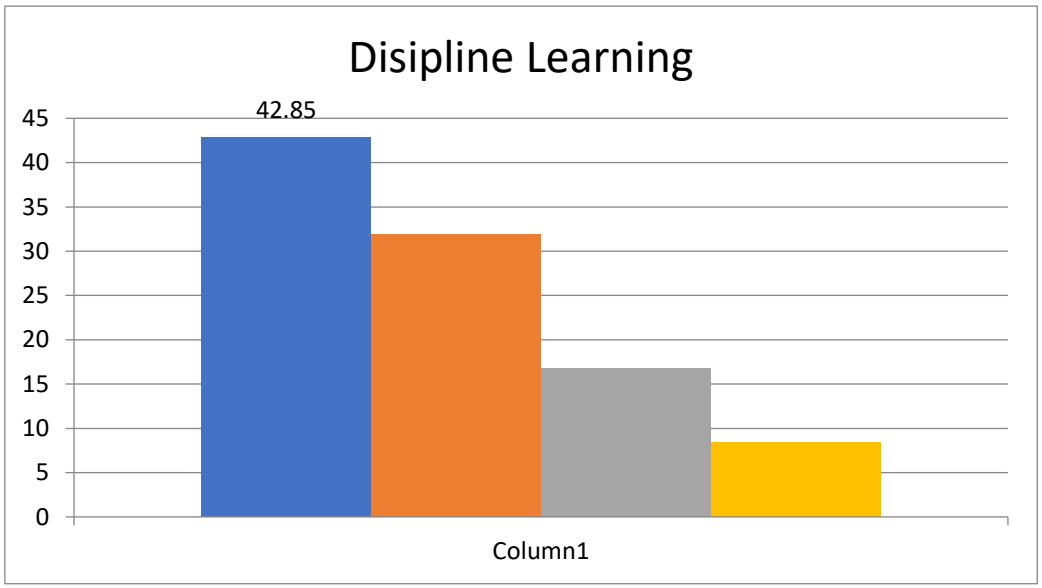
From table 2 can be concluded the average score 50.51, the median 51.00 mode 48.00, standard deviation 4,742, variance 22,489. minimum value 39, maximum value 58.

TABLE 3
DISTRIBUTION OF DISCIPLINED STATISTICS

Class Intervals	Frequency	Percentage (%)
36-38	0	0
39-41	5	4,20%
42-44	9	7,56%
45-47	16	13,44%
48-50	29	24,36%
51-53	26	21,84%
54-56	18	15,12%
57-59	16	13,44%
Entire	119	100%

Discipline variables can be calculated based on the instrument score which has a maximum = 58 and a minimum value = 39

FIGURE 2
CATEGORY OF LEARNING DISCIPLINES



Based on figure 2. The category of disciplinary aspects, it can be concluded that the discipline of learning students in SMK di Pontianak has a tendency in a very high category. This can be seen from the core 42.85% were in a very high category represented by 51 respondents, 32% were in the high category represented by 38 respondents, 17% were in the low category represented by 20 respondents, 8% were in the very low category represented by 10 respondents.

Descriptive Variable Learning Outcomes

TABLE 4
DESCRIPTIVE LEARNING OUTCOMES

N	Saw	119
	Lost	0
Mean		68,44
Median		70,00
Mode		70
Std. Deviations		11,413
Variance		130,265
Leanings		-1,127
Std. Skewness Error		,222
Range		68
Minimum		21
Maximum		89
Sum		8144

