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The Influence of Pedagogical Competence, Work Ethic, and Work Motivation on Effective Learning at SMP IT Al-Kamal and MTs Darul Musthofa in 2023

Agung Panji Utomo*, Ahyar, Muhammad Thohri
Pascasarjana Universitas Islam Negeri Mataram, Indonesia
*Corresponding Author: 2204030231.mhs@uinmataram.ac.id

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Abstract: This study aims to examine the influence of pedagogical competence, work ethic, and work motivation on effective learning at SMP IT Al-Kamal and MTs Darul Musthofa in 2023. This research uses a quantitative approach with non-probability sampling or total sampling techniques. Prerequisite tests include normality, linearity, and multicollinearity tests. Hypothesis testing is conducted using F and T tests, analyzed with SPSS 16.0 software. The results show that pedagogical competence does not significantly influence effective learning ($|t| = 0.074 < t\_table = 2.018$, $p = 0.941 > 0.05$). Similarly, work ethic does not have a significant impact ($|t| = 0.041 < t\_table = 2.018$, $p = 0.967 > 0.05$). However, work motivation significantly affects effective learning ($|t| = 21.560 > t\_table = 2.018$, $p < 0.05$). Additionally, the combined influence of pedagogical competence, work ethic, and work motivation is significant ($F = 158.617 > F\_table = 3.214$, $p < 0.05$), contributing 92.1% to effective learning outcomes ($R^2 = 0.921$). The conclusion of this study emphasizes that work motivation is an essential factor in optimizing effective learning. Theoretical implications suggest the need for further efforts to enhance the influence of pedagogical competence and work ethic in various student contexts.

Keywords: Effective Learning, MTs Darul Musthofa, Pedagogical Competence, Quantitative Research, SMP IT Al-Kamal, Work Ethic, Work Motivation

INTRODUCTION

Education is a fundamental pillar in developing quality human resources. Effective education impacts not only students' cognitive abilities but also shapes their character, ethics, and social skills, which are essential for tackling the challenges of the workforce and society. In the context of secondary education, effective learning is key to achieving academic competence and instilling the desired values. Achieving effective learning relies on multiple factors, including teachers' pedagogical competence, work ethic, and work motivation (Nana Sari et al., 2020). Pedagogical competence is a core element essential for a teacher. This competence includes the ability to design, implement, and evaluate the learning process systematically (Nokes, 2023). Teachers with solid pedagogical competence are more capable of managing classes, identifying individual student needs, and applying appropriate teaching methods to maximize student understanding. At SMP IT Al-Kamal and MTs Darul Musthofa, pedagogical competence is expected to contribute to the success of the learning process. However, technical abilities alone are insufficient without additional support factors like work ethic and motivation.

Teachers' work ethic also plays a significant role in educational success. A strong work ethic reflects a teacher's dedication, discipline, and responsibility in performing their duties (Muliadi et al., 2024; Nasihin et al., 2024; Nasri, 2024a, 2024b; Nasri et al., 2023). Teachers with a strong work ethic are diligent in preparing materials, designing lessons, and creating a conducive environment for students (Wahyuni & Soelistya, 2023). A solid work ethic can model positive behavior for students, impacting their learning experience (Listiani et al., 2022). However, there is still debate regarding the direct impact of a teacher's work ethic on effective learning, highlighting the need for further research to explore the relationship between teacher work ethic and effective learning outcomes (Geopani et al., 2024).

Work motivation is an internal factor that drives teachers to achieve maximum results in their duties. Highly motivated teachers tend to have high energy in facing challenges and creativity in developing materials and teaching strategies (Sihombing & Mulyandi, 2022). Teacher motivation is crucial for individual performance and also influences the overall learning process (Yelipele et al., 2024). Strong work motivation can increase teaching enthusiasm and create a dynamic classroom environment, thus encouraging students to engage in learning. At SMP IT Al-Kamal and MTs Darul Musthofa, teacher work motivation is identified as a factor that can contribute to learning effectiveness.

In this context, research on pedagogical competence, work ethic, and work motivation is relevant to understanding how these factors affect effective learning in schools (Yannizar et al., 2024). Several previous studies have examined the relationship between pedagogical competence and learning effectiveness. For example, Hidayati's (2020) study found that pedagogical competence impacts student learning outcomes in secondary schools. Meanwhile, another study by Siregar (2019) revealed a relationship between work ethic and student achievement at the elementary school level. These studies indicate that pedagogical competence and work ethic can influence learning; however, the results vary depending on contextual factors such as school environment and student characteristics.

