

The Influence of Education and Training on Civil Servant Performance Mediated by Competence

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Article Info	ABSTRACT
Keywords: Education Training Civil Servant Performance Mining Supervision	Education and training programs for civil servants (ASN) have been intensified, yet bureaucratic performance, particularly in mining supervision, remains suboptimal. This study aims to examine the effect of education and training on ASN performance with competence as a mediating variable. Using a quantitative approach with PLS-SEM analysis on 41 respondents from the Inspector of Mines Office in North Maluku Province. This study found that education does not have a significant effect on either the competence or performance of civil servants. In contrast, training has a significant effect on competence but not directly on performance. Competence was proven to have a significant effect on performance and mediates the relationship between training and performance, but does not mediate the relationship between education and performance. These findings indicate that improvements in civil servant performance in the mineral and coal subsector are more strongly influenced by competencies gained through training rather than formal education, highlighting the strategic role of competency-based training programs in enhancing performance.

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INTRODUCTION

Bureaucratic reform places the performance of state civil servants (ASN) as the primary benchmark for successful public service delivery and governance (Zahari et al., 2022). In the context of development and supervision of the mineral and coal subsector, performance is also reflected through the effectiveness of development and supervision activities, which are evaluated using indicators such as the development and supervision index.

Table 1. Effectiveness Index of Guidance and Supervision of the Mineral and Coal Subsector 2020-2024

Indeks Efektivitas Binwas	Tahun				
	2020	2021	2022	2023	2024
Target PK	76	77	78	79	79
Realisasi	82,33	81,84	80,43	79,73	80,05
Persentase	108%	106%	103%	101%	101%

Source: Directorate General of Mineral and Coal Performance Report 2020 - 2024

Table 1. Shows the effectiveness index value of guidance and supervision in the mineral and coal subsector from 2020 to 2024. Although all annual achievements consistently exceeded the set performance targets (more than 100%), the data indicates a downward trend and stagnation in the effectiveness of guidance and supervision over the past five years. This is compared to the number of ASN participants at the Ministry of Energy and Mineral Resources who have attended training from 2020 to 2024, as shown in Table 2.

Table2. Number of Participants in the 2020-2024 Ministry of Energy and Mineral Resources ASN Training

Jumlah Peserta Pelatihan ASN	Tahun				
	2020	2021	2022	2023	2024
Target PK	3.827	10.693	18.600	19.819	18.543
Realisasi	22.761	15.294	21.724	22.452	23.820
Persentase	595%	143%	117%	113%	128%

Source: BPSDM KESDM Performance Report 2020 – 2024, processed

Furthermore, all civil servants at the research location, the North Maluku Provincial Mining Inspector's Office, have participated in the Mining Inspector Functional Training, a strategic training program to support guidance and supervision activities. This indicates that increased input, such as the number of civil servant training sessions, has not fully aligned with improved outcomes in the effectiveness of guidance and supervision in the mineral and coal subsector. This phenomenon indicates a gap between inputs in the form of education and training and outcomes in the form of performance.

Although many research results state that education and training improve performance (Kepler Sinaga et al, 2021; Ruspratiwi et al, 2024) However, different results can occur in the field. This is no exception at the North Maluku Provincial Mining Inspectorate Office, an integral part of the Directorate General of Minerals and Coal at the Ministry of Energy and Mineral Resources, which acts as an extension of the central government in guiding and supervising mining activities in the region. Education is a planned process to develop individual potential through formal, non-formal, and informal channels (Law No. 20 of 2003). Education provides a theoretical foundation, knowledge, and core values that support the implementation of ASN duties (Gaffar & Ismail, 2024). Meanwhile, training is a systematic effort to improve skills, knowledge, and attitudes so that employees can work more effectively (Flippo in Hasibuan, 2019; Kaswan, 2013). Performance is defined as the quality and quantity of an employee's work results in accordance with their responsibilities (Mangkunegara, 2021). Indicators include quality, quantity, reliability, and work attitude.