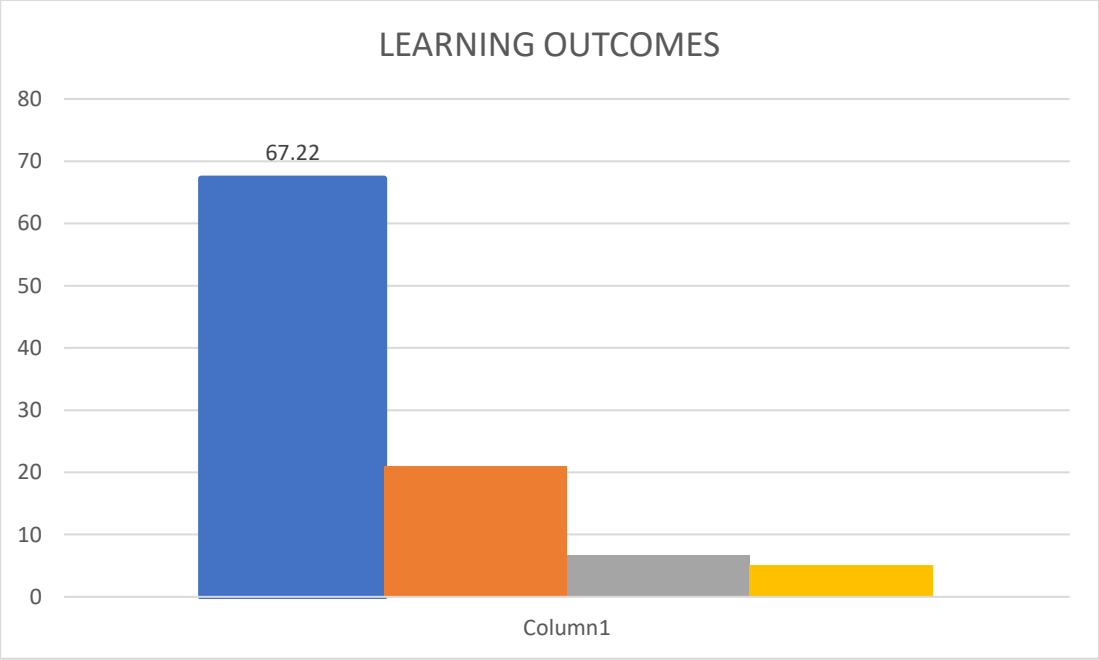
From table 4 can be concluded the average value of 68.44, the median 70.00 mode 70.00, the standard deviation 11,413, the variance 130,265. minimum value 21, maximum value 89.

TABLE 5
STATISTICAL DISTRIBUTION OF LEARNING OUTCOMES

Class Intervals	Frequency	Percentage (%)
21-29	1	0,84%
30-38	1	0,84%
39-47	6	5,04%
48-56	7	5,88%
57-65	24	20,17%
66-74	46	38,66%
75-83	27	22,69%
84-91	7	5,88%
Entire	119	100%

The learning outcome variable can be calculated based on the instrument score which has a maximum = 89 and a minimum value = 21

FIGURE 4
LEARNING OUTCOMES CATEGORY



Based on figure 4. The category of aspects of learning outcomes, it can be concluded that student learning outcomes at vocational school in Pontianak tend to be in a very high category. This can be seen from the score of 67% in the very high category represented by 80 respondents, 21% were in the high category represented by 25 respondents, 7% were in the low category represented by 8 respondents, 5% were in the very low category represented by 6 respondents.

INFERENTIAL ANALYSIS

Test Analysis Prerequisites

Testing this analysis is done with the aim of finding out if the sub-problems in the study have been met. In this test there are three tests that will be done, namely normality, linearity, and multicollinearity test.

Normality Test

The normality test aims to test whether the data is distributing normally. If the significance value is more than = 0.05 then the data is distributed normally, whereas if the significance value is less than = 0.05 then the data is not distributed normally. In this data analysis to test the normality of the data in the test using*αα the kolmogrov-smirnov* formula using the SPSS 18 application.

Normal testing of this data is needed to find out if the data in normal distributed analysis also comes from the normal population as well. How to calculate the data normality test in this research instrument using SPSS 18 with *the formula kolmogrov-smirnov*. Based on the analysis of known significance values that indicate normality if the price *coefficient asym*. kolmogrov-smirnov test output mark > of alpha is determined 5% (0.05) with normality test results are:

TABLE 6
ONE KOLMOGOROV-SMIRNOV SAMPLE TESTS INTEREST, DISCIPLINE, AND LEARNING OUTCOMES

		Remnant
N		119
Parameter Normal	Mean	,0000
	Std. Deviations	11,39227
The Most Extreme Difference	Absolute	,109
	Positive	,051
	Negative	-,109
Kolmogorov-Smirnov Z		1,187
Asymp, what's going on? Sig. (2 tails)		,120

Based on the normality test with *the kolmogorov-smirnov* test obtained a large asymp value of 0.120 > 0.05 stating that 3 variables consisting of two free variables and one related variable were distributed normally.

