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The Influence Of School Environment And Learning Interests On Students' Learning Outcomes In Informatics Subjects At State Vocational High School 2 Tulungagung

Angga Putra Yonianta [1)], Rico Andhika Putra [2)]

1. Information Technology Education Study Program, Faculty of Science and Technology, Universitas Bhinneka PGRI, Indonesia
Email address : anggapya@gmail.com
2. Automotive Technology Vocational Education Study Program, Faculty of Science and Technology, Universitas Bhinneka PGRI, Indonesia
Email address : ricoandhikaputra@ubhi.ac.id

***Abstract*— Informatics is one of the general subjects taught in vocational high schools, aimed at equipping students with skills in information and communication technology. Based on observations and literature review from the PLP report, problems were identified related to the school environment and students' learning interest, which were found to affect learning outcomes in Informatics at State Vocational High School 2 Tulungagung. Therefore, the researcher conducted a study to examine the influence of the school environment and learning interest on students' learning outcomes in Informatics subjects at the school. This research was carried out in the 2024/2025 academic year using a quantitative approach with a non-experimental design. The study involved 74 students from Grade 10 Light Vehicle Engineering 1 and Grade 10 Autotronic Engineering 1, selected using a cluster random sampling technique. Data were collected through questionnaires and documentation of the mid-semester summative assessment results. Data analysis was performed using IBM SPSS Statistics 26. The t-test results showed that the school environment variable (X_1) had a positive and significant effect on learning outcomes (Y), with a t-value of 2.383 and a significance level of 0.020. The learning interest variable (X_2) also had a positive and significant effect on learning outcomes (Y), with a t-value of 2.829 and a significance level of 0.006. Furthermore, the F-test results indicated that both independent variables (X_1 and X_2) simultaneously influenced the dependent variable (Y), with an F-value of 12.582 and a significance level of 0.000. Based on these findings, it can be concluded that both the school environment and learning interest have a positive and significant influence, both partially and simultaneously, on students' learning outcomes in Informatics subjects at State Vocational High School 2 Tulungagung.**

Keywords—Informatics, School Environment, Learning Interests, Learning Outcomes

I. INTRODUCTION

Education aims to create high-quality human resources (HR) who contribute to the nation and the state intellectually, emotionally, and spiritually. This aligns with the goals of the Indonesian national education system as stated in Law Number 20 of 2003 concerning the National Education System:

> "National education functions to develop capabilities and to shape the character and civilization of a dignified nation. It aims to develop the full potential of learners so that they become individuals who are faithful and devoted to God Almighty, possess noble character, are healthy, knowledgeable, competent, creative, independent, and become democratic and responsible citizens."

Education serves as a fundamental pillar in the development of individual talents and potentials, both physically and spiritually, from birth. This process aligns with the values upheld in national and civic life. National education functions as a means to develop individual abilities and to shape the character and civilization of a dignified nation. It is organized with the goal of enlightening the life of the nation and developing students' potential so they may become individuals who are faithful and devoted to God Almighty, knowledgeable, virtuous, healthy, competent, independent, creative, and responsible democratic citizens [1]. In Indonesia, education is divided into several levels: basic education (elementary and junior high school), secondary education (senior high school and vocational high school), and higher education (diploma, undergraduate, master's, specialist, and doctoral programs).

Vocational high schools represent one of the secondary education tiers within Indonesia's national education system. Broadly defined, vocational high schools are vocational institutions designed to produce graduates who are not only skilled and proficient but also competitive in response to the demands of an increasingly globalized labor market [2]. Vocational high schools possess a number of distinctive advantages, including: (1) an emphasis on practical skill development, (2) accelerated pathways to employment, (3) curricula aligned with industry needs, and (4) a focused approach to career-oriented education.

