

The Influence of Interest and Creativity on Learning Achievement Students of SMKN 1 Tongkuno

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Abstract— This study aims to: (1) determine the effect of interest in learning on student achievement in the electrical installation engineering expertise program 11th class SMK Negeri 1 Tongkuno, (2) to determine the effect of learning creativity on student achievement in the electrical installation engineering skill program 11th class SMK Negeri 1 Tongkuno, and (3) to determine the effect of interest and creativity on student achievement in the electrical installation engineering expertise program 11th class SMK Negeri 1 Tongkuno. The population in this study was all students of class XI-a (28 students) and students of class XI-b (25 students) at SMK Negeri 1 Tongkuno, with 53 students, so this research is a population study. Questionnaires and documentation do data collection. Questionnaire to collect data on interest and creativity in learning while documentation to collect data on learning achievement. This instrument trial was conducted on 35 students of 11th class TITL SMK Negeri 1 Tongkuno; the multiple regression analysis techniques were used in the data analysis. The analysis requirements test was conducted before data analysis, including normality, multicollinearity, autocorrelation, and heteroscedasticity. The result of this study is that (1) learning interest (X1) has a significant effect on learning achievement (Y), which is indicated by a significance value of $.000 < .023$ so that the first hypothesis proposed can be accepted. Learning creativity (X2) has a significant effect on student achievement (Y); this is indicated by a significance value of $.004 < .05$, so the second hypothesis formulated in this study can be accepted. Based on the result of hypothesis testing, it claims that student progress in the electrical installation engineering competence program 11th class SMK Negeri 1 Tongkuno is significantly influenced by enthusiasm and creativity, it can be proven by the significance value of F (F-sig) of $= .000$ which means it is smaller than $\alpha = .05$ (F-sig $.000 < .05$).

Keywords: interest, creativity, learning achievement

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I. INTRODUCTION

Education is a complex event. This event is a series of communication activities between humans so that humans grow as a whole person. An educational outcome can be of high quality if graduates' knowledge, skills, and attitudes help them continue higher education and after returning to society (Jacob et al., 2012).

So, education is an activity that is carried out intentionally so that students have a good attitude and personality. The implementation of education must be carried out following the National Education System based on Law no. 20 of 2013. According to Law no. 20 of 2013 concerning national education, one of the types of secondary education in Vocational High School (in Indonesian, it is abbreviated as SMK).

Vocational high school is one of the vocational education institutions in engineering. At this time, the teaching staff at vocational high schools are very

much needed. However, these teaching staffs need serious attention to welcome the era of globalization and meet the demands of the world of work that requires skilled and professional workers in their fields. This gives a role that human resources primarily determine the success of the development.

SMK Negeri 1 Tongkuno is located in Kontumolepe Village, Muna Regency, Southeast Sulawesi Province. SMK Negeri 1 Tongkuno is a vocational high school that implements the 2013 curriculum. The 2013 curriculum, often known as character-based education, was developed by the Indonesian Ministry of Education and Culture to replace the Education Unit Level Curriculum. The 2013 curriculum emphasizes comprehension, skills, and character development; students must grasp the content, participate actively in debates and presentations, and maintain strict disciplinary standards. Subjects must be followed by all students in education units at each academic unit or level,

according to the 2013 curriculum. Therefore, it is essential to make changes and improvements in the learning process.

Learning achievement results from an activity that has been done, or created, both individually and in groups, and a person's attitude in completing a thing (Hamdani, 2011). Learning achievement is the result achieved by someone after going through a learning process (Kamagi et al., 2021). One factor that influences learning achievement is interest in learning and learning creativity (Abu & Widodo, 2004).

Interest in learning is the most convincing foundation for the success of a teaching and learning process. Interest in learning that grows in students' souls dramatically affects the process and way of learning (Sermatan et al., 20121). Interest in learning includes pleasure, willingness, awareness, and attention to lessons. Students with high learning interest will have high learning achievement and vice versa. In addition to students' interest in learning, creativity is another factor that affects learning achievement (Putra et al., 2021).

Creativity is the ability of students to reprocess the lessons learned to provide new ideas and apply them in problem-solving by demanding fluency in thinking, flexibility in attitude, authenticity in opinion, and enriching and developing an idea. Students who have high learning creativity tend to achieve high learning achievement, and conversely, students who have less creativity tend to have low learning achievements.