Linearity Test

This test uses a significance rate of 0.05 or 5% if the probability > 0.05, then there is a linear relationship between the free variable and the bound variable.

Test results showed that all the variables in the study had a linear relationship.

TABLE 7
LINEARITY TEST

Variable	Probability	Description
Interest in Learning and Learning Outcomes	0,353	Linear
Results of Discipline and Learning	0.888	Linear

Based on table 7, the probability value obtained from The Interest in Learning is 0.353 > 0.05, then the relationship between variable X1 and variable Y is said to be linear, and the probability value of the Discipline is 0.888 > 0.05, then the relationship between variable X2 and variable Y is said to be linear.

According to the criteria is if the probability greater than the significance level taken 0.05 or 5% means it is linearly related. From the calculations above, it can be concluded that the free and bound variables are greater than the level of significance (0.05) so that the influence of interest and discipline on student learning outcomes in Digital Simulation subjects in vocational schools in Pontianak is said to be linear.

Multicollinearity Test

To find out if the relationship between variables is free. Using correlation analysis will be obtained the price of the relationship between variables freely. *With Variance Inflation Factor* (VIF) no more than 10 and a tolerance value of no less than 0.1. So, if there is multicollinearity between free variables then the double correlation test cannot be continued. However, if there is no multicollinearity whether the regression model is found to have a correlation between free variables then the double correlation test can continue.

TABLE 8
MULTICOLLINEARITY TEST

Variable	Tolerance	Bright	Description
Mint Learning	0,724	1,382	There is no multicollinearity going on.
Discipline	0,724	1,382	There is no multicollinearity going on.

The results of the analysis presented in table 8 above show that the tolerance value between learning style variables is 0.724 > the values 0.1 and VIF *(Inflation Factor*) 1,382 < 10 so it can be concluded that there is no multicollinearity, while the results of the analysis presented above show that the tolerance value between student motivation variables is 0.724 > 0.1 and VIF (Variance *Inflation Factor).* The value of 1,382 < 10 so it can be concluded that there is no multicollinearity.

Test the Hypothesis

Decision making in the form of acceptable hypotheses or not, then used in this study is to provide the results of simple regression tests and multiple regression tests. To answer sub-problems 2 and 3, a simple regression test is used.

Simple Regression Test Results

Interest in Learning Outcomes.

Ha: *How interest affects students' learning outcomes in digital subject simulations at Vocational High School in Pontianak*

H0: *No influence of interest in student learning outcomes in simulation of Digital subjects at vocational school in Pontianak*

To find out how much influence a student's learning interests have on a student's learning outcomes, it's done using a simple regression test. Here are the results of data processing influence of interest on student learning outcomes at vocational school in Pontianak.

TABLE 9
SUMMARY MODELS INFLUENCE INTEREST IN LEARNING OUTCOMES

Half		Adjusted R. Square	Std error of the forecast
	R		
1	**,040**	**-,007**	**11,453**

The table above describes the number of correlations/relationship values (R) 0.40 and describes the percentage of the influence of free variables on bound variables called determination coefficients which are the result of calculation S R. From the output in obtaining the coefficient of determination (R2) of 0.02, which contains the understanding that the effect of interest-free variables on bound variables (learning outcomes) of 0.4% of the remaining influence is influenced by other factors.

TABLE10
ANOVA INFLUENCES INTEREST IN LEARNING OUTCOMES

ANOVA[b]						
Half		Number of Boxes	Df	Average Square	F	Own.
1	Regression	24,533	1	24,533	,187	.666[a]
	Remnant	15346,745	117	131,169		
	Entire	15371,277	118			
a. Predictor: (Constant), interest in						
b. Dependent Variables: learning outcomes						

Table 10 explains whether there is any real influence between interests in learning outcomes. From the output it is seen that F calculates =0.187 with a signification rate/probability of 0.666 > 0.05 then regression can be used to predict bound variables.