The inconsistency of previous research findings with the current phenomenon indicates the presence of other variables that play a role in explaining the relationship between education and training and performance. Competence is the intervening variable in this study. Competence is the combination of knowledge, skills, and attitudes that underpins superior individual performance (Susanto, 2001; Edison et al., 2019). In the context of civil servants (ASN), competence encompasses technical, managerial, and socio-cultural aspects that support work effectiveness (PermenPANRB No. 38 of 2017).

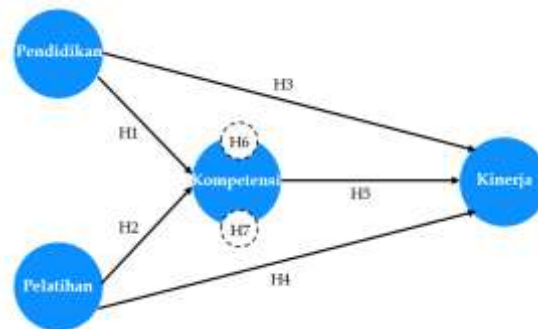
Therefore, this study focuses on analyzing the influence of education and training on ASN performance with competency as a mediating variable, particularly at the North Maluku Province Mining Inspector's Office.

According to Sugiyono (2024), a hypothesis is a temporary answer to a research problem, where the research problem has been stated in the form of a statement. The hypothesis in this study is:

1. H1: There is a significant influence of education on competence;
2. H2: There is a significant influence of training on competence;
3. H3: There is a significant influence of education on performance;
4. H4: There is a significant influence of training on performance;
5. H5: There is a significant influence of competence on performance;
6. H6: There is a significant influence of education on performance through competence; and
7. H7: There is a significant influence of training on performance through competence.

There are 4 variables forming the hypothesis in this study, consisting of: 2 (two) independent variables, namely education (PEN) and training (PEL); one dependent variable, namely performance (KIN) and one mediating variable, namely competence (KOM).

The relationship between variables is shown in Figure



Picture1. Relationship between variables

METHODS

This research used a quantitative approach with a survey method. The study took place at the North Maluku Province Mining Inspector's Office. Primary data was obtained through a questionnaire distributed to 41 respondents, while secondary data was obtained from relevant documents and literature.

The data collection technique used a questionnaire with a Likert scale to measure the research variables. The data analysis technique used Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) to test the direct and indirect relationships between variables.

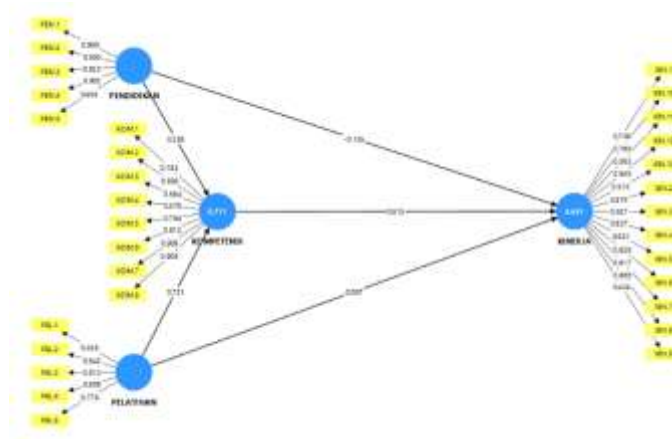
RESULTS AND DISCUSSION

In the PLS-SEM framework, inferential statistical testing includes two main stages, namely the measurement model test (outer model) and the structural model test (inner model).

Outer Model

The measurement model tests include convergent validity, discriminant validity, and construct reliability. Figure 2 shows the loading factor values of the indicators for each variable.

In order to fulfill convergent validity, the criteria measures used are loading factor values > 0.7 and AVE (Average Variance Extracted) > 0.50 .