Informatics is one of the general subjects taught at the vocational high school level, specifically designed to equip students with knowledge and skills in the field of information and communication technology (ICT) [3], [4]. Previously known as Simulation and Digital Communication, the subject of Informatics was introduced in conjunction with the

implementation of the Merdeka Curriculum. Under this new curriculum, Informatics is integrated as part of a broader effort to enhance students' digital competencies. The subject encompasses programming, digital literacy, and a deeper understanding of information technology that is more aligned with current technological developments and the demands of the modern workforce compared to its predecessor, Simulation and Digital Communication.

Learning is an activity undertaken to shape a complete personality through the mastery of scientific knowledge [5]. It has its own distinct characteristics, rooted in human awareness and the desire to change for the better, resulting in permanent changes brought about by experiences and repeated practice [6]. Learning does not solely occur through individual effort; it can also be acquired through the transfer of knowledge from others or through formal instructional processes.

According to [7], children's life skills must be viewed holistically from various aspects through the development of learning processes. Effective learning activities involve a series of interactions between teachers and students, supported by a conducive learning environment [8]. A supportive learning environment enables students to actively engage in the learning process. Active learning in schools can be achieved when all school members possess strong competencies in their respective fields. One effort to realize active learning in schools is ensuring that teachers possess adequate professional competence.

According to Law Number 14 of 2005 concerning Teachers and Lecturers, teacher competencies are classified into four categories: (1) pedagogical competence, (2) personal competence, (3) social competence, and (4) professional competence. In addition, teachers are also required to possess the ability to build synergy with their students and to manage learning effectively in order to enhance students' interest in the teaching and learning process in the classroom [9]. The success of learning depends largely on students' level of awareness and the degree of their interest [10].

State Vocational High School 2 Tulungagung is one of the leading vocational high schools located in Tulungagung. This school focuses on developing students' skills in various vocational fields in accordance with the needs of Indonesia's industrial and business sectors. State Vocational High School 2 Tulungagung offers eight areas of expertise, including: (1) Heavy Equipment Engineering, (2) Industrial Automation Engineering, (3) Motorcycle Engineering, (4) Light Vehicle Engineering, (5) Ototronic Engineering, (6) Welding Engineering, (7) Office Management, and (8) Accounting. The school is also equipped with various learning facilities to support the educational process, such as: (1) Ceremony field, (2) Sports field, (3) Classrooms, (4) Workshops, (5) Computer laboratories, (6) Library, (7) Student cooperative, (8) Mosque, (9) Wi-Fi, (10) Parking area, (11) Music room, and (12) Canteen.

Based on observations conducted by the researcher and a literature review of the PLP (School Field Practice) reports of Universitas Bhinneka PGRI students, it was found that in the 2024–2025 academic year, State Vocational High School 2 Tulungagung (SMKN 2 Tulungagung) had a total of 740 students in Grade X, 717 students in Grade XI, 638 students in Grade XII, and 57 students in Grade XIII. This data indicates a year-to-year increase in student enrollment. To address this issue, State Vocational High School 2 Tulungagung implements a moving class system during the learning process. This system was adopted due to the limited number of classrooms, which are insufficient to accommodate the growing number of students. As a result, learning takes place not only in classrooms but also in other facilities such as computer laboratories, vocational workshops, the PKK building, the school mosque, and the schoolyard. However, the implementation of the moving class system has reduced the effectiveness of learning, particularly for subjects like Informatics and others conducted in classrooms and laboratories. Students require additional energy due to frequent transitions between rooms. This is especially noticeable after practical sessions in the workshops, where students often experience fatigue, leading to decreased motivation and interest in subsequent lessons. Moreover, since most vocational competencies at State Vocational High School 2 Tulungagung are in the technical field, learning activities in the workshops often generate noise, which can disrupt students' concentration in nearby classes. Consequently, this situation contributes to a decline in students' learning interest.