TABLE 11
COEFFICIENTS AFFECT INTEREST IN LEARNING OUTCOMES COEFFICIENTS

Half		Substandard coefficients		Standard Coefficient	Q	Own.
		B	Std. Error	Beta		
1	(Constant)	63,494	11,477		5,532	,000
	Interest	,066	,153	,040	,432	,666

In the *table coefficient* column B on constant (a) the result of the study is 63,494 and (b) is 0.66 so that the regression equation can be written Y = a + bX or 63,494 + 0.66

Discipline in Learning Outcomes

H_a: *There is a disciplinary influence on the results of digital student simulation learning at vocational school in Pontianak*

H_0: *No disciplinary influence on the learning outcomes of Digital Simulation students at vocational school in Pontianak*

To find out how much influence a student's learning discipline has on a student's learning outcomes, it's done using a simple regression test. Here are the results of data processing influence of interest on student learning outcomes at vocational school in Pontianak

TABLE 12
ANOVA INFLUENCES DISCIPLINE ON ANOVAB LEARNING OUTCOMES.

.Half		Number of Boxes	Df	Average Square	F	Own.
1	Regression	4,954	1	4,954	,038	.846[a]
	Remnant	15366,324	117	131,336		
	Entire	15371,277	118			
a. Predictor: (Constant), discipline						
b. Dependent Variables: learning outcomes						

The table above explains whether there is any real influence between discipline and learning outcomes. From the output F calculate = 0.038 with a signification/probability rate of 0.846 >0.05 then regression can be used to predict bound variables

TABLE 13
INFLUENCE OF DISCIPLINE ON LEARNING OUTCOME COEFFICIENTS

Half		Substandard coefficients		Standard Coefficient		
		B	Std. Error	Beta	Q	Own.
1	(Constant)	70,619	11,286		6,257	,000
	Discipline	-,043	,222	-,018	-,194	,846
a. Dependent Variables: learning outcomes						

In *the column B coefficient table* on constant (a) the result of the study is 70.519 and (b) is 0.-043 so that regression equations can be written

$$Y = a+bX \text{ or } 66,537 - 0.-043$$

Multiple Linear Regression Hypothesis Test Results

Multiple linear regression analysis is used to test hypotheses to determine the influence of student interest and leadership on processed learning outcomes using spss 18 assistance with the following results:

TABLE 14
INFLUENCE OF INTEREST AND LEARNING DISCIPLINE

Half	Substandard coefficients		Standard Coefficient		
	B	Std. Error	Beta	Q	Own.
(constant)	66,537	13,058		5,096	,000
Interest	,113	,181	,068	,627	,532
Discipline	-,130	,262	-,054	-,494	,622

Explain the regression equation:

$$Y = 66.537 + 0.113x1 - 0.130x2$$

From the regression equation multiplied above, showing that the learning outcome = 66,537, interest in learning 0.113, student discipline -0.130 form equation is interpreted as follows:

1. A constant score of 66,537 indicates that if there is no variable interest in student learning and discipline then the student's learning outcome is 66,537.
2. The regression coefficient (b1) indicates 0.11 3 that each addition of one learning interest score will increase by 0.113 if the student's disciplinary variable remains.
3. The regression coefficient (b2) indicates -0.130 on each addition of one student's leadership score will increase by -0.130 if the learning interest variable remains.

Based on the calculations above, it can be known the influence of the two free variables on the more dominant bound variable is variable X2 i.e. student discipline.

DISCUSSION

This research aims to determine the effect of interest on digital simulation learning outcomes, the influence of student discipline on digital simulation learning outcomes, the influence of interest in learning, joint student discipline on digital simulation learning outcomes. Based on research data that analyzes the learning interests of vocational students in Pontianak can n using an average score of 74. 50, median 75.00 mode 75,00, standard deviation 6,873, variance 4 7.2 35.

Simple regression coefficients can be worth a = 0.40 and b = 0.02, which contain the idea that variables independent of interest variables (learning outcomes) by 0.2% are influenced by other factors. Then the significance of 0.666> 0.05 In the column B coefficient table on constant t(a) the learning outcome is 63,494 and (b) is 0.066 so that the regression equation can be written Y = a + b X or 63,494 + 0.066.

