The Influence of Competence and Training on Teacher Performance is Mediated by Creativity in ASN Teachers

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Authors' contributions

This work was carried out in collaboration between both authors. The author designed the study, performed statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Author TDS provided guidance in writing the manuscript. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

The study aims to test the influence of competence and training on the performance of teachers in the State High School with creativity as a mediation variable. The research method used is quantitative causal research. The population of this study is as much as 88 teachers in the first preventive school of the state of Pusakanagara Subang. The sample in this study covers the entire population that exists. Data analysis method using Structural Equation Model-partial Least Square (SEM-PLS). The results of the research show that: (1) competence has a positive and significant impact on teacher performance, (2) training has a significant and positive impact on teachers performance, (3) competences have a significant positive influence on creativity, (4) competencies have a positive, significant influence upon creativity; (5) creativity has a positive and significant effect on teacher's performance, (6) competences influence positive and meaningful influence of

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teacher performance through creativity. 7) training influence positive and meaningful influence of teacher performance through creativity. Conclusion: that competence, training and creativity can be used to improve teacher performance. Contribution: Competence, training and creativity can be the basis of policy to improve teacher performance especially in the field of education. Novelty: Creativity plays an important role as a mediator of competence and training to improve teacher performance.

1. INTRODUCTION

The Indonesian government is very serious about paying attention to the education sector to create a quality generation. Teachers play a key role in formal education as models and main influences on students. Educational success is influenced by the ability and quality of teacher performance. Teachers need to have basic skills, competence, creativity and innovation to achieve educational goals. Teachers are required to continue to improve their abilities, provide examples, and develop students' creativity. However, The current situation in Indonesia reveals significant variations in the quality of teachers across different regions, including some who prioritize part-time work over their main duties as teachers.

In 2021, the achievements related to the percentage of teachers and professional education staff reached 54.65%, or 1,645,42 people out of a total of 3,010,856 teachers. This achievement is lower than the target of 57.30%, with an achievement percentage of 95.38%. When compared with the 2020 achievement of 55.91%, there was a decrease in 2021, although in 2020, the realization exceeded the target. In 2022, the achievement regarding the percentage of teachers and professional education personnel was 51.90%, lower than the target of 59.71%, with an achievement percentage of 86.92%. When compared with the 2021 achievement of 54.65%, there was a decrease of 2.74 points in 2022. This trend, as reported by the Ministry of Education, Culture, Research, and Technology [1], shows a decline year by year, indicating a continuing shortage of professional teaching staff and low teacher quality, which is one of the factors contributing to less than optimal teacher performance.

Based on teacher performance data at SMPN (State Junior High School) Pusakanagara Subang in Indonesia, although in general it can be seen that teacher performance achievements are more dominant in the good category, there are still very few teachers who have very good performance and are even considered rare. In terms of management, if there are those who are better or very good, it means that performance is still not optimal. In increasing the effectiveness of learning activities, teachers must be more creative and innovative. Teachers must have creativity in delivering learning material, there is a need to deliver material using various models of learning methods and media, foster enthusiasm for student learning, different assessment techniques. Quality learning largely depends on student motivation and teacher creativity, as highlighted by the Ministry of Education, Culture, Research, and Technology (2020). However, the teacher at SMPN (State junior High Schiool) Pusakanagara Subang showed the opposite, namely that the teacher was less creative in the learning process.

Training is provided for teaching staff in facing the challenges of the world of education and to help optimize more innovative learning, by attending workshops and exchanging ideas and experiences with fellow teachers so that they can gain more knowledge. Based on interviews with public relations at SMPN 1 Pusakanagara, there are several teachers or not all teachers who have received training, but the training that has been implemented has not been able to change the teacher's mindset. Not only are many facilitators unable to convey the essence of the training, the implementation of the training is often not in accordance with the program and agenda. which had been planned, the schedule was compressed, the quality of the assignments during the training was not controlled and billed properly, so that after attending the training, there were no changes to the learning process carried out by the teacher in the classroom. Yuliati & Liana [2] prove that competency has a positive and significant influence on teacher performance. However, research Umar et al. [3] found that competency partially has a negative effect on teacher performance. But in Research Yanita [4] that Teacher competency has no effect on teacher performance. Likewise with research

by Rehman [5] proves that training has a significant effect on teacher performance, supported by Basalamah et al. [6]. But instead, research Aisyah et al. [7] found that training had no influence on teacher performance. Based on several previous researchers, it is known that there are inconsistencies in the research results. Therefore, researchers feel the need to conduct further research regarding variables that are thought to influence teacher performance in this research.

Various studies have attempted to test various factors that influence performance, such as the competence of researchers Yuliati & Liana [2] demonstrate that competency has a positive and significant influence on teacher performance, based on their study conducted study of elementary school civil servant teachers at the regional coordinator for education in subah district. In contrast, Umar et al. [3] found that competency has a partial negative effect on teacher performance, particularly in in kindergartens in benteng district, selayar islands regency. Yanita [4] found that teacher competency has no significant impact on teacher performance in her study of state high school 3 sungai full. However, Aisyah et al. [7] found no significant influence of training on teacher performance in the batam city center of excellence vocational school. These varying results suggest that the impact of competency and training on teacher performance may be context-dependent, influenced by factors such as location, resources, and the specific definitions of "competency" used in each study. Based on research by Loren Sianturi & Melisa Hutabarat [8] which proves that the results of this research show that there is a positive and significant influence of teacher professionalism on creativity. And Dzikri [9] proves that training has a positive and significant effect on increasing creativity. Apart from that, it is certain that teacher creativity contributes to teacher performance, based on research by Serang et al. [10]. Supported by Lindawati et al. [11] that teacher creativity has a positive and significant influence on teacher performance. However, on the contrary, research conducted by Ratnasari et al. [12] shows that the influence of creativity on teacher performance is negative and not significant.