Picture2. Construct Model After PLS-SEM Calculation

Table3. Loading Factor value for PLS-SEM calculation

Variables	Indicator	Loading Factor	Information
Education (PEN)	PEN.1	0.969	Valid
	PEN.2	0.900	Valid
	PEN.3	0.823	Valid
	PEN.4	0.902	Valid
	PEN.5	0.903	Valid
Training (PEL)	PEL.1	0.438	Invalid
	PEL.2	0.842	Valid
	PEL.3	0.813	Valid
	PEL.4	0.809	Valid
	PEL.5	0.776	Valid
Competence (KOM)	KOM.1	0.743	Valid
	KOM.2	0.838	Valid
	KOM.3	0.564	Invalid
	KOM.4	0.570	Invalid
	KOM.5	0.764	Valid
	KOM.6	0.812	Valid
	KOM.7	0.908	Valid

Variables	Indicator	Loading Factor	Information
Performance (KIN)	KOM.8	0.908	Valid
	KIN.1	0.736	Valid
	KIN.2	0.873	Valid
	KIN.3	0.827	Valid
	KIN.4	0.827	Valid
	KIN.5	0.921	Valid
	KIN.6	0.828	Valid
	KIN.7	0.617	Invalid
	KIN.8	0.606	Invalid
	KIN.9	0.424	Invalid
	KIN.10	0.766	Valid
	KIN.11	0.563	Invalid
	KIN.12	0.648	Invalid
KIN.13	0.513	Invalid	

Source: Processed Primary Data, August 2025

Based on table 3, several indicators are invalid and need to be removed because they do not meet the loading factor value of > 0.7 , namely PEL.1, KOM.3, KOM.4, KIN.7, KIN.8, KIN.9, KIN.11, KIN.12, and KIN.13. These indicators will not be included in the next calculation.

Table 4. AVE value

	Average variance extracted (AVE)
EDUCATION	0.810
TRAINING	0.666
COMPETENCE	0.711
PERFORMANCE	0.697

Source: Processed Primary Data, August 2025

Based on table 4, it is known that the AVE values of all variables are valid because they meet the criteria of $AVE > 0.5$.

Table 5. Cross Loading Value

	Education	Training	Competence	Performance
PEN.1	0.968	0.306	0.490	0.306
PEN.2	0.905	0.323	0.442	0.289
PEN.3	0.826	0.339	0.411	0.373
PEN.4	0.898	0.193	0.316	0.173
PEN.5	0.896	0.125	0.324	0.201
PEL.2	0.495	0.822	0.684	0.578
PEL.3	0.490	0.798	0.680	0.581
PEL.4	0.008	0.840	0.683	0.604
PEL.5	0.009	0.803	0.650	0.688
KOM.1	0.205	0.748	0.798	0.724
KOM.2	0.196	0.711	0.857	0.810

	Education	Training	Competence	Performance
KOM.5	0.474	0.710	0.749	0.557
KOM.6	0.602	0.662	0.792	0.618
KOM.7	0.469	0.679	0.923	0.835
KOM.8	0.378	0.679	0.923	0.835
KIN.1	0.130	0.609	0.762	0.783
KIN.2	0.342	0.791	0.893	0.915
KIN.3	0.288	0.782	0.857	0.888
KIN.4	0.315	0.539	0.609	0.785
KIN.5	0.379	0.607	0.718	0.915
KIN.6	0.164	0.574	0.626	0.819
KIN.10	0.187	0.358	0.509	0.717

Source: Processed Primary Data, August 2025

Based on table 5, the indicators of the Education variable (PEN), namely PEN.1 to PEN.5, all have higher loading values on the Education variable compared to other variables, meaning that the indicators that measure the Education variable correlate more highly with the Education variable and correlate lesser with other variables. Likewise, the indicators of the Training variable (PEL), namely PEL.2 to PEL.5, all have higher loading values on the Training variable compared to other variables, meaning that the indicators that measure the Training variable correlate more highly with the Training variable and correlate lesser with other variables.

Meanwhile, the indicators of the Competence variable (KOM), namely KOM.1, KOM.2, KOM.5, KOM.6, KOM.7, and KOM.8, all have higher loading values on the Competence variable compared to other variables, meaning that the indicators that measure the Competence variable correlate higher with the Competence variable and correlate lower with other variables. Likewise, the indicators of the Performance variable (KIN), namely KIN.1 to KIN.6 and KIN.10, all have higher loading values on the Performance variable compared to other variables, meaning that the indicators that measure the Performance variable correlate higher with the Performance variable and correlate lower with other variables.