The lack of student interest in Informatics at State Vocational High School 2 Tulungagung is primarily due to the fact that students' talents, interests, and expertise are generally not oriented toward the field of Information and Communication Technology (ICT). This is evident from the absence of any ICT-related expertise programs offered at the school. Moreover, the learning environment is often perceived as unengaging. The instructional methods employed by teachers tend to be teacher-centered, relying heavily on lectures, while the learning media used are often monotonous and lack variation. Students require diverse teaching methods to prevent boredom and to facilitate better understanding and absorption of the subject matter. In addition, teachers need to provide more recognition and encouragement in order to foster greater interest and motivation among students in learning Informatics.

Based on this background, the researcher intends to conduct a study entitled "The Influence of School Environment and Learning Interest on Students' Learning Outcomes in Informatics Subjects at State Vocational High School 2 Tulungagung."

II. RESEARCH METHOD

The method used by the author in this research is a quantitative approach with a non-experimental research design. According to [11] in their book Quantitative Research Methods, quantitative research is a systematic approach to investigating phenomena by collecting measurable data that can be analyzed using statistical, mathematical, and computational methods. This type of research is classified as ex post facto. Ex post facto research indicates that changes in the independent variables have already occurred prior to the study, and researchers face the challenge of identifying the causes of the observed effects [12]. It can be concluded that in such research, the researcher

does not manipulate variables but only analyzes cause-and-effect relationships based on collected data.

This study employs a dual design to identify whether there is an influence between two independent, School Environment (X_1) and Learning Interest (X_2) and one dependent variable, Learning Outcomes (Y). To determine the influence between X_1 and Y, as well as between X_2 and Y, the researcher uses simple linear regression methods. Meanwhile, to assess the combined influence of X_1 and X_2 on Y, multiple linear regression analysis is applied. The research data consist of numerical values obtained from questionnaires measuring the influence of the school environment, students' learning interest, and documentation of learning outcomes (mid-semester summative assessment scores) for Informatics subjects at State Vocational High School 2 Tulungagung. The following is the paradigm applied by the researcher in this quantitative study.

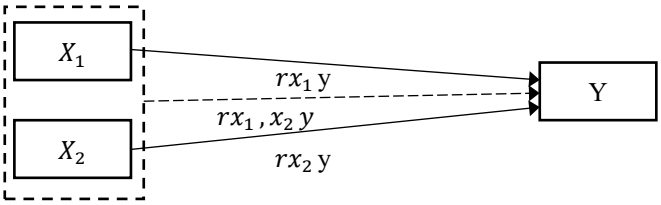


Fig. 1. Dual two-variable paradigm

Information :

X_1	: School Environment
X_2	: Learning Interest
Y	: Learning Outcomes
rx_1 y	: Influence Between X_1 and Y
rx_2 y	: Influence Between X_2 and Y
Rx_1, x_2 y	: Influence Between X_1 and X_2 on Y
———	: Simple Linear Regression
- - - - - - - -	: Multiple Linear Regression

According to [13], the population refers to the entire set of objects or subjects under study. In this research, the population comprised all Grade 10 students at State Vocational High School 2 Tulungagung, encompassing eight areas of expertise, with a total of 740 students. According to Suliyanto as cited in [14], if the population size is equal to or greater than 100, the sample should be taken at a proportion of 10/100 = 0.1 or 10%. In selecting the sample, the researcher employed the cluster random sampling technique, which is a type of probability sampling. This technique is used when the research population is large, and sample selection is carried out randomly based on predetermined groups or clusters [15]. The research sample data were randomly selected using Microsoft Excel 2010, applying the formula =RANDBETWEEN(1, 20). As a result, two classes were chosen: Grade 10 Light Vehicle Engineering 1 and Grade 10 Ototronic Engineering 1, with a total sample of 74 students. The data collected were numerical in nature, consisting of questionnaire scores measuring the influence of the school environment, including teaching methods, curriculum, student relationships with school members, enforcement of school regulations, school facilities, building conditions, and learning methods and questionnaire scores measuring learning interest, which included indicators such as enjoyment and interest in learning, active student engagement, diligence in studying and completing assignments, discipline and persistence, and the creation of study plans or schedules. Additionally, documentation of students' learning outcomes (mid-semester summative assessment scores) in the Informatics subject at State Vocational High School 2 Tulungagung was also used as research data. The data analysis techniques used in this study consisted of three types: instrument testing, prerequisite analysis testing, and hypothesis testing. The findings of this study were based on a comparison between the results of hypothesis testing and the predetermined hypotheses, as outlined below:

$H0_1$: There is no significant influence of the school environment on students' learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung.