2. MATERIALS AND METHODS

2.1 Teacher Performance

Teacher performance refers to the teaching achievements resulting from the activities carried out by teachers in their primary tasks and functions. This performance is a concrete realization of their responsibilities as professionals in the field of education, as outlined in the Regulation of the Minister of National Education (Permendiknas) No. 41 of 2007 [13].

2.2 Creativity

Creativity, as defined by Utami Munandar [14], is the process of generating new outcomes through actions. These new results emerge from the unique characteristics of individuals as they interact with others, their experiences, and life circumstances.

2.3 Competence

Teacher competence, according to the Regulation of the Minister of National Education (Permendiknas) No. 16 of 2007, encompasses the qualifications required of teachers. This includes the knowledge, skills, and attitudes necessary to perform their professional duties effectively and efficiently [15].

2.4 Training

Training is the process of providing employees with the necessary skills to perform their jobs. Dessler [16] describes training as any effort to improve job performance in a specific role, whether currently held or related to future responsibilities, to ensure effectiveness.

These concepts form the foundation of this study's literature review and theoretical framework, highlighting the interrelationships between teacher performance, creativity, competence, and training. Understanding these elements is crucial for examining the factors that influence educational outcomes and teacher effectiveness.

Based on these theories, the framework of this study is as follows:

Method with an associative causality approach. Data sources are primary data and secondary data. Primary data was collected using questionnaires, secondary data using books, journals and scientific literature. The research objects were all ASN (State Civil Apparatus) teachers at SMPN in the Pusakanagara District, Subang Regency. The sample used was 88 ASN teachers. The data collection technique in this study is non-probability sampling using saturated samples. Questionnaires with a Likert scale of 1-

5. The analysis technique uses the Structural Equation Model (SEM), namely SmartPLS.4 version 4.1.0. The data will be analyzed with two models. The measurement model (outer model) is a measurement model that connects indicators with latent variables. The structural model (inner model) is a structural model that connects latent variables.
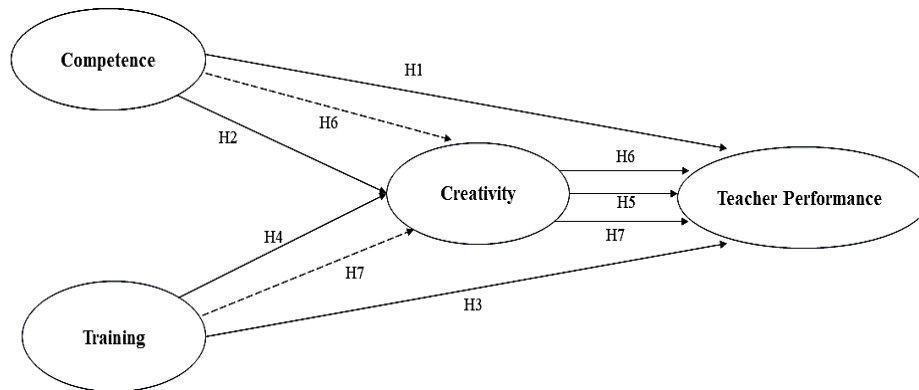

Fig .1. Teacher performance is the teaching achievement

The illustration of the Structural Equation Model-Partial Least Square (SEM-PLS) model in this study can be described as follows:

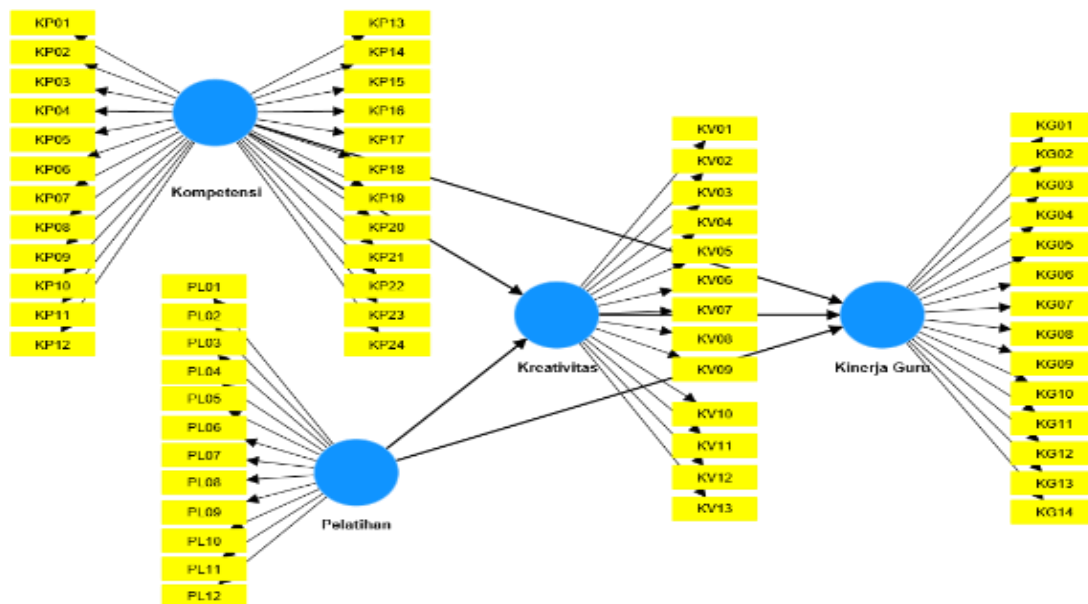**Fig. 2. Illustration of the Structural Equation Model-Partial Least Square (SEM-PLS) model**