Table 6. CA and CR values

	Cronbach's alpha	Compositereliability (rho_a)	Compositereliability (rho_c)
EDUCATION	0.941	0.960	0.955
TRAINING	0.833	0.833	0.889
COMPETENCE	0.917	0.921	0.936
PERFORMANCE	0.927	0.944	0.941

Source: Processed Primary Data, August 2025

Based on table 6, it can be concluded that the reliability of the variables has been met because all variables have a Cronbach's Alpha (CA) value > 0.70 and Composite Reliability (CR) > 0.70.

Inner Model

Structural model tests include: R-Square (R2) calculations, Q-Square (Q2) calculations, f-Square (f2)

calculations, Path Coefficient Tests, Hypothesis Tests and Mediation Tests.

Table 7. R-square value

	R-square	R-square adjusted
PERFORMANCE	0.771	0.753
COMPETENCE	0.729	0.715

Source: Processed Primary Data, August 2025

Based on table 7, the R-square for the Performance variable is 0.771, with an adjusted R-square value of 0.753. This indicates that the independent variables used in the model are able to explain 77.1% of the variation in Performance, while the remaining 22.9% is explained by other factors outside the research model. Furthermore, the R-square value for the Competence variable is 0.729, with an adjusted R-square value of 0.715. This means that the independent variables in the model are able to explain 72.9% of the variation in Competence, while the remaining 27.1% is influenced by other variables not included in the model.

According to Hair et al. (2022), an R-square value of 0.75 is categorized as substantial, 0.50 as moderate, and 0.25 as weak. Based on these criteria, the results of this study indicate that the R-square value for Competence is in the substantial category, and the R-square value for Performance is in the substantial category.

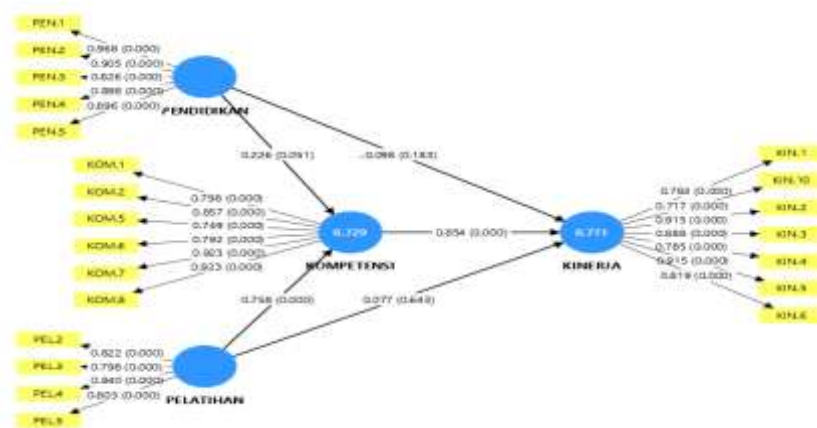
The value of R-square can then be used to calculate Q-Square using the Stone-Geisser formula:

$$Q^2 = 1 - [(1 - R_{12})(1 - R_{22}) \dots (1 - R_{nn})]$$

From the R-square values in table 7, $R_{12} = 0.771$ and $R_{22} = 0.729$. So,

$$Q^2 = 1 - [(1 - 0.771)(1 - 0.729)] = 0.938$$

The Q^2 value = 0.938 indicates that this research model has excellent predictive ability, because $Q^2 > 0.35$. Based on these results, the Q Square value of 0.938 indicates that the amount of data diversity that can be explained from the research that has been conducted is 93.8% and the rest is explained by other factors outside the research.