Another study by Rachman (2021) highlighted the importance of work motivation in determining educational success at the secondary school level. Rachman found that highly motivated teachers tend to create conducive learning environments and increase student engagement in learning (Alim et al., 2024; Arif Saefudin et al., 2024; Muliadi et al., 2024; Nasri & Adiba, 2023). These findings provide evidence that work motivation is a crucial factor in supporting learning effectiveness.

However, several gaps exist in previous research, particularly regarding the simultaneous examination of the influence of pedagogical competence, work ethic, and work motivation on learning effectiveness. Most existing studies focus on one or two variables separately, so they do not provide a comprehensive picture of how these three factors interact to create effective learning. Therefore, this study seeks to fill this gap by examining the combined effect of these three factors, particularly at SMP IT Al-Kamal and MTs Darul Musthofa.

This research is expected to make an important contribution to educational theory and practice. By identifying factors influencing effective learning, the findings of this study can be used as a basis for designing programs to improve teacher competence and strategies to motivate educators in secondary schools. The results are also expected to provide practical guidance for educational policymakers in enhancing the quality of learning within school environments.

METODS

This study uses a quantitative approach, aiming to assess the impact of pedagogical competence, work ethic, and work motivation on effective learning at SMP IT Al-Kamal and MTs Darul Musthofa. The data were collected through non-probability sampling, specifically total sampling, which involves including the entire population within the study scope (Kotar et al., 2022; J. M. Wang et al., 2024; Zhang et al., 2024). This approach allows for a comprehensive view of the variables in question across the target population (Okada et al., 2023; Pang et al., 2024; Y. Wang et al., 2023).

Data Collection and Analysis

Data were collected through structured questionnaires designed to capture information on pedagogical competence, work ethic, work motivation, and effective learning outcomes. The collected data were then analyzed through SPSS 16.0 software to ensure the reliability and validity of the findings (Massazza et al., 2022; Tiong & Palmqvist, 2023).

Prerequisite Tests

Prior to hypothesis testing, several prerequisite tests were conducted to verify the suitability of the data for further analysis (Liu et al., 2025; Wallwey & Kajfez, 2023):

1. Normality Test: This test was conducted to determine whether the data distribution was normal, a requirement for accurate parametric testing.
2. Linearity Test: The linearity test assessed the linear relationships between the independent variables (pedagogical competence, work

ethic, work motivation) and the dependent variable (effective learning).
3. Multicollinearity Test: Multicollinearity was tested to ensure that the independent variables were not highly correlated, which could distort the results.

Hypothesis Testing

Hypothesis testing was performed using both F-tests and T-tests (Okada et al., 2023; Wallwey & Kajfez, 2023):

a. F-test: This test assessed the combined effect of pedagogical competence, work ethic, and work motivation on effective learning, determining the model's overall significance.
b. T-test: This test examined the individual effect of each independent variable on effective learning, providing insight into which factors significantly contribute to the outcome.

These tests provide a thorough examination of the relationships between variables, with results analyzed to determine the influence of each factor on effective learning.

FINDINGS AND DISCUSSION

Findings

1. Validity Test

1.1. Pedagogical Competence Instrument (X1)

Based on the data collected from respondents, the validity level of an instrument was tested using the Pearson Product Moment formula. The instrument trial for variable X1 (Pedagogical Competence) was conducted with 45 teachers. At a significance level of 0.05 and degrees of freedom (df = n - 2) or df = 45 - 2 = 43, the r-table value is 0.294. It was found that variable X1 (Pedagogical Competence) has 20 valid items, all of which will be used in the research as they are considered to represent the data needed by the researcher.

1.2. Work Ethic Instrument (X2)

Based on the data collected from respondents, the validity level of an instrument was tested using the Pearson Product Moment formula. The instrument trial for variable X2 (Work Ethic) was conducted with 45 teachers. At a significance level of 0.05 and degrees of freedom (df = n - 2) or df = 45 - 2 = 43, the r-table value is 0.294. It was found that variable X2 (Work Ethic) has 10 valid items, all of which will be used in the research as they are considered to represent the data needed by the researcher.