Based on the Structural Equation Model Image

Construct variables consist of:

  Endogenous : teacher performance and creativity
  Exogenous : competence, training and creativity

The Inner or structural model consists of:

  KG: Teacher Performance   KP = Competence
  PL: Training   KV = Creativity

Outer model or measurement in the form of construct variable instruments, namely:

1. Performance

Table 1. Teacher performance

Outer	Instrument Contruct Teacher Performance
KG.01	Formulate learning objectives of lesson plans according to the curriculum
KG.02	Compile teaching materials sequentially
KG.03	Plan effective learning activities
KG.04	choose learning resources according to the material in the learning strategy
KG.05	Start learning effectively
KG.06	Master the lesson material
KG.07	Implement effective learning approaches
KG.08	Utilize learning resources
KG.09	Maintain student involvement
KG.10	Use correct language
KG.11	End learning effectively
KG.12	Design evaluation tools to measure progress in learning success
KG.13	Use assessment strategies to monitor progress in learning outcomes in achieving certain competencies according to the lesson plan
KG.14	Utilize assessment results to provide feedback on learning progress

Source: Permendiknas) No. 41 tahun 2007)

2. Creativity

Table 2. Creativity

Outer	Instrument Contruct Creativity	Outer	Instrument Contruct Creativity
KV.01	Fluency	KV.08	Incubation
KV.02	Flexibility	KV.09	Illumination
KV.03	Originality	KV.10	Verification
KV.04	Elaboration	KV.11	Novelty
KV.05	Internal Drivers	KV.12	Solving
KV.06	External Drivers	KV.13	Details
KV.07	Preparation		

Source: Utami munandar, [14]

3. Competence

Table 3. Competence

Outer	Instrument Contruct Variable Competence
KP.01	Mastering the characteristics of students
KP.02	Mastering educational learning theories.
KP.03	Developing a curriculum related to the subjects taught
KP.04	Organizing educational learning.
KP.05	Utilizing information and communication technology for learning purposes.
KP.06	Facilitating the development of students' potential to actualize their potential
KP.07	Communicating effectively with students.
KP.08	Organizing assessments in evaluating the learning process and outcomes.
KP.09	Utilizing the results of evaluation assessments for learning purposes.
KP.10	Taking reflective action to improve the quality of learning
KP.11	Acting in accordance with Indonesian national culture
KP.12	Presenting oneself as a role model for students
KP.13	Presenting oneself as an authoritative person.
KP.14	Demonstrating a high work ethic, responsibility

Outer	Instrument Contruct Variable Competence
KP.15	Upholding the code of ethics of the teaching profession.
KP.16	Acting objectively and not discriminating.
KP.17	Communicating effectively with fellow educators
KP.18	Adapting to a place of duty that has socio-cultural diversity
KP.19	Communicating with one's own professional community and other professions
KP.20	Mastering materials that support the subjects taught.
KP.21	Mastering the basic competency standards of the subjects taught
KP.22	Developing the learning materials taught creatively.
KP.23	Developing professionalism sustainably with reflective actions.
KP.24	Utilizing information and communication technology to develop oneself

(permendiknas) nomor 16 tahun 2007

4. Training

Table 4. Training

Outer	Instrument contruct variable training	Outer	Instrument Contruct Variable Training
PL01	Adequate Competence	PL07	Having clear targets
PL02	Motivating participants	PL08	Increasing ability.
PL03	Need for feedback	PL09	Suitability of material with training objectives.
PL04	Enthusiasm to follow Training	PL10	Material target setting
PL05	Desire to pay attention	PL11	Improving training participant skills.
PL06	Suitability of method with type of Training	PL12	Understanding of work ethics of training participants

[16]

Model evaluation SEM-PLS:

Table 5. Outer model analysis test instrument

(Outer Model)	Parameter	Rule of Thumb
Validitas Convergent	*Outer Loading dan (AVE)*	> 0.7 States the level of validity
	(AVE)	> 0.50 has sufficient discriminant
	(Akar kuadrat AVE)	each construct > than the correlation between
	Fornell dan lacker	constructs with other constructs
	HTMT	< 0.90 discriminant validity evaluation is accepted
Reliabilitas	*Cronbach Alpha dan Composite Realibility*	• > 0.70 States the level of reliability or internal consistency of measurement

[17]

Table 6. Instrument test analisis inner model

Criteria	Statistical Measures
R-Square	0.67, 0.33, and 0.19 (strong, moderate and weak models)
Q2	Q2>0 indicates the model has predictive relevance
Effect Size f2	0.02, 0.15 and 0.35 (Small, medium and large)
GoF	0.02, 0.25 and 0.35 (weak, moderate, strong)
Model Fit	(SRMR) below 0.1 (good fit) (indicates model suitability)
(VIF)	VIF value>5, meaning there is a critical collinearity problem VIF value <3, meaning there is no collinearity problem
PLS Predic	if all indicators = high prediction If the majority or the same number = medium prediction A minority of one indicator = low prediction
Hipotesis	It can be said that there is a significant influence if the p-value <0.05, the T statistic value> T table (1.987) at the 5% level,

[17]

3. RESULTS

This research involved collecting opinions from teachers at three schools in Pusakanagara, Subang: SMPN 1 Pusakanagara, SMPN 2 Pusakanagara, and SMPN 3 Pusakanagara. The schools are located as follows:

- SMPN 1 Pusakanagara: Jl. Raya Timur Pusakanagara No.31, Pusakanagara District, Subang 41255
- SMPN 2 Pusakanagara: Jl. Raya Pantura Mundusari Km 02, Pusakanagara, Subang 41255
- SMPN 3 Pusakanagara: Jl. Pusakanagara Km 3.5, Kalentambo, Pusakanagara District, Subang 41255

These schools were selected to provide a diverse representation of the educational environment within Pusakanagara. SMPN 1, 2, and 3 Pusakanagara were chosen because they are representative of the different types of

secondary schools in the district, including variations in location and school resources. By including schools from different parts of Pusakanagara, the sample aims to capture a broad spectrum of teacher opinions and experiences, thereby enhancing the generalizability of the findings within the context of the district. This approach also allows for comparisons between schools with different characteristics, contributing to a more comprehensive understanding of the factors affecting teacher performance in this region.