Based on initial observations made at SMK Negeri 1 Tongkuno class XI in the subject of Electrical Installation Engineering Expertise Program, it was found that there were several problems with student achievement, which remained low. This is demonstrated by a lack of enthusiasm in student learning during the teaching and learning process in a variety of disciplines in general, and in the Electrical Installation Engineering Expertise Program subjects in particular. In addition, inadequate facilities and infrastructure, class conditions that are not conducive, the learning process are less effective, and the lack of creativity of students has an impact on student achievement, especially in the subjects of the Electrical Installation Engineering Expertise Program class XI.

II. METHOD

The method used in this research is a quantitative associative method. What is meant by associative research is research that aims to determine the influence or relationship between two or more variables (Sugiyono, 2014).

Research variables are everything determined by the researcher to be studied so that information is obtained about it, and then conclusions are drawn (Sugiyono, 2015).

The population of this study were all students of class XI-a (28 students) and students of class XI-b (25 students) at SMK Negeri 1 Tongkuno.

The sampling technique used in this study is simple random sampling; the sampling of population members is carried out randomly without regard to the existing strata in the population; with this technique, each population has the same opportunity to become a member of the sample.

The sample in this study used the formulation proposed by Slovin in the formula 1 (Sugiyono, 2015).

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

For :

n = Sample Size

N = Number of students in class XI SMK Negeri 1 Tongkuno

e = Percentage of inaccuracy due to error 10 percent

To collect data and research information, data collection techniques are used as follows:

1. Questionnaire Method

Questionnaires are several written questions used to obtain information from respondents in terms of reports about their personalities or things they know (Sugiyono, 2014). The form of the questionnaire used in this study was a closed questionnaire, in which the respondents gave answers that had been provided by providing a list of questions that students must fill out directly at the research site. The list of questions relates to the variables of interest in learning and creativity. The data generated in this study is quantified qualitative data, so it needs to be converted into a score. The measurement scale uses a Likert scale (Sugiyono, 2014) in Table 1.

Table 1. Likert Scale

Comments	Score
TS : Tidak Setuju (Disagree)	1
KS : Kurang Setuju (Slightly Disagree)	2
R : Ragu-Ragu (Hesitant)	3
S : Setuju (Agree)	4
SS : Sangat Setuju (Strongly Agree)	5

2. Documentation Method

This method is used to collect information or data by studying the documents of SMK

Negeri 1 Tongkuno, which includes the names and numbers of students, and so on.

This research is located at SMK Negeri 1 Tongkuno, located in Kontumolepe Village, Muna Regency, Southeast Sulawesi Province. With a research time of approximately three months since the research permit was issued.

III. RESULTS AND DISCUSSION

Descriptive statistics give an overview or description of data based on the average (mean), standard deviation, maximum, and lowest values of each variable (Arifina, 2019). The variables used consisted of learning interest variables, learning creativity and student achievement variables. From the data of one dependent variable and two independent variables, descriptive statistical tests were tested, and then the results were obtained in Table 2.

Table 2. Descriptive Statistics

	N	Min.	Max.	Sum	Mean	Std. Dev.
Learning Interest	35	20	98	2709	77.40	13.406
Learning Creativity	35	52	94	2506	71.60	10.158
Learning Achievement	35	65	97	2752	78.63	7.138
Valid N (listwise)	35					

The table was analyzed based on the answers to the questionnaire statements given to 35 students at SMK Negeri 1 Tongkuno, which were designed using a Likert scale. The table describes the minimum (lowest score), maximum (highest score), sum (sum of scores), mean (average value) and standard deviation. In the interest in learning, the minimum score is 20, the maximum value is 98, the total score (sum) is 2,709, the average value (mean) is 77.40, and the standard deviation (standard deviation) is 13.406.

In the variable of Learning Creativity, the minimum score is 52, the maximum value is 94, the total score (sum) is 2,506, the average value (mean) is 71.60, and the standard deviation value (standard deviation) is 10.158. The minimum score on the learning accomplishment variable is 65, the maximum value is 97, and the total score (sum) is 2,752, the average value (mean) is 78.63, and the standard deviation value (standard deviation) is 7.138.

A validity test is an index that shows the measuring instrument measures what is being measured (Arifina, 2019). A validity test is used to

measure the validity or validity of a questionnaire. Questionnaire items are declared valid if the total score correlation is $>$ from the r -table value. To test whether each indicator is valid or not.