Ho hypothesis in this study has no disciplinary influence on the learning outcomes of students of Digital Simulation subjects at Vocational School in Pontianak Rejected so that the conclusion of learning interest affects learning outcomes. In accordance with the theory expressed by Slameto (2010: 180) that interest is a feeling of preference and interest in something or activity, without anyone asking including learning actors.

Based on a study discipline questionnaire that will be distributed to students of SMK 119 in Pontianak with an average score of 50, 51, a median of 51.00 mode 48,00, standard deviation 4,742, variance 22,489.

The simple regression coefficient becomes a = 0.18 and b = 0.00 which implies that the independent variable discipline on dependent variables (learning outcomes) is 0.00% influenced by other factors. Then the significance of 0.846> 0.05 in column B coefficient table in constant learning outcome (a) is 70.619 and (b) is -0.043 so that the regression equation can be written as Y = a + bX or 70.619-.04 3.

Based on interest questionnaires and learning disciplines distributed to students in vocational After the analysis was done using multiple linear regressions, the regression coefficient was 0.61, meaning that it had a great positive influence on learning outcomes. While the coefficient of determining interest in learning and student learning disciplines together is 0.4%, the rest is influenced by other factors. Then the value of its significance is 0.807> 0.05. Multiple regression coefficients obtain values (a) 66, 537 and (b1) 0, 113 and (b2) 0, -130. So the linear equation is $Y = 66{,}537 + 0{,}113\ X_1 + 0{,}-130\ X_2$.

There is a mutually interest and disciplinary effect on student learning outcomes in the subject of Digital Simulation at vocational school in Pontianak, and the conclusion is that students' interests and disciplines together influence learning outcomes.

CONCLUSION

This research aims to find out the influence of interest on digital simulation learning outcomes, the influence of student discipline on digital simulation learning outcomes, the influence of learning interests, student discipline along with digital simulation learning outcomes. Based on the research data analyzed, the translator conducts about the following research results.

Interest in Learning

Based on the study interest questionnaire distributed to 119 vocational students in Pontianak obtained an average score of 74.50, a median of 75.00mode of 75.00, a standard deviation of 6,873.

The simple regression coefficient obtains values a = 0.40 and b = 0.02, which echoes the understanding that the effect of interest-free variables on bound variables (learning outcomes) the remaining 0.2% is influenced by other factors. Then the significance value of 0.666 > 0.05 In the column B coefficient table on constant (a) the learning outcome is 63.494 and (b) is 0.066 so that the regression equation can be written Y = a + bX or 63.494 + 0.066.

Ho's hypothesis in this study is that there is no influence of discipline on student learning outcomes on vocational high school digital simulation subjects in Pontianak. Rejected so that the conclusion of learning interest affects the learning outcome.

Learning Discipline

Based on a study discipline questionnaire distributed to students from 119 vocational students in Pontianak obtained an average score of 50.51, a median of 51.00mode 48.00, a standard deviation of 4,742,489.

The simple regression coefficient derives values a = 0.18 and b = 0.00, which echoes the understanding that the influence of discipline-free variables on bound variables (study results) the remaining 0.00% is influenced by other factors. Then the significance value of 0.846 > 0.05 In *the column B coefficient table* on constant (a) the result of the study is 70.619 and (b) is -0.043 so that the regression equation can be written Y = a + bX or 70.619-0.043.

Influence of Learning Interests, Student Discipline With Learning Outcomes

Based on an interest questionnaire and learning discipline distributed to the remaining 119 students at Vocational High School in Pontianak. After the analysis using double linear regression obtained a regression result coefficient of 0.61 which means that it has a great positive influence on learning outcomes. While the determination of the coefficient of interest and discipline of learning students together by 0.4% the rest is influenced by other factors. Then the signification value is 0.807 > 0.05. The multiple regression coefficients derive values (a) 66.537 and (b1) 0.113 and (b2) 0, -130. So, the linear equation is Y = 66.537 + 0.113X1 + 0, -130X2.

There is a shared influence of interest and discipline on student learning outcomes on vocational high school simulation digital subjects in Pontianak rejected, and as a conclusion students' interest and discipline together affect learning outcomes.

The results of this study are in line with research conducted by Michael Plato with the title on the role of self-concept related disciplines in in-depth and surface approaches to learning among students that approaches in learning and disciplines can improve student learning outcomes and research conducted.

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