The characteristics of the 88 respondents are as follows. The sample in this study was dominated by female respondents 53%, while male 47%. age 21 - 30 years 22%, dominated by 31-40 years 30%, 41 - 50 years 22%, > 50 years 24%. not certified Teachers 57% certified 43%, from group III 85%, group IV 15% Last education S1 99%, S2 only 1%, work period 2-7 years 25% the dominant is 8-13 years 33%. 14 - 19 years 20% and > 20 years 22%.

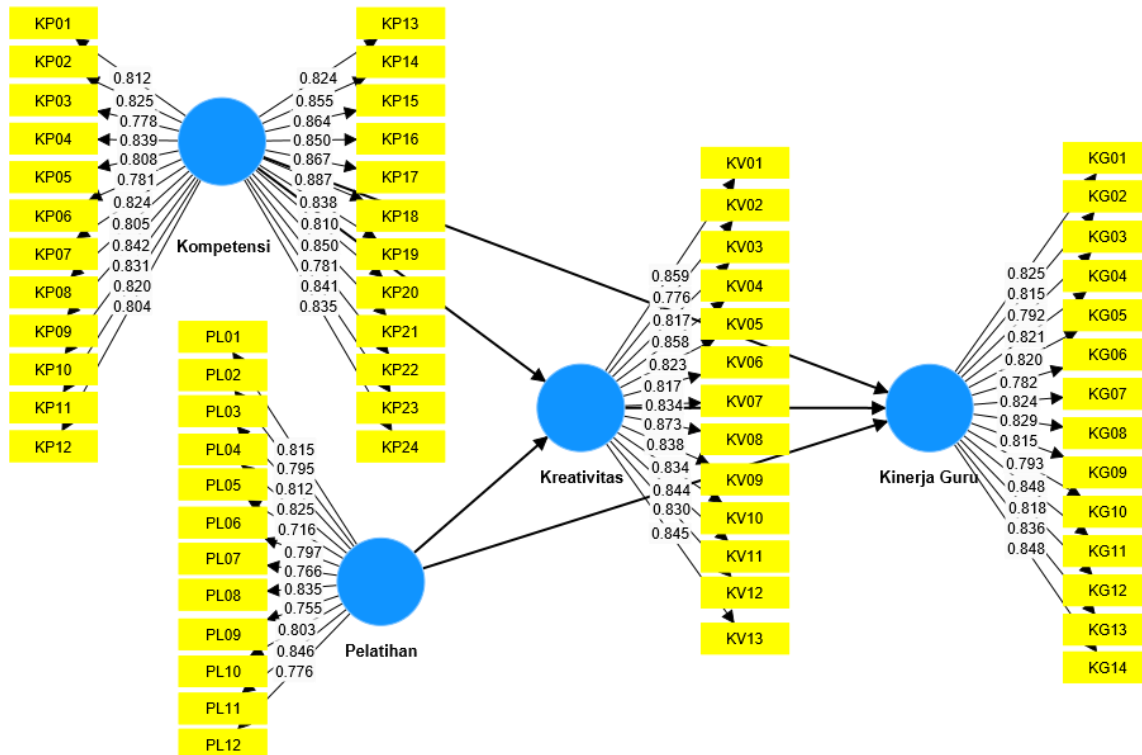### 3.1 Measurement Model (Outer Model)

Fig. 3. Evaluation of the measurement model
Source: Output Smart PLS 4.1.0.0, (2024)

Overall, each item that measures the variables of competence, training, creativity and performance has a Loading Factor ≥ 0.70 so that it meets convergent validity.

Table 7. Results of Conbach alpha values, composite reliability, AVE

Variable	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Teacher Performance	0,962	0,964	0,671
Competence	0,980	0,981	0,686
Creativity	0,964	0,965	0,697
Training	0,948	0,961	0,633

Source: Output from Smart PLS 4.1.0.0 using PLS algorithm, 2024.

The table shows that all research variables have a cobach alpha value and composite reliability of more than 0.7. And has an AVE value of more than 0.5 so it can be concluded that all variables have met discriminant validity [17].

Table 8. Fornell Larcker Criterion test results

Variable	Teacher Performance	Competence	Creativity	Training
Teacher Performance	**0,819**			
Competence	0,712	**0,829**		
Creativity	0,763	0,588	**0,835**	
Training	0,690	0,618	0,631	**0,796**

Source: Output from Smart PLS 4.1.0.0 using PLS algorithm, 2024

From the table shows that the Square Root of AVE values are 0.819, 0.829, 0.835 and 0.796. These values are greater than the correlation of each construct and meet the criteria of discriminant validity.

Table 9. HTMT test results

	Teacher Performance	Competence	Creativity
Competence	0,723		
Creativity	0,785	0,600	
Training	0,681	0,633	0,625

Source: Output from Smart PLS 4.1.0.0 using PLS algorithm, 2024

The test results show that the HTMT value is below 0.90 for the variable pair, so the discriminant validity is achieved.