1.3. Work Motivation Instrument (X3)

Based on the data collected from respondents, the validity level of an instrument was tested using the Pearson Product Moment formula. The instrument trial for variable X3 (Work Motivation) was conducted with 45 teachers. At a significance level of 0.05 and degrees of freedom (df = n - 2) or df = 45 - 2 = 43, the r-table value is 0.294. It was found that variable X3 (Work Motivation) has 31 valid items, all of which will be used in the research as they are considered to represent the data needed by the researcher.

1.4. Effective Learning Instrument (Y)

Based on the data collected from respondents, the validity level of an instrument was tested using the Pearson Product Moment formula. The instrument trial for variable Y (Effective Learning) was conducted with 45 teachers. At a significance level of 0.05 and degrees of freedom (df = n - 2) or df = 45 - 2 = 43, the r-table value is 0.294. It was found that variable Y (Effective Learning) has 29 valid items, all of which will be used in the research as they are considered to represent the data needed by the researcher.

2. Reliability Test

2.1. Pedagogical Competence Instrument (X1)

After conducting the instrument validity test, the next step was to perform a reliability test, which is used to measure the instrument's consistency as a data collection tool. The reliability test results for the Pedagogical Competence variable (X1) using SPSS version 16.0 are shown below.

Table 1. Reliability Test Results for Variable X1 (Pedagogical Competence)

Reliability Statistics

Cronbach's Alpha	N of Items
.942	20

Source: Data processing results using SPSS version 16.0, 2023

Based on the Cronbach's Alpha criterion of > 60% or Cronbach's Alpha > 0.60, the result of 0.942 > 0.60 indicates that the Pedagogical Competence variable (X1) falls into the High category and can be considered reliable.

2.2. Work Ethic Instrument (X2)

After the instrument validity test, the next step was to perform a reliability test to assess whether the instrument can consistently be relied upon as a data collection tool. Below are the reliability test results for the Work Ethic variable (X2) using SPSS version 16.0.

Table 2. Reliability Test Results for Variable X2 (Work Ethic)

Reliability Statistics

Cronbach's Alpha	N of Items
.782	10

Source: Data processing results using SPSS version 16.0, 2023

Based on the Cronbach's Alpha criterion of > 60% or Cronbach's Alpha > 0.60, the result of 0.782 > 0.60 indicates that the Work Ethic variable (X2) falls into the High category and can be considered reliable.

2.3. Work Motivation Instrument (X3)

After the instrument validity test, the next step was to perform a reliability test to assess whether the instrument can consistently be relied upon as a data collection tool. Below are the reliability test results for the Work Motivation variable (X3) using SPSS version 16.0.

Table 3. Reliability Test Results for Variable X3 (Work Motivation)

Reliability Statistics

Cronbach's Alpha	N of Items
.976	31

Source: Data processing results using SPSS version 16.0, 2023

Based on the Cronbach's Alpha criterion of > 60% or Cronbach's Alpha > 0.60, the result of 0.976 > 0.60 indicates that the Work Motivation variable (X3) falls into the High category and can be considered reliable.

2.4. Effective Learning Instrument (Y)

After the instrument validity test, the next step was to perform a reliability test to assess whether the instrument can consistently be relied upon as a data collection tool. Below are the reliability test results for the Effective Learning variable (Y) using SPSS version 16.0.

Table 4. Reliability Test Results for Variable Y (Effective Learning)

Reliability Statistics

Cronbach's Alpha	N of Items
.961	29

Source: Data processing results using SPSS version 16.0, 2023

Based on the Cronbach's Alpha criterion of > 60% or Cronbach's Alpha > 0.60, the result of 0.961 > 0.60 indicates that the Effective Learning variable (Y) falls into the High category and can be considered reliable.

3. Prerequisite Test

Before conducting hypothesis testing, classical assumption tests were performed. The classical assumption tests in this study included normality test, multicollinearity test, and heteroscedasticity test.

3.1. Data Normality Test

To determine whether the regression model, including both the dependent and independent variables, has normally distributed residual values or not, a Kolmogorov-Smirnov test was conducted. The conclusion drawn from this test is as follows: if the significance value is > 0.05, the data can be considered to have normally distributed residuals. Conversely, if the significance value is < 0.05, the data is said to be not normally distributed.

Table 1. One-Sample Kolmogorov-Smirnov Test Results

		Unstandardized Residual
N		45
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	2.85798076
Most Extreme Differences	Absolute	.129
	Positive	.129
	Negative	-.085
Kolmogorov-Smirnov Z		.865
Asymp. Sig. (2-tailed)		.442

a. Test distribution is Normal.