Based on the findings of the first validity test, it is known that in the Learning Interest variable (X_1), all statement items used in the questionnaire are valid, where the total score correlation is $>$ from the r -table value. Meanwhile, in the Learning Creativity variable, it was found that there was 1 (one) invalid question item, namely the statement item $X_2 = .08$. However, apart from invalid question items, all question items can be used in the entire test model.

Because there is an invalid statement item on the Learning Creativity variable (statement item $X_2 = .08$), to save time, effort and cost, the author uses an alternative with the invalid statement item and then does a second validity test.

The following are the results of the second stage of the Learning Creativity variable validity test after removing the invalid statement item. This is seen in Table 3.

Table 3. Learning Creativity Variables Validity Test Results After Invalid Statement Items Are Removed

Variable	Total Score Correlation	R _{table}	Value	Desc.
Learning Creativity	X2.01	.459	.283	Valid
	X2.02	.654	.283	Valid
	X2.03	.331	.283	Valid
	X2.04	.619	.283	Valid
	X2.05	.780	.283	Valid
	X2.06	.289	.283	Valid
	X2.07	.602	.283	Valid
	X2.09	.649	.283	Valid
	X2.10	.526	.283	Valid
	X2.11	.634	.283	Valid
	X2.12	.379	.283	Valid
	X2.13	.505	.283	Valid
	X2.14	.519	.283	Valid
	X2.15	.422	.283	Valid
	X2.16	.323	.283	Valid
	X2.17	.538	.283	Valid
	X2.18	.750	.283	Valid
	X2.19	.769	.283	Valid
	X2.20	.507	.283	Valid

Reliability is an index that shows how a measuring instrument can be trusted or relied on (Tavakol & Dennick, 2011). A reliability test aims to measure the consistency of a person's answers to the question items in the questionnaire. The reliability

test criteria are to see the value of Cronbach Alpha (α) for each variable. A variable is deemed to be dependable if its Cronbach Alpha value is greater than .60. Table 4 shows the results of the reliability testing.

Table 4. Results of Reliability Testing

Variable	Cronbach's Alpha	Reliability Standard	Desc.
Learning Interest	.931	.60	Reliable
Learning Creativity	.861	.60	Reliable

The research instrument reliability test in Table 4 shows that all indicator items used to measure each variable are reliable, where all indicator items have an alpha coefficient greater than .60 ($>.60$). Therefore, the instrument used in collecting data is declared reliable at = .05 or 95 percent confidence level so that all questions can be trusted and can be used for further research.

Classical assumption testing was carried out before hypothesis testing, including normality test, multicollinearity test, autocorrelation test and heteroscedasticity test. The analysis prerequisite test was performed using the SPSS for Windows application.

A normality test is a test conducted to test the normality of data (Yazici & Yolacan, 2007). A good regression model is a regression model that is normally distributed. The easiest way to see the normality of data is to use the Normality Probability Plot test. This prediction is used by looking at the plot points. If the points or data are close to the diagonal line, then the data used can be normally distributed. In addition to using the Normality Probability Plot, to ensure the normality of the data, the Kolmogorov Smirnov test is used. The following are the results of the normality test based on the Normality Probability Plot and Kolmogorov Smirnov test, as seen in Figure 1.

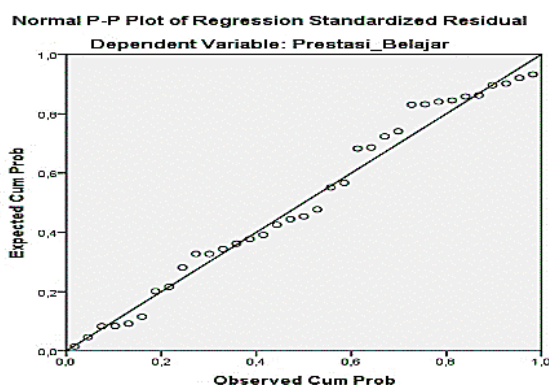


Figure 1. Kolmogorov Smirnov Normality Test

Based on the results of the p-plot graph, it can be seen that the data or points follow and approach the diagonal line; this indicates that the existing data is normally distributed. To make sure that the data is normally distributed, the Kolmogorov Smirnov test is used. In Table 5, it can be observed from the Kolmogorov Smirnov test that the significance level is greater than .05 or 5 percent (Asymp. Sig. 2-tailed .196 $>.05$) So the variables used in this study are interesting in learning and learning creativity. Furthermore, student learning achievement is proven to be normally distributed. Because the data in this research is regularly distributed, the normality test may be met.