3.2 Structural Model Evaluation (Inner Model)

The inner model test can be seen from the determination coefficient value / R-Square (R^2), Effect Size (F^2), predictive relevance (Q^2), and GoF, while the significant coefficient path to test the hypothesis is to predict the relationship between latent variables.

- **Test results of the R-Square (R^2) and Predictive Relevance (Q^2) values**

The determination coefficient R-Square (R^2) shows how much the exogenous variables explain the endogenous variables.

Table 10. R-Square (R^2)

Variable endogen	R-square
Teacher Performance	0,711
Creativity	0,462

Source: Output from Smart PLS 4.1.0.0 using PLS algorithm, 2024

Based on the R-Square value in Table 10, it shows the magnitude of the influence of Competence, Training and Creativity on Teacher Performance of 71.1%. and has a relationship with the category "Strong" while the remaining 29.9% is explained by other variables outside the study. In the Creativity construct of 0.462, the magnitude of the influence of Competence, and Training on Creativity is 46.2%. including the influence of "moderate".

- **Results of the effect size f2 test**

The effect size is used to determine how much the exogenous latent variable can support the endogenous latent variable.

Table 11. Effect size f2

Connection	f-square	Effect size
Competence -> Teacher Performance	0,197	Medium
Competence -> Creativity	0,118	Medium
Creativity -> Teacher Performance	0,359	High
Training -> Teacher Performance	0,081	Low
Training -> Creativity	0,216	Medium
Training -> Creativity->Teacher Performance	0,036	Low
Competence -> Creativity->Teacher Performance	0,019	Low

Source: Output from Smart PLS 4.1.0.0 using PLS algorithm, 2024.

- **Predictive Relevance (Q2) results**

Relevance (Q2) measures how well the observed values are generated by the model.

Table 12. Predictive relevance Q2

Variable endogen	Q²predict
Teacher Performance	0,552
Creativity	0,417

Source: Output from Smart PLS 4.1.0.0 using PLS predic, 2024

In Table 12, the endogenous variables that show Q²predict values of 0.417 (creativity) and 0.552 (teacher performance), the Predictive Relevance (Q2) value> 0 means that it can be concluded that the model has a relevant predictive value.

- **GoF Index Results**

The formula for calculating GoF is as follows:

$$GoF = \sqrt{Com \times R2}$$
$$= \sqrt{(0,612+0,638)/2 \; (0,711+0,462)} \quad /2 \qquad = \sqrt{0,625 \times 0,587}$$
$$= \sqrt{0,3666} \qquad = 0,605$$

Table 13. Gof index test results

Rata-rata Coummunality	Rata-rata R square	Idex Gof
0,625	0,587	0,605

Source: Output from Smart PLS 4.1.0.0 using PLS algorithm, 2024

Table 13 shows the GoF index result is 0.605 including high GoF. The overall level of fit of the structural measurement model is included in the high category.

- **Model Fit Evaluation**

Table 14. Model fit test results

	Saturated model	Estimated model
SRMR	0,078	0,078

Source: Output from Smart PLS 4.1.0.0 using PLS algorithm, 2024

Table 14 shows that the SRMR value is 0.078 < 0.10, it can be concluded that the model in this study has a Good Fit.

- **Collinearity Statistic (VIF) Results**

Inner VIF to see whether there is multicollinearity between variables.

Table 15. Inner VIF

Variable	Teacher Performance	Creativity
Creativity	1,860	
Competence	1,808	1,617
Training	1,966	1,617

Source: Output from Smart PLS 4.1.0.0 using PLS algorithm, 2024

The estimation results show an inner VIF value <3, so the level of multicollinearity between the variables is low. then collinearity is not a problem or there is no multicollinearity between the variables that affect teacher performance and creativity. These results strengthen the results of parameter estimation in SEM PLS which is robust (unbiased).

- **The strength of the predictive power of a model**

Comparing the predictive power of PLS with the Linear Regression Model (LM). The size compared is the error or error of the RSME and MAE predictions, so to determine a good prediction the error must be low. So PLS must be lower than LM.

Table 16 shows that the measurement items of all PLS model indicators have lower RMSE and MAE values than the LM model (linear regression) except for items KG.07 and KG.08 which have higher MAE values than the LM model. This means that the PLS SEM Model has medium predictive power or is approaching high predictive power.

- **Testing Hypothesis**

To test the proposed hypothesis, it can be seen from the Original Sample and the T- Statistic value through the Bootstrapping procedure. According to Hair et al. [17], the path coefficient value is in the range of -1 to +1, where a path coefficient value close to +1 represents a strong positive relationship and a path coefficient value of -1 indicates a strong negative relationship. Meanwhile, the T-Statistic value limit for rejecting and accepting the proposed hypothesis is ±1,987, where if the T-Statistic value is in the value range <1,987 then the hypothesis will be rejected or in other words accept the null hypothesis (H0) (Table 17).

Table 16. Comparison of RMSE and MAE (PLS vs LM Model)

	PLS RMSE	PLS MAE	LM_RMSE	LM_MAE		PLS RMSE	PLS MAE	LM_RMSE	LM_MAE
KG.01	0,566	0,454	0,721	0,547	KV.01	0,697	0,540	0,805	0,605
KG.02	0,598	0,466	0,800	0,601	KV.02	0,539	0,430	0,712	0,534
KG.03	0,640	0,483	0,958	0,713	KV.03	0,655	0,485	0,802	0,605
KG.04	0,608	0,468	0,748	0,533	KV.04	0,639	0,480	0,727	0,541
KG.05	0,562	0,455	0,858	0,635	KV.05	0,748	0,575	1,145	0,883
KG.06	0,582	0,485	0,831	0,637	KV.06	0,555	0,383	0,713	0,561
KG.07	0,460	0,361	0,481	0,350	KV.07	0,625	0,490	0,699	0,545
KG.08	0,578	0,454	0,588	0,426	KV.08	0,690	0,519	0,997	0,740
KG.09	0,788	0,614	1,001	0,732	KV.09	0,682	0,483	0,890	0,636
KG.10	0,761	0,587	1,048	0,718	KV.10	0,523	0,386	0,743	0,527
KG.11	0,593	0,437	0,692	0,523	KV.11	0,588	0,402	0,802	0,621
KG.12	0,633	0,523	0,712	0,541	KV.12	0,885	0,672	1,200	0,906
KG.13	0,756	0,591	0,858	0,646	KV.13	0,609	0,491	0,873	0,637
KG.14	0,612	0,472	0,693	0,505					