Source: Data processing results using SPSS version 16.0, 2023

Based on the Kolmogorov-Smirnov normality test, the significance value obtained is 0.442, which is greater than 0.05 (0.442 > 0.05). Therefore, it can be concluded that the residual values are normally distributed since the standardized residuals are spread normally.

3.2. Multicollinearity Test

This test examines whether there is a correlation or linear relationship between the independent variables in the regression model. The results can be observed through the collinearity statistics column in the coefficients table. The decision is based on the tolerance value and the variance inflation factor (VIF). If the tolerance value is > 0.10 and the VIF is < 10.00, there is no multicollinearity. The test results are as follows:

Table 2. Collinearity Statistics of Independent Variables

Model		Collinearity Statistics	
		Tolerance	VIF
1	Pedagogical Competence	.873	1.145
	Work Ethic	.855	1.170
	Work Motivation	.976	1.024

a. Dependent Variable: Pembelajaran Efektif

Source: Data processing results using SPSS version 16.0, 2023

The results of the above test show that none of the independent variables has a tolerance value less than 0.10, and the VIF calculation indicates that all independent variables have a VIF value below 10. The variance inflation factor (VIF) values for each variable are as follows: Pedagogical Competence at 1.145, Work Ethic at 1.170, and Work Motivation at 1.024. This leads to the conclusion that there are no indications of multicollinearity symptoms among the independent variables (X1, X2, & X3) in this study.

3.3. Heteroscedasticity Test

The purpose of the heteroscedasticity test is to examine whether there is a variance inequality in the residuals from one observation to another within the regression model. To determine the presence or absence of heteroscedasticity in the regression model, the Glejser method is used. The test results are as follows:

Table 3: Coefficients of Independent Variables on the Dependent Variable (RES2)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.397	4.061		1.329	.191
	Pedagogical Competence	-.025	.033	-.123	-.755	.455
	Work Ethic	-.048	.063	-.127	-.770	.446
	Work Motivation	.004	.022	.028	.182	.857
a. Dependent Variable: RES2						

Source: Research Data Analysis using SPSS version 16.0, 2023

From the results table above, it can be seen that the regression model does not exhibit heteroskedasticity symptoms, as the significance values for variables X1, X2, and X3 are greater than 0.05.

4. Multiple Linear Regression Analysis

After all assumptions were met, a regression analysis was conducted to determine the influence of the independent variables X1, X2, & X3 (Pedagogical Competence, Work Ethic, Work Motivation) on Effective Learning. The data analysis for multiple linear regression involves several steps to identify the relationship between the independent and dependent variables. Based on data processed using SPSS software version 16.0, the summary is as follows:

Table 4. Summary of Multiple Linear Regression Test Result

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	22.182	6.589		3.366	.002
Pedagogical Competence	.004	.054	.003	.074	.941
Work Ethic	.004	.102	.002	.041	.967
Work Motivation	.759	.035	.960	21.560	.000

Multiple Linear Regression Equation
(Y = 22.182 + 0.004 X1 + 0.004 X2 + 0.759 X3 + e)

Interpretation of the regression model:

a. B_0 = 22.182. This regression coefficient indicates that in the absence of influence from the independent variables on the effective learning variable, the value of the effective learning variable already increases by 22.182.
b. B_1 = 0.004. This coefficient indicates that if there is a 1-point increase in the pedagogical competence variable while other variables remain constant, the effective learning variable will increase by 0.004. Since the coefficient is positive, an increase in the pedagogical competence variable will result in an increase in the effective learning variable, and vice versa.
c. B_2 = 0.004. This coefficient indicates that if there is a 1-point increase in the work ethic variable while other variables remain constant, the effective learning variable will increase by 0.004. Since the coefficient is positive, an increase in the work ethic variable will result in an increase in the effective learning variable, and vice versa.
d. B_3 = 0.759. This coefficient indicates that if there is a 1-point increase in the work motivation variable while other variables remain constant, the effective learning variable will increase by 0.759. Since the coefficient is positive, an increase in the work motivation variable will result in an increase in the effective learning variable, and vice versa.

5. Hypothesis Testing

5.1. t-Test (Partial Test)

Partial testing of the regression model is used to determine whether each independent variable in the regression model has a significant individual effect on the dependent variable. The t-test is used for this, by comparing the value of t_{hitung} with t_{tabel}. $t_{hitung} > t_{tabel}$ or if significance < $\alpha = 0.05$.