Ha_1: There is a significant influence of the school environment on students' learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung.

$H0_2$: There is no significant influence of the learning interest on students' learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung.

Ha_2: There is a significant influence of the learning interest on students' learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung.

$H0_3$: There is no significant simultaneous influence of the school environment and learning interest on students' learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung.

Ha_3: There is a significant simultaneous influence of the school environment and learning interest on students' learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung.

III. Result and Discussion

A. Instrument Testing

The research instrument testing includes validity and reliability tests. According to [16], validity testing aims to measure how accurately a test performs its intended function, while reliability testing serves as a measurement tool to determine the extent to which the instrument used is trustworthy and consistently precise. Based on data analysis from 33 student respondents and calculations performed using IBM SPSS Statistics 26 for Windows, the results of the validity and reliability tests are as follows:

TABLE I. Results of the Validity Test of School Environment Variables

Number Of Item	*r-count values*	*r-table values*	*Sig. (2-tailed)*	*Na*	*Information*
P3	0,402	0,344	0,020	0,05	Valid
P4	0,596	0,344	0,000	0,05	Valid
P8	0,613	0,344	0,000	0,05	Valid
P13	0,500	0,344	0,003	0,05	Valid
P14	0,404	0,344	0,020	0,05	Valid
P15	0,360	0,344	0,040	0,05	Valid

P16	0,356	0,344	0,042	0,05	Valid
P17	0,528	0,344	0,002	0,05	Valid
P18	0,515	0,344	0,002	0,05	Valid
P19	0,404	0,344	0,020	0,05	Valid
P21	0,599	0,344	0,000	0,05	Valid
P22	0,744	0,344	0,000	0,05	Valid
P24	0,555	0,344	0,001	0,05	Valid
P25	0,608	0,344	0,000	0,05	Valid
P28	0,425	0,344	0,014	0,05	Valid
P29	0,820	0,344	0,000	0,05	Valid
P30	0,719	0,344	0,000	0,05	Valid

Table 1 shows that out of 30 questionnaire items on the school environment, 17 items have r-count values greater than the r-table value, and therefore can be considered valid.

TABLE II. GRID INSTRUMENT FOR SCHOOL ENVIRONMENT VARIABLE

Indicator	Item
Teaching methods	1, 2
Curriculum	3
Student relationships with school members	4, 5
Enforcement of school regulations	6, 7, 8, 9
School facilities	10, 11, 12
Building conditions	13, 14
Learning methods	15, 16, 17

TABLE III. RESULTS OF THE VALIDITY TEST LEARNING INTEREST VARIABLES

Number Of Item	r-count values	r-table values	Sig. (2-tailed)	Nα	Information
P2	0,611	0,344	0,000	0,05	Valid
P4	0,633	0,344	0,000	0,05	Valid
P5	0,369	0,344	0,035	0,05	Valid
P9	0,419	0,344	0,015	0,05	Valid
P10	0,448	0,344	0,009	0,05	Valid
P11	0,650	0,344	0,000	0,05	Valid
P12	0,710	0,344	0,000	0,05	Valid
P13	0,347	0,344	0,050	0,05	Valid
P14	0,512	0,344	0,002	0,05	Valid
P16	0,488	0,344	0,004	0,05	Valid
P19	0,669	0,344	0,000	0,05	Valid
P20	0,499	0,344	0,003	0,05	Valid

Table III shows that out of 20 questionnaire items on the learning interest, 12 items have r-count values greater than the r-table value, and therefore can be considered valid.