Source: Output from Smart PLS 4.1.0.0 using PLS Predic, 2024

Table 17. Results of direct effect hypothesis testing

Hypothesis	Direct Effects (DE)	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
Hypo 1	Competency -> Teacher Performance	0.321	0.313	0.154	2,082	0.037	Accepted
Hypo 2	Competence -> Creativity	0.321	0.314	0.113	2,831	0.005	Accepted
Hypo 3	Creativity -> Teacher Performance	0.439	0.447	0.105	4,169	0,000	Accepted
Hypo 4	Training -> Teacher Performance	0.215	0.212	0.107	2,000	0.04 6	Accepted
Hypo 5	Training -> Creativity	0.433	0.447	0.102	4,236	0,000	Accepted

Source: Output from Smart PLS 4.1.0.0 using PLS Bostrapping, 2024

Based on Table 17, it can be seen that:

H1: competence has a positive and significant effect on teacher performance: This is shown by the test results between these two variables which show that there is an *original sample value* (0.321) and has a *T-Statistic value* (2.082 > 1.987) or p value (0.037 < 0.05). Thus it can be concluded that the better the teacher's competence, the greater the teacher's performance. This shows that the higher the teacher's competence, the higher the teacher's performance.

H2: Competence has a positive and significant influence on creativity: Competence has a positive and significant effect on creativity. This is shown by the test results between these two variables which show that there is an *original sample value* (0.321) and has a *T-Statistic value of* 2.831 (>1.987) or p value (0.005 <0.05). Thus it can be concluded that competence influences creativity.

H3: Creativity has a positive and significant effect on teacher performance: This is shown by the test results between these two variables which show that there is an *original sample value* (0.439) and has a *T-Statistic value* of 4,169 (>1,987) or p value (0.000 < 0.05). Thus it can be concluded that better creativity causes teacher performance to increase.

H4: Training has a positive and significant effect on teacher performance: This is shown by the test results between the two variables which show that there is an *original sample value* (0.215) and has a *T-Statistic value* of 2,000 (> 1.987) or p value (0.046 < 0.05). Thus it can be concluded that better training leads to increased opportunities for teacher performance.

H5: Training has a positive and significant effect on creativity: This is shown by the test results between these two variables which show an *original sample value* of 0.433 and a *T-Statistic value of* 4.236 (> 1.987) or p value (0.000 < 0.05). Thus it can be concluded that the better and more focused the training program in the company causes increased creativity.

H6: Competence has a Positive and Significant Influence on Teacher Performance through Creativity: Based on Table 2, it shows that the indirect influence of competence on teacher performance through creativity has a positive and significant influence. This is shown by the test results between these two variables which show that there is an original sample value

(0.141) and has a T-Statistic value of 2.117 (>1.987) or p value (0.034 < 0.05). Creativity significantly acts as a variable that mediates the indirect influence of competence on teacher performance. The mediation role is partial mediation. So that Hypothesis 6 Accepted.

H7: Training has a positive and significant impact on performance Teacher Through Creativity: Based on Table 19, it can be seen that training has a significant indirect effect on teacher performance through the mediation of creativity. This is shown by the test results between these two variables which show that there is an original sample value (0.190) and has a T-Statistic value of 2.677 (>1.987) or p value (0.007 < 0.05). This shows that creativity significantly acts as a variable that mediates the indirect effect of training on teacher performance. Thus, the presence or absence of creativity does not change the relationship between training and performance. So it can be concluded that creativity partially mediates the relationship (partial mediation) between training and performance, this is because there is no change that occurs in the influence of direct effects (direct effects) and indirect relationships (indirect effects) where previously it was known that training on performance has positive and significant influence, these changes are not found through creativity. So Hypothesis 7 is accepted.

Based on Table 19, because there is no intermediary between Competency and Creativity, and Creativity and Creativity and Teacher Performance, the total effect is the same as the direct effect. So in this case it will not be discussed further. In this case, it will be explained where there is only an intermediary variable, namely the total influence of Competence on Y and the total influence of training on teacher performance. because competency (x1) and training (X2) affect teacher performance (Y) through creativity (Z).

1. **Total effects or the influence of total competence (X1) on teacher performance (Y):** The parameter coefficient for variable X1 on Y (the sum of direct and indirect influences through Z) is 0.462, which means there is a positive total influence of with a calculated T value of 3.094 > 1.987 and a standard deviation of 0.149. So the p value is 0.002<0.05 so that H1 is accepted or which means the total influence of X1 on Y is significantly positive.