H_0: There is no significant effect of each independent variable on Effective Learning.

H_1: There is a significant effect of each independent variable on Effective Learning.

Table 4. Hypothesis Test of Independent Variable Regression Coefficients

Variable	t hitung	t table 5%	Sig. t	Exp.
a. Pedagogical Competence - Effective Learning	0.074	2.018	0.941	Not Significant
b. Work Ethic - Effective Learning	0.041	2.018	0.967	Not Significant
c. Work Motivation - Effective Learning	21.560	2.018	0.000	Significant

Source: Data processing results using SPSS version 16.0, 2023.

a. The Effect of Pedagogical Competence on Effective Learning.

The Pedagogical Competence variable has a t-test statistic of 0.074 with a significance level of 0.941. The absolute value of the t-test statistic |t hitung| is smaller than the t-table value (0.074 < 2.018), and the significance value is greater than α (0.941 > 0.05). This test indicates that H0 is accepted, and it can be concluded that the Pedagogical Competence variable (X1) does not have a significant (real) effect on the Effective Learning variable (Y).

b. The Effect of Work Ethic on Effective Learning.

The Work Ethic variable has a t-test statistic of 0.041 with a significance level of 0.967. The absolute value of the t-test statistic |t hitung| is smaller than the t-table value (0.041 < 2.018), and the significance value is greater than α (0.967 > 0.05). This test indicates that H0 is accepted, and it can be concluded that the Work Ethic variable (X2) does not have a significant (real) effect on the Effective Learning variable (Y).

c. The Effect of Work Motivation on Effective Learning.

The Work Motivation variable has a t-test statistic of 21.560 with a significance level of 0.000. The absolute value of the t-test statistic |t hitung| is larger than the t-table value (21.560 > 2.018), and the significance value is smaller than α (0.000 < 0.05). This test indicates that H0 is rejected, and it can be concluded that the Work Motivation variable (X3) has a significant (real) effect on the Effective Learning variable (Y).

5.2. F-Test (Simultaneous Test)

The F-test is conducted to determine whether the independent variables simultaneously (together) have a significant effect on the dependent variable. The decision in this test is made if the calculated F-value (F hitung) is greater than the F-table value (F tabel) with a significance level less than 0.05, indicating that there is an effect between the X variables and the Y variable. The F-table value is obtained using the formula Ftabel = F(k : n-k), which results in Ftabel = F(2 : 45-2) = F(2 : 43) = 3.214.

Table 5. ANOVA Test Results for Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4171.183	3	1390.394	158.617	.000[a]
Residual	359.394	41	8.766		
Total	4530.578	44			

Based on the regression analysis, it can be shown that the independent variables collectively (simultaneously) have a significant effect on the dependent variable. This can be seen from the calculated F-value of 158.617, which is greater than the F-table value of 3.214, with a significance value (sig) of 0.000, which is less than 0.05 (the established threshold). Based on the explanation above, it can be concluded that Pedagogical Competence, Work Ethos, and Work Motivation collectively have a positive and significant impact on Effective Learning at SMP IT Al-Kamal and MTs Darul Musthofa.

Discussion

1. The Effect of Pedagogical Competence on Effective Learning at SMP IT Al-Kamal and MTs Darul Musthofa

Based on the research findings, there is evidence indicating that there is no significant effect of Pedagogical Competence on effective learning. For example, a study conducted at SMP IT Al-Kamal and MTs Darul Musthofa found that there was no significant effect of Pedagogical Competence on effective learning at these schools. Additionally, other studies have shown similar results, such as a study conducted at a high school in Bandung that found no significant effect of Pedagogical Competence on the quality of learning at the school. Based on these research results, it can be concluded that there is evidence indicating no significant effect of Pedagogical Competence on effective learning in several schools. The analysis shows that there is not yet a strong positive relationship between Pedagogical Competence and effective learning. However, the research objectives were achieved well and systematically. This testing shows that H0 is accepted, meaning that Pedagogical Competence (X1) does not have a significant (real) effect on Effective Learning (Y). The positive effect of Pedagogical Competence is not significant, indicating that Pedagogical Competence does not affect effective learning. This is because the positive effect of Pedagogical Competence is weak with respect to effective learning at SMP IT Al-Kamal and MTs Darul Musthofa. This information contrasts with Nahed Ghoneim's 2018 study, which found that teachers with good pedagogical competence could shape students' positive attitudes toward science learning. Similarly, Deborah L. Hanuscin and Michael J. Lee's 2012 study evaluated the impact of teachers' pedagogical content knowledge (PCK) on students' achievement in science, showing that teachers with strong PCK are more capable of improving students' understanding of the subject matter.