TABLE IV. GRID INSTRUMENT FOR LEARNING INTEREST VARIABLE

Indicator	Item
Enjoyment and interest in learning	1, 2
Active student engagement	3
Diligence in studying and completing assignments	4, 5, 6, 7
Discipline and persistence	8, 9, 10
The creation of study plans or schedules	11, 12

TABLE V. RELIABILITY TEST RESULTS

Variable	Cronbach's alpha	Sig.	N	Information
School Environment	0,852	0,6	17	Reliabel
Learning Interest	0,768	0,6	12	Reliabel

Table V indicates that the questionnaires on school environment and learning interest have Cronbach's Alpha values greater than the significance threshold, and therefore, both can be considered reliable. Based on the table above, it can be concluded that the questionnaire entitled "The Influence of School Environment and Learning Interest on Students' Learning Outcomes in Informatics at State Vocational High School 2 Tulungagung" meets the established reliability criteria.

B. Prerequisite Analysis Testing

The prerequisite tests for analysis include: normality test, linearity test, multicollinearity test, heteroscedasticity test, and homogeneity test. Based on data analysis from a sample of 74 students and calculations conducted using IBM SPSS Statistics 26 for Windows, the results of the tests are as follows:

1) Normality Test

According to [17], the normality test is a statistical test used to determine whether the distribution of data is normal. In this study, the researcher employed the Kolmogorov-Smirnov test for normality, which is commonly used to assess whether a sample originates from a population with a specific distribution.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		74
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2.86411417
Most Extreme Differences	Absolute	.096
	Positive	.096
	Negative	-.057
Test Statistic		.096
Asymp. Sig. (2-tailed)		.087[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Fig. 2. Result of normality test

Figure 2 shows that the Asymptotic Significance value is 0.087, which is greater than the predetermined alpha level of 0.05. Based on this analysis, it can be concluded that the data in this study are normally distributed.

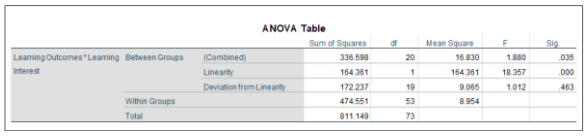
2) Linearity Test

The linearity test aims to determine whether there is a statistically significant linear relationship between two variables [18]. This test analyzes how the independent variable (X) influences the dependent variable (Y), whether in a directly proportional or inversely proportional manner.

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Learning Outcomes * School Environment	Between Groups	(Combined)	417.882	22	18.995	2.463	.004
		Linearity	145.392	1	145.392	18.855	.000
		Deviation from Linearity	272.490	21	12.976	1.683	.066
	Within Groups		393.267	51	7.711		
	Total		811.149	73			

Fig. 3. Result of linearity test between variable X_1 and Y



ANOVA Table

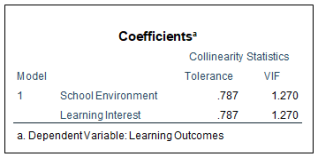
			Sum of Squares	df	Mean Square	F	Sig.
Learning Outcomes * Learning Interest	Between Groups	(Combined)	336.598	20	16.830	1.880	.035
		Linearity	164.361	1	164.361	18.357	.000
		Deviation from Linearity	172.237	19	9.065	1.012	.463
	Within Groups		474.551	53	8.954		
	Total		811.149	73			

Fig. 4. Result of linearity test between variable X_2 and Y

Figure 3 shows that the *deviation from linearity* value for variable X_1 (School Environment) and Y (Learning Outcomes) is 0.066, while Figure 4 shows that the *deviation from linearity* value for variable X_2 (Learning Interest) and Y is 0.463. Since both values are greater than the predetermined significance level of 0.05, it can be concluded that both independent variables have a linear relationship with the dependent variable (Learning Outcomes).

3) Multicollinearity Test

[19] explain that the multicollinearity test is used to detect a high linear correlation among the independent variables in a regression model. The primary criterion for detecting multicollinearity is the Variance Inflation Factor (VIF) value.



Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	School Environment	.787	1.270
	Learning Interest	.787	1.270

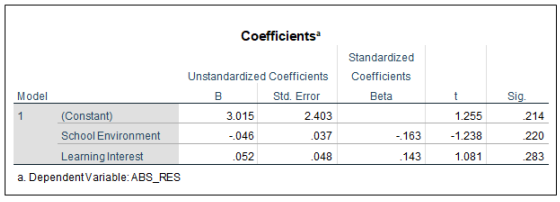
a. Dependent Variable: Learning Outcomes

Fig. 5. Result of multicollinearity test

Figure 5 shows that both independent variables (school environment and learning interest) have a Variance Inflation Factor (VIF) value of 1.270, which is less than 10. Therefore, it can be concluded that there is no indication of multicollinearity in the regression model.

4) Heteroscedasticity Test

According to [20] in their book *"Prerequisite Tests for Analysis"*, the heteroscedasticity test is conducted to determine whether bias occurs in a regression model analysis. Based on this, it can be concluded that the heteroscedasticity test is used to assess whether the regression residuals have constant variance across different observations.



Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.015	2.403		1.255	.214
	School Environment	-.046	.037	-.163	-1.238	.220
	Learning Interest	.052	.048	.143	1.081	.283

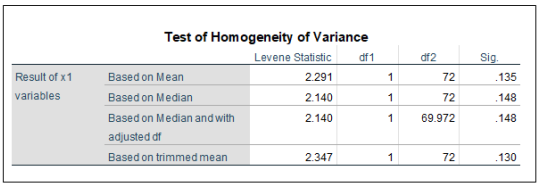
a. Dependent Variable: ABS_RES

Fig. 6. Result of heteroscedasticity test

Figure 6 shows that both variables, the school environment variable (0.220) and the learning interest variable (0.283), have significance values greater than 0.05. Therefore, it can be concluded that the regression model in this study does not exhibit heteroscedasticity.

5) Homogeneity Test

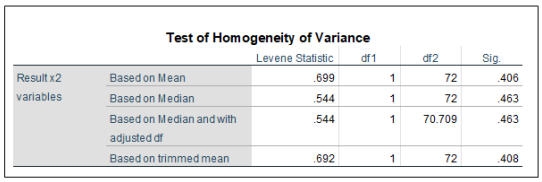
Homogeneity test is a statistical procedure aimed at determining whether two or more sample groups are drawn from populations with equal variances [21]. The homogeneity test is conducted to assess whether the data distribution in a study is homogeneous and to identify if there are differences that affect parametric statistical tests.



Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Result of x1 variables	Based on Mean	2.291	1	72	.135
	Based on Median	2.140	1	72	.148
	Based on Median and with adjusted df	2.140	1	69.972	.148
	Based on trimmed mean	2.347	1	72	.130

Fig. 7. Result of homogenity test for variable X_1



Test of Homogeneity of Variance

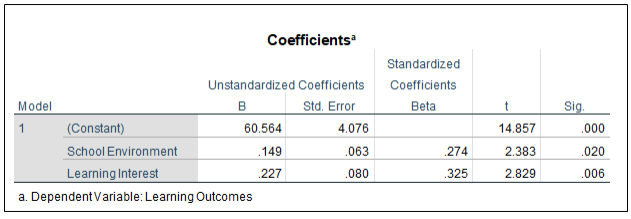
		Levene Statistic	df1	df2	Sig.
Result x2 variables	Based on Mean	.699	1	72	.406
	Based on Median	.544	1	72	.463
	Based on Median and with adjusted df	.544	1	70.709	.463
	Based on trimmed mean	.692	1	72	.408

Fig. 8. Result of homogenity test for variable X_2

Figures 7 and 8 show that the school environment variable (0.135) and the learning interest variable (0.406) have significance values greater than 0.05. Therefore, it can be concluded that the sample data groups originate from populations with equal variances (homogeneous).