Table 5. One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		35
Normal Parameters	Mean	.0000000
	Std. Deviation	4.37007510
Most Extreme Differences	Absolute	.123
	Positive	.066
	Negative	-.123
Test Statistic		.123
Asymp. Sig. (2-tailed)		.196^c

Based on the results of the p-plot graph, it can be seen that the data or points follow and approach the diagonal line; this indicates that the existing data is normally distributed. To make sure that the data is normally distributed, the Kolmogorov Smirnov test is used. The significance threshold is more than .05 or 5 percent, as seen in the Kolmogorov Smirnov test table. (Asymp. Sig. (2-tailed) .196 $>.05$) So the variables used in this study are interesting in learning, learning, creativity and achievement. Student learning is proven to be normally distributed. Because the data in this research is regularly distributed, the normality test may be met.

The autocorrelation test arises because consecutive observations over time are related to each other (DeCarlo & Cross, 1990). A run test was carried out to determine the existence of autocorrelation in the regression model. The basis for decision making in the run test is the Asymp value. Sig. (2-tailed) is more significant than 0.05, and there is no evidence of autocorrelation. (Mamahit, 2019). The results of the autocorrelation test with the run test are shown in Table 6.

Table 6. Autocorrelation Test Results

Runs Test		
Sig. (2-tailed)	Significance Level	Description
.087	.05	There is no autocorrelation

Based on Table 6, the Asymp value is well known. Sig. .087 (2-tailed) > .05, it can be concluded that the data in this study does not have an autocorrelation problem. Thus, the variables in this study can be used, and linear regression analysis can be continued.

The multi-collinearity test is used to see whether there is a correlation between the independent variables in the study (Dormann et al., 2013). A regression model is a decent regression model that does not have multi-collinearity deviations. To determine whether there is a connection between independent variables, utilize the VIF (Variance Inflation Factor) and Tolerance calculations. Regression will be said to pass the multi-collinearity test if the VIF value is ten and the Tolerance value .10. The following is the result of the calculation of VIF and Tolerance. This is seen in Table 7.

Table 7. Test Results for VIF and Tolerance

Model	Variable	Collinearity Statistics		Desc.
		Tolerance	VIF	
1	Learning Interest	.481	2.079	There is no multi-collinearity
	Learning Creativity	.481	2.079	There is no multi-collinearity

The results of the SPSS output above can be seen that the results of the calculation of VIF and Tolerance indicate that there are no symptoms of multicollinearity in the variables used in this study. This indicates that the variables used do not correlate with each other, so they can be used in research.

A good regression model is a regression model that does not have heteroscedasticity in it (Khaled et al., 2019). In this study, the Scatterplot test is used to determine whether there are symptoms of heteroscedasticity.

The output of Scatterplots shows that the points are scattered above and below or around the number 0 (zero), and the dots do not accumulate solely above or below the number 0 (zero). Thus, there is no heteroscedasticity problem, so a good and ideal regression model can be fulfilled. Multiple linear regression analysis was used to test the study hypothesis. This is done to determine whether learning interest and learning creativity influence student achievement in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno. The results of multiple linear regression analysis can be seen in Table 8.

Table 8. Recapitulation of Multiple Regression Analysis Results

Independent Variable (X)	Regression Coefficient (β)	t _{count}	t _{significant}	Desc.
Learning Interest	.371	2.380	.023	Significant
Learning Creativity	.480	3.480	.004	Significant
a. Dependent variable: Student achievement				
Constant	39.176	N = 35		
R	.791	α = .05 (5 percent)		
R Square	.625			
F _{count}	26.683			
F _{sig}	.000			
Standar Error	4.505			

According to the table, the regression coefficient (β) beta (X1) interest in learning of .371 is positive, meaning that the higher the student's interest in learning, the student's learning achievement will increase. Likewise, the value of the regression coefficient (β) beta (X2) learning creativity of .480 is positive, meaning that the higher the student's learning creativity, the higher the student's learning achievement.