Table 18. Results of Indirect Effect Hypothesis Testing

Hypothesis	indirect effects	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
Hypothesis 6	Competence -- >Creativity -> Teacher Performance	0.141	0.14 2	0.066	2.1 17	0.034	Accepted
Hypothesis 7	Training -> Creativity -> Teacher Performance	0.190	0.201	0.071	2,677	0.007	Accepted

Source: Output from Smart PLS 4.1.0.0 using PLS Bostrapping, 2024

Table 19. Total effect hypothesis testing results

Direct effects	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Competency -> Teacher Performance	0.462	0.455	0.149	3,094	0.002
Competence -> Creativity	0.321	0.314	0.113	2,831	0.005
Creativity -> Teacher Performance	0.439	0.447	0.105	4,169	0,000
Training -> Teacher Performance	0.405	0.413	0.114	3,548	0,000
Training -> Creativity	0.433	0.447	0.102	4,236	0,000

Source: SmartPLS 4.1.0.0 Output, 2024

2. Total effects or total influence of training (X2) on teacher performance (Y): The parameter coefficient for variable X2 on Y (the sum of direct and indirect influences through Z) is 0.405, which means there is a positive total influence of amounting to 0.413 with a calculated T value of 3.548 and a standard deviation of 0.114. So the p value is 0.000<0.05 so that H1 is accepted or which means the total influence of X2 on Z is positive and statistically significant.

4. DISCUSSION

4.1 The Influence of Competency on Teacher Performance

From the research conducted, the first hypothesis was found which connects teacher competency with teacher performance. The research results show that there is a significant relationship between these two variables. The implications of these findings are very important because they show that the higher the teacher's competence, the higher the teacher's performance. Thus, strategies for increasing teacher competency can be effective in improving their performance. The research results show that competence has a positive effect and significant impact on teacher performance. The results of this research are in line with research conducted by Basalamah et al. [6]; Andi, N., Firman, A. [18]; Lindawati et al. [11]; Fakoubun [19]; Umar et al. [20]; Masriah [21] who stated that Competence influences teacher performance. The same thing applies to researchers Maharani & Johanes Lo [22]; Priyasmimana et al. [23]; Wahyudi et al. [24]; Yuliati & Liana [2] research results show that teacher competency has a positive and significant effect on teacher performance. The results of this research strengthen the results of existing research previously carried out by Hidayatullah et al. [25]. The results of this research show that competence has a positive effect on teacher performance, giving a signal that the higher the teacher's competence, the teacher's performance will also increase. Mustikawati & Qomariah [26] teacher competency has a significant effect on teacher performance. This could be due to aspects related to teacher competency which have been able to create teacher performance. Munandar [27] teacher competency has a significant effect on teacher performance, this is

considering the important role of teachers in schools, a teacher must be professional in carrying out his duties and responsibilities as an educator, so teacher professionalism must be built through mastery. competencies that are actually applied in completing the profession. This competency is used as a motivator for teachers in carrying out their performance as educators.

4.2 The Influence of Competence on Creativity

The test results show that there is a significant positive relationship between the competency variable and the creativity variable. This means that the higher the level of teacher competence, the higher the level of teacher creativity. Thus, the findings of facts and data in this research analysis increasingly support previous findings regarding the existence of a positive relationship between teacher competence and teacher creativity. This finding is supported by research by Dzikri [9] showing that there is a positive and significant influence from increasing competence on increasing the creativity of teaching staff. This means that after increasing competency, the teaching staff will be able to apply it in their daily work as teaching staff very well and if increasing competency continues to be carried out continuously, then the increase in creativity will increase further. Researchers Serang et al. [10] show that the influence of competence on teacher creativity is positive and significant, meaning that an increase in competence will be followed by an increase in teacher creativity, assuming that other factors that influence the size of competence are constant. In line with that, in relevant research conducted by Lindawati et al. [11] also stated that competence has a positive and significant influence on creativity, and researchers Loren Sianturi & Melisa Hutabarat [8] showed that there is a positive and significant influence on creativity. teacher's professional competence is significant for creativity, a teacher who has high teacher professionalism must have good teaching abilities, be able to master the class and all the tasks assigned to him. Teachers will also be more active in guiding students to repeat all the lesson material provided, so that in the end the creativity obtained will increase. A teacher Those who have low teacher professionalism will be lazy to learn about innovation in the learning process so that it will also have an effect on student creativity.

4.3 The Effect of Training on Teacher Performance

The research results show that Training has a positive and significant influence on teacher performance. This means that if teachers often take part in training related to teacher performance, teacher performance will be better. with the training that teachers take part in, teachers can develop their personality, become more competent There are several relevant research results that strengthen the results of this research. Research conducted by Mustikawati & Qomariah [26] demonstrated that training significantly influences teacher performance. Similarly, Agustini et al. [1] confirmed a significant impact of training on performance. Totween Helniha [28] also found that training positively affects teacher performance. This is further supported by research from Rehman, Ansari, & Ali [5] and Basalamah et al. [6], which also observed the positive effects of training on teacher performance. These findings collectively suggest that enhancing education and training programs leads to improved teacher performance, assuming other influencing factors remain constant. Likewise, researchers Karyono et al. [29], training has a significant effect on employee performance, stating that high levels of training improve the performance of customer employees.

4.4 The Effect of Training on Creativity

The research results show that training has a positive and significant effect on creativity. Rahayu & Apriyansyah [30] Training has a significant effect on creativity. creativity, said that teacher creativity had increased after the training was implemented, showing quite significant changes. Previous research conducted by Nasiah [31] stated that training had a positive effect on teacher creativity. It is important for teachers to carry out training in schools because it has a strong influence on student learning which will improve the quality of learning. Teachers who are able to apply active, innovative, environmental, creative, effective and interesting learning. Teacher creativity in teaching needs to be increased because the learning process is a benchmark that can determine whether the learning process is successful or not. Also in research conducted by Dzikri [9] there is a positive and significant influence from training on increasing the creativity of teaching staff. This means that if

training is carried out continuously, the creativity of teaching staff will increase. In line with researchers Sari & Susilo [32] Job training has a positive effect on creativity. Training not only increases knowledge, but improves work skills and reduces employee error rates. Apart from this, more skilled employees will result in increased creativity at work. This means that good job training increases creative abilities, with teachers who have a high level of creativity, this means that teachers will continue to make updates to find the best alternative methods for completing work and overcoming problems that occur when completing assignments.