C. Hypothesis Testing

A hypothesis is a tentative answer derived from the problem formulation. To verify its validity, hypothesis testing must be conducted. In this study, hypothesis testing was performed using simple linear regression (t-test) and multiple linear regression (F-test). According to Priyatno in [22], the t-test is used to examine the regression coefficients partially, to determine whether each independent variable has a significant effect on the dependent variable. Meanwhile, the F-test is used to assess whether the independent variables simultaneously have a significant influence on the dependent variable [23]. The analysis and calculations were conducted with the assistance of IBM SPSS Statistics 26 for Windows, with the results as follows.



Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	60.564	4.076		14.857	.000
	School Environment	.149	.063	.274	2.383	.020
	Learning Interest	.227	.080	.325	2.829	.006

a. Dependent Variable: Learning Outcomes

Fig. 9. Result of t-test

Figure 9 presents the results of the t-test, indicating that for the school environment variable (X_1) in relation to learning outcomes (Y), the calculated t value is positive (2.383), with a significance value of 0.020, which is less than the predetermined significance level ($\alpha = 0.05$). This result indicates that $H0_1$ is rejected and Ha_1 is accepted. Furthermore, for the learning interest variable (X_2) in relation to learning outcomes (Y), the calculated t value is also positive (2.829), with a significance value of 0.006, which is also less than the significance threshold ($\alpha = 0.05$). This result indicates that $H0_2$ is rejected and Ha_2 is accepted. Based on these findings, it can be concluded that there is a positive and significant partial effect of both the school environment and learning interest on students' learning outcomes in the subject of Informatics at State Vocational High School 2 Tulungagung.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	212.265	2	106.133	12.582	.000[b]
	Residual	598.883	71	8.435		
	Total	811.149	73			

a. Dependent Variable: Learning Outcomes
b. Predictors: (Constant), Learning Interest, School Environmen

Fig. 10. Result of F-test

Based on Figure 10, it was found that the two independent variables (X_1 and X_2) in relation to the dependent variable (Y) yielded a positive F value of 12.582, with a significance level of 0.000, which is less than the predetermined significance threshold ($\alpha = 0.05$). This result indicates that H_{03} is rejected and H_{a3} is accepted. Therefore, it can be concluded that there is a positive and significant simultaneous effect of the school environment and learning interest on students' learning outcomes in the subject of Informatics at State Vocational High School 2 Tulungagung.

D. Discussion of Research Results

*1) The Influence of the School Environment on Learning Outcomes in Informatics Subjects at State Vocational High School 2 Tulungagung:*The school environment is an institution that serves as an educational platform to guide students in acquiring knowledge, shaping attitudes, and developing skills both through intraclass (intracurricular) and extracurricular activities within the framework of an established educational system. A well-structured school environment can offer significant benefits to students. These benefits include: (1) Enhancing students' concentration and learning ability at school, (2) Reducing stress and tension during the learning process, (3) Increasing students' interest in learning, (4) Making learning more effective and efficient, as a conducive school environment allows learning material to be more easily absorbed, and (5) Achieving optimal learning outcomes. Based on observations and literature review of the PLP reports at State Vocational High School 2 Tulungagung, it was found that the number of students at the school has increased from year to year. To address this issue, the school has implemented a moving class system during the learning process due to the limited number of classrooms, which are insufficient to accommodate all students. As a result, learning activities are carried out in various alternative locations such as computer laboratories, vocational workshops, the PKK building, the mosque, and the schoolyard. However, the implementation of this system has made learning particularly for subjects such as Informatics, which typically take place in classrooms or laboratories less effective. Students require additional energy due to frequent class transitions. This is especially burdensome after workshop-based learning, where students often become physically fatigued, resulting in reduced enthusiasm and learning interest in subsequent subjects. Moreover, as the majority of vocational competencies at State Vocational High School 2 Tulungagung are in technical fields, workshop activities frequently generate noise, which can disrupt the concentration of students in other learning areas.