Based on the coefficient of determination analysis presented in the table, the coefficient of determination (R Square) is .625. This shows that interest in learning and creativity in learning affect Student Achievement in Electrical Installation Engineering Expertise Program Class XI at SMK Negeri 1 Tongkuno by 62.5 percent. Other characteristics not included in this study model impact the remaining 37.5 percent.

A hypothesis test was conducted to prove whether interest in learning and creativity in student learning affect student achievement in the Electrical Installation Engineering Expertise Program Class XI at SMK Negeri 1 Tongkuno. Hypothesis testing is done using 2 (two) ways.

A partial test (t-test) is used to test whether each independent variable significantly affects the dependent variable. At the 95 percent confidence level, partial testing (t-test) was performed by comparing the significance value of the t (t sign) with the alpha value (= .05). According to the table, the findings of hypothesis testing show:

1. Learning Interest (X1) has a substantial influence on Learning Achievement (Y), as evidenced by a significance value of .000. < .023, implying that the first hypothesis provided is correct. On this basis, Learning Interest (X1) can be categorized as one of the variables that significantly affect Student Achievement in the

Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno.

2. Learning Creativity (X2) has a significant effect on Student Achievement (Y); this is indicated by a significance value of $.004 < .05$, so the second hypothesis formulated in this study can be accepted. On this basis, Learning Creativity (X2) can be categorized as one of the variables that significantly affect Student Achievement in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno.

According to the table, the findings of hypothesis testing that Learning Interest and Learning Creativity have a substantial impact on student achievement in the Electrical Installation Engineering Expertise Program at SMK Negeri 1 Tongkuno Class XI; this can be proven by the significance value of F (F-sig) of = .000 which means smaller than = 0.05 (F-sig $.000 < .05$).

Learning Interest and Learning Creativity can be viewed as having a substantial effect on Student Achievement in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno. The third hypothesis provided can be accepted based on the findings of this test.

Based on the analysis results in this study, the regression coefficient value (β) of positive learning interest was .371. The regression coefficient value of the positive learning interest variable indicates that interest in learning positively influences student achievement in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno. Suppose student interest in learning increases by 1 percent, and student achievement in Electrical Installation Engineering subjects will increase by .371. In addition, based on the hypothesis test shown in Table 8, the significance value of the t-test on the variable of interest in learning is .023. When compared with the set significance value of 5 percent (.05), then the calculated significance value is smaller than the specified significance value ($.023 < .05$). On this basis, it can be concluded that partially "Learning Interest has a positive and significant effect on Student Achievement in the Electrical Installation Engineering Skills Program class XI-A and Class XI-B SMK Negeri 1 Tongkuno.

The existence of a positive and significant influence on Learning Interest on Student Achievement in the Electrical Installation Engineering Skills Program class XI-A and Class XI-B SMK Negeri 1 Tongkuno is supported by the indicators attached to the student's interest in learning. These indicators include the feeling of pleasure that students have towards the electrical installation engineering expertise program subjects.

Students who feel happy participating in electrical installation engineering lessons will be shown through the actions of students who feel happy if they get assignments from the teacher, enjoy participating in electrical installation engineering expertise programs, and enjoy studying and reading books related to electrical installation engineering lessons so that it will form a positive attitude with students with student disciplinary actions such as quickly coming to school if there is an electrical installation engineering lesson on that day.

Starting with the emergence of feelings of pleasure that exist in students towards the lesson, it will give birth to feelings of interest, raise students' attention to electrical installation engineering lessons, and encourage students to be involved in every activity related to electrical installation engineering lessons. Students will express a positive response in feeling at home in class when the electrical installation engineering lesson occurs. Students will pay attention to the teacher when giving electrical installation engineering lessons, and students will actively participate in discussions related to electrical installation engineering lessons. They will encourage students to learn more deeply about electrical installation engineering.

Thus, a high interest in learning expressed by positive attitudes in the indicators of interest in learning will positively and significantly influence student achievement in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno.

The findings of this study back with previous studies by Abdul Rohim (2011), Wilda (2017), Yoga P. Kurnia (2016), and Edwin (2017), which show that interest in learning has a positive effect on learning achievement, meaning that if interest in learning increases the learning achievement will also improve.