4.5 The Influence of Creativity on Teacher Performance

The research results show that creativity has a positive and significant effect on teacher performance, meaning that teachers who are able to think creatively can design interesting learning methods, bring innovation to the classroom, and motivate students. The higher the level of teacher creativity, the better their performance can be. Teachers need to be encouraged to look for new ways of teaching, developing materials, and interacting with students. This is supported by research conducted by Serang et al. [10]; Lindawati et al. [11] teacher creativity has a positive and significant effect on teacher performance.

4.6 Influence of Competency on Teacher Performance Through Creativity

The research results show that Competence has a positive and significant effect on teacher performance through creativity, meaning that teacher creativity mediates the relationship between teacher competence and performance. Teacher competency refers to the knowledge, skills and abilities possessed by a teacher in carrying out teaching duties. Meanwhile, creativity is the ability to produce new ideas, innovative solutions, and different approaches to solving problems. teachers who have higher competence tend to show higher levels of creativity in designing learning, managing classes, and responding to student needs more effectively. Increasing teacher competency supported by strengthened creativity can pave the way to improve the quality of teaching, learning, and ultimately, influence teacher performance as a whole. The results of this research strengthen the results of previous research conducted by Yuliati & Liana [2] proving

that competency has a positive and significant influence on teacher performance. Other research conducted by Dzikri [9]; Serang et al. [10] stated that competency has a positive and significant effect on educator creativity. The results of this research are also in line with researchers Serang et al. [10] that teacher creativity has a positive and significant effect on teacher performance.

Therefore, an approach to teacher professional development, with a focus on competence and creativity, is very important to achieve optimal learning outcomes. It can be concluded that teacher competence that increases creativity will contribute positively to improving teacher performance.

4.7 The Effect of Training on Teacher Performance Through Creativity

The research results show that training has a positive and significant effect on Teacher Performance through Creativity. When teachers have developed creativity, teachers can find innovative approaches to delivering learning material and overcoming challenges that arise in the classroom. Thus, good training not only improves their technical skills, but also enriches the way they inspire and motivate students. This will ultimately lead to significant improvements in the quality of teacher performance and student learning outcomes. This is in accordance with the opinion expressed by Dzikri [9] proves that training has a positive and significant effect on increasing creativity. Apart from that, it is certain that teacher creativity contributes to teacher performance, Serang et al. [10]. In line with Lindawati et al. [11] that teacher creativity has a positive and significant influence on teacher performance. Likewise with research by Basalamah et al. [6]; Rehman, M., Ansari, RH, & Ali [5]. proves that training has a significant effect on teacher performance. The results of this research are also in line with the theory that is the reference in this research, namely Hamzah [33], the factors that influence creativity are external factors such as (educational background, training, experience, welfare), which states that the results with the theory put forward by Yamin, Martinis. [34] who say that performance is greatly influenced by characteristics (personal/individual) including elements of knowledge, skills, abilities, self-confidence, motivation.

Providing training is intended so that teachers can master the work they are responsible for so

that efficiency and effectiveness can be achieved in carrying out their duties. Through this training, schools can also have teachers who are competent to compete, especially in global competition and the increasingly diverse demands of society as a manifestation of the function of developing teaching staff, the human resources owned by the organization must be given training which is a continuous process because of technological developments, economic and non-economic development in a country. With training, teachers have the opportunity to develop new ideas and creative approaches to teaching, which ultimately affects the quality of the teacher's teaching. This change in teaching methods also has the potential to improve overall student achievement.

5. CONCLUSION

Competence has a positive and significant influence on teacher performance. Competence has a positive and significant influence on creativity. Competent teachers are more creative in teaching. Creativity has a positive and significant influence on teacher performance. Training has a positive and significant influence on teacher performance. Training has a positive and significant influence on creativity. Creativity acts as a significant mediating variable in the indirect influence of training on teacher performance.

Creativity acts as a significant mediating variable in the indirect influence of competence on teacher performance. Increasing competency and training for teachers is very important to increase teacher creativity and performance. Teacher professional development with a focus on increasing competence and creativity will produce better teaching quality and optimal student learning outcomes.

6. SUGGESTIONS

A. for educational institutions Improving teacher performance can be done through periodic competency training that covers pedagogical, professional, social, and personal aspects. Periodic performance evaluation is important to provide constructive feedback. Mentoring programs by senior teachers are also needed. Teacher creativity can be improved through program innovation, provision of supportive facilities, and learning communities. In addition, awards

for creativity, collaborative projects, and innovative teaching methods can motivate teachers. Focused and practical training should be held periodically with feedback and follow-up to support continuous professional development. Integration of creativity in every training program is very important to mediate the relationship between teacher competence and performance.

B. For further research, the limitations of this study only include one mediator variable and a limited number of participants. For further research, it is recommended to use the total effect again and see the significant standard based on the loading factor. Explain the model by adding other variables or two mediators. Include other variables such as emotional intelligence and compensation. Expand the number of samples to cover a wider and more representative scope. Thus, research can make a greater contribution to improving teacher performance.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

ETHICAL APPROVAL

The authors declare that all procedures involving human participants, in this case teachers, have been reviewed and approved by the appropriate ethics committee. This research has been carried out in accordance with the ethical standards laid down by the 1964 Helsinki Declaration and its relevant amendments.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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