On this basis, the researcher sought to determine whether the school environment has an effect on students' academic achievement in Informatics at State Vocational High School 2 Tulungagung. Based on data analysis using simple linear regression (t-test) with the assistance of IBM SPSS Statistics 26 for Windows, it was concluded that is rejected and is accepted. The analysis revealed that the tcount value was positive (2.383) and the significance level for the school environment variable (X_1) in relation to learning outcomes (Y) was 0.020, which is less than the significance threshold ($\alpha = 0.05$). Therefore, it can be concluded that there is a positive and significant influence of the school environment on students' learning outcomes in Informatics at State Vocational High School 2 Tulungagung.

2) The Influence of Learning Interest on Learning Outcomes in Informatics Subjects at State Vocational High School 2 Tulungagung: Learning interest is a psychological factor that serves as a driving force in achieving desired academic outcomes. The greater the learning interest, the higher the potential academic achievement. According to Nugroho and Budiono (2020), there are seven characteristics of learning interest: (1) Interest develops along with physical and mental growth, (2) Interest depends on the learning process, (3) Interest depends on learning opportunities, (4) The development of interest may be limited, for example by physical constraints or other factors, (5) Cultural influence, (6) Interest carries emotional weight, and (7) Interest is egocentric in nature, such as when interest arises from feelings of pleasure or desire to possess something. Based on observations, the researcher found that students' interest in learning Informatics at State Vocational High School 2 Tulungagung was relatively low. This low level of interest is primarily due to the fact that students' talents, hobbies, and expertise at State Vocational High School 2 Tulungagung are generally not in the field of Information and Communication Technology (ICT), as evidenced by the absence of any ICT-related competency programs at the school. In addition, the learning process is perceived as less engaging; teachers tend to rely heavily on the lecture method, and the learning media used is often

monotonous. Students require a variety of instructional methods to prevent boredom and to fully absorb the learning material. Furthermore, teachers need to provide more appreciation and motivation to foster students' interest in Informatics. Based on data analysis using simple linear regression (t-test) with the assistance of IBM SPSS Statistics 26 for Windows, it was concluded that is rejected and is accepted. The analysis showed a positive t value (2.829), and the significance level for the learning interest variable (X_2) in relation to learning outcomes (Y) was 0.006, which is smaller than the predetermined significance level ($\alpha = 0.05$). Therefore, it can be concluded that there is a positive and significant influence of learning interest on students' learning outcomes in Informatics at State Vocational High School 2 Tulungagung.

3) The Influence of School Environment and Learning Interest on Learning Outcomes in Informatics Subjects at State Vocational High School 2 Tulungagung: Based on the t-test results for the influence of the school environment on learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung, as well as the influence of learning interest on learning outcomes in the same subject, it was found that both tests indicate a positive and significant partial effect of the school environment and learning interest on students' academic performance in Informatics. In addition, the researcher conducted a multiple linear regression test (F-test) to examine whether the school environment and learning interest jointly (simultaneously) influence students' learning outcomes in Informatics. Based on data analysis using multiple linear regression (F-test) with the aid of IBM SPSS Statistics 26 for Windows, it was concluded that is rejected and is accepted. The analysis showed a positive F value of 12.582, and the significance level for the school environment variable (X_1) and learning interest variable (X_2) in relation to learning outcomes (Y) was 0.000, which is smaller than the predetermined significance threshold ($\alpha = 0.05$). Therefore, it can be concluded that there is a positive and significant simultaneous effect of the school environment and learning interest on students' learning outcomes in Informatics at State Vocational High School 2 Tulungagung.

IV. CONCLUSIONS

Based on the results of data analysis and hypothesis testing, the following conclusions can be drawn:

- There is a positive and significant influence of the school environment on students' learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung.
- There is a positive and significant influence of learning interest on students' learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung.
- There is a positive and significant simultaneous influence of the school environment and learning interest on students' learning outcomes in the Informatics subject at State Vocational High School 2 Tulungagung.

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