Based on the findings of this study's analysis, the regression coefficient value (β) of learning creativity is positive, namely .480. The regression coefficient value of the positive learning creativity variable can be interpreted that learning creativity has a positive influence on student achievement in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno; if students' learning creativity increases by 1 percent, student achievement in Electrical Installation Engineering subjects will also increase by .480. In addition, based on the hypothesis test results in Table 8, the significance value of the t-test on the learning creativity variable is .004. When compared with the set significance value of 5 percent (.05), then the calculated significance value is smaller than the specified significance value ($.004 < .05$). On this basis, it can be concluded that, partially, Learning

Creativity has a positive and significant effect on Student Achievement in the Electrical Installation Engineering Skills Program class XI-A and Class XI-B SMK Negeri 1 Tongkuno.

Learning creativity is the ability of students to make new combinations based on existing information data or elements. A student can find many possible answers to a problem based on available data or information. The emphasis is on quality, usability, and diversity of answers, which can reflect fluency, flexibility, originality in thinking, and the ability to elaborate an idea.

The existence of a positive and significant influence on learning creativity on student achievement in the electrical installation engineering skill program class XI SMK Negeri 1 Tongkuno, of course, is supported by indicators attached to the variable of learning creativity, such as the awareness that arises from within a student to have and have great curiosity about something. This attitude of great curiosity can be done if you find a new mechanical item; students do not hesitate to ask about the benefits and how it works; if there is a lesson or topic that the answer is not known, then in addition to asking the teacher to satisfy his curiosity, students can also use other alternatives such as reading books in the library and using the internet.

The existence of this attitude of great curiosity will encourage students to be involved in providing ideas and suggestions for an existing problem with reliable ideas, creating a willingness always to feel happy when trying new things until, finally, it will make students feel better. Students become independent and can work well in groups. The high level of creativity in a student's learning makes it easier for students to solve problems. This ability is necessary for everyone, especially for class XI students of SMK Negeri 1 Tongkuno in solving and solving problems related to the Electrical Installation Engineering Expertise Program lesson. Thus, high learning creativity will have an impact on increasing student achievement.

The results of this study support previous research conducted by (ANIKMA, 2017), which states that learning creativity positively influences learning achievement. If learning creativity increases, learning achievement will also increase.

This study indicates that interest in learning and learning creativity have a positive and significant effect on student achievement in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno. This is evidenced by the positive value of the regression coefficient (β) variable interest in learning (.371) and learning creativity (.480). In addition to the value of the

regression coefficient (β), both variables are positive; interest in learning and creativity in learning together also significantly affect student achievement in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno. This is evidenced by the significance value of the hypothesis test (F-Test), less than .05 ($.000 < .05$). On this basis, the third hypothesis formulated in this study is acceptable. Student accomplishment in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno is positively and significantly influenced by learning enthusiasm and inventiveness.

The value of the coefficient of determination (R square) is .625. This can be interpreted as the variable interest in learning and learning creativity to student achievement in the Electrical Installation Engineering Expertise Program Class XI SMK Negeri 1 Tongkuno is 62.5 percent. In contrast, the remaining 37.5 percent is influenced by other factors not included in the model—this research.

Interest in learning is the attention, liking, and interest of someone (students) towards learning which is shown through enthusiasm, participation, and activeness (Arifina, 2019). While learning, creativity is the ability of students to find, create and solve a problem related to the things being studied. Something new here does not have to be all-new, but it can also be a new combination or discover new associations between already existing data items or entities.

A student who has a high interest and creativity in learning will affect increasing student achievement. Learning achievement is the result of an assessment of the learning activities that have been carried out and is a form of final formulation given by the teaching staff to see to what extent students' abilities are expressed in the form of symbols, numbers, letters, and sentences that can reflect the results that have been achieved. Improved student learning outcomes will be reflected through the level of knowledge, understanding, analysis, and application of the material learned in everyday life.

The findings of this study back up earlier studies by (ANIKMA, 2017), which demonstrates interest and creativity in learning positively influence learning achievement, meaning that if interest and creativity in learning increase, student achievement will also increase.

IV. CONCLUSION

Based on the results of research and discussion, several conclusions can be drawn. Interest in learning has a positive and significant effect on student

achievement in the electrical installation engineering expertise program for class XI at SMK Negeri 1 Tongkuno. Learning Creativity has a positive and significant effect on student achievement in the electrical installation engineering expertise program for class XI at SMK Negeri 1 Tongkuno. Simultaneously, interest in learning and creativity in learning affect Student Achievement in Electrical Installation Engineering Expertise Program Class XI at SMK Negeri 1 Tongkuno by 62.5 percent.

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