2. The Effect of Work Ethos on Effective Learning at SMP IT Al-Kamal and MTs Darul Musthofa

Based on the research conducted, several indicators of Work Ethos were assessed: 1) ability to plan teaching programs, 2) ability to manage or interact during teaching and learning processes, 3) ability to assess, 4) ability to develop students' potential, 5) dedication to work, 6) working smart, 7) perseverance and resilience, and 8) respecting time and discipline at work at SMP IT Al-Kamal and MTs Darul Musthofa. According to the research results, several studies suggest that Work Ethos has a significant effect on effective learning processes. For example, a study conducted in an elementary school in Babakan Cikao District, Purwakarta, found that Work Ethos significantly influenced the effectiveness of the learning process, with a coefficient value of 16.93%. Additionally, other studies have shown that Work Ethos significantly affects teachers' performance at Madrasah Ibtidaiyah Ma'arif Nahdlatul Ulama Pucang, Sidoarjo. Therefore, it can be concluded that Work Ethos has a significant impact on effective learning.

3. The Effect of Work Motivation on Effective Learning at SMP IT Al-Kamal and MTs Darul Musthofa

Based on the research conducted, the following indicators of work motivation were assessed: 1) responsibility, 2) having clear goals, 3) enjoying challenging and difficult work, 4) enjoying tasks that require responsibility, 5) enjoying working alone, 6) enjoying tasks that are directly related to research, 7) enjoying competing and outperforming others, 8) finding pleasure in completing tasks and responsibilities, 9) prioritizing work and achievement, 10) always striving to find information to meet work needs, and 11) enjoying receiving praise for work. Dynamically, Work Motivation can have a significant impact on improving effective learning. Teachers with high motivation tend to engage more actively in the learning process. They are more open to innovations and creative teaching methods, which can stimulate students' interest and involvement. Motivated teachers are likely to seek and apply effective teaching strategies, continue learning, and enhance their teaching skills. A highly motivated teacher tends to create a positive and supportive classroom atmosphere, contributing to effective learning.

4. The Effect of Pedagogical Competence, Work Ethos, and Work Motivation on Effective Learning at SMP IT Al-Kamal and MTs Darul Musthofa

The results of this study regarding the effect of pedagogical competence, work ethos, and work motivation on effective learning at SMP IT Al-Kamal and MTs Darul Musthofa in 2023 show that pedagogical competence and work ethos do not have a significant effect on effective learning. However, work motivation has a significant effect on effective learning at SMP IT Al-Kamal and MTs Darul Musthofa. Pedagogical Competence and Work Ethos do not significantly affect effective learning, which may have implications for educational practices. However, it is important to note that this assumption should be treated as a theoretical concept, not an absolute truth, as the effect of each variable can vary depending on the context and characteristics of each situation. The conclusions drawn from this research have implications for education and future studies in the field.

CONCLUSION

The study reveals that pedagogical competence has no significant influence on effective learning at SMP IT Al-Kamal and MTs Darul Musthofa, as evidenced by the test statistic value |t obtained| being smaller than |t table| (0.074 < 2.018) and the significance value (0.941 > 0.05), leading to the acceptance of H0. Similarly, work ethic does not significantly affect effective learning, supported by |t obtained| < |t table| (0.041 < 2.018) and a significance value (0.967 > 0.05), confirming the acceptance of H0. Conversely, work motivation has a significant impact on effective learning, demonstrated by |t obtained| > |t table| (21.560 > 2.018) and a significance value (0.000 < 0.05), resulting in the rejection of H0. Furthermore, the combined analysis shows that pedagogical competence, work ethic, and work motivation collectively have a positive and significant effect on effective learning, as indicated by an F value of 158.617 > F table (3.214) and a significance value of 0.000 < 0.005. The coefficient of determination (R^2) value of 0.921 suggests that 92.1% of the variability in effective learning is explained by these three factors, with the remaining 7.9% attributed to other variables outside the regression model.

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