Picture 3. Results of Structural Model Analysis with Bootstrapping (Path Coefficient and p-value)

Table 8. F-square value

	f-square
EDUCATION -> COMPETENCE	0.171
EDUCATION -> PERFORMANCE	0.033
TRAINING -> COMPETENCY	1,927
TRAINING -> PERFORMANCE	0.008
COMPETENCY -> PERFORMANCE	0.864

Source: Processed Primary Data, August 2025

Based on Table 8, the f-square value indicates the magnitude of the effect size of each dependent variable on the independent variable. The analysis results show that:

- 1) Education → Competence (0.171) is in the moderate category. This means that education has a significant influence on increasing competence.
- 2) Education → Performance (0.033) is in the small category. This indicates that the direct influence of Education on Performance is relatively weak, so its contribution to improving Performance is not very large.
- 3) Training → Competence (1.927) is in the very large category. This shows that Training is the dominant factor influencing Competence.
- 4) Training → Performance (0.008) is in the very small category, so the contribution of Training to Performance is relatively weak.
- 5) Competence → Performance (0.864) is in the large category. This indicates that Competence makes a strong contribution to improving ASN Performance. Competence is a key factor connecting Education and Training with Performance.

Referring to Hair et al. (2022), the f-square values are classified into small (0.02), medium (0.15), and large (0.35). Thus, it can be concluded that the most dominant variable influencing the model is Training on Competence, while the weakest influence is Education on Performance.

Hypothesis Testing

In PLS-SEM, all hypothesis testing (path coefficients) requires bootstrapping to determine the significance of the relationship between variables. This study used a subsample of 5,000 with a significance level of 0.05. Figure 3 shows the bootstrapping results of the education and training variables on the ASN performance variable, mediated by the competency variable.

The values of the path coefficient and p-value are shown in Table 9.

Table 9. Path Coefficient Value Between Variables

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
PEN -> COM	0.226	0.225	0.116	1,952	0.051
PEL -> KOM	0.758	0.759	0.103	7,377	0,000
KOM -> KIN	0.854	0.847	0.155	5,493	0,000
PEN -> KIN	-0.098	-0.095	0.074	1,332	0.183
PEL -> KIN	0.077	0.094	0.165	0.464	0.643

Source: Processed Primary Data, August 2025

Based on table 9, by looking at the values of the path coefficient and p-value between variables, the following conclusions can be drawn:

- 1) Education has a positive and insignificant effect on competence (path coefficient = 0.226; p-value = 0.051).
- 2) Education has a negative and insignificant effect on performance (path coefficient = -0.098; p-value = 0.183).
- 3) Training has a positive and significant effect on competence (path coefficient = 0.758; p-value = 0.000).
- 4) Training has a positive and insignificant effect on performance (path coefficient = 0.077; p-value = 0.643).
- 5) Competence has a positive and significant effect on performance (path coefficient = 0.854; p-value = 0.000).

Hypothesis testing using parameters in the form of path coefficient, p-value, t-statistic, 97.5% Confidence Intervals and f-square as shown in table 10.

Table 10. Hypothesis Testing

Hypothesis	Path Coefficient	p-values	t-statistic	Confidence Intervals		f2	Information
				2.5%	97.5%		
H1. Education -> Competence	0.226	0.051	1,952	0.002	0.449	0.171	Rejected
H2. Training -> Competence	0.758	0,000	7,377	0.544	0.941	1,927	Accepted
H3. Education -> Performance	-0.098	0.183	1,332	-0.239	0.051	0.033	Rejected
H4. Training -> Performance	0.077	0.643	0.464	-0.208	0.438	0.008	Rejected
H5. Competence -> Performance	0.854	0,000	5,493	0.508	1,100	0.864	Accepted

Table 11. Mediation Test

Hypothesis	Path Coefficient	p-values	t-statistics	Confidence Intervals		Information
				2.5%	97.5%	
H6. Education -> Competence -> Performance	0.193	0.077	1,771	0.001	0.420	Rejected
H7. Training -> Competence -> Performance	0.647	0,000	4,597	0.381	0.944	Accepted

Source: Processed Primary Data, August 2025

Based on table 10 above, the following conclusions can be drawn:

- 1) The first hypothesis (H1) was rejected, namely that there was no significant influence of education on competence.

The path coefficient value of 0.226 with a p-value of 0.051 (> 0.05) and a T-value of 1.952 (< 1.96) indicates that the effect is not significant. The Confidence Interval (95% CI) range is 0.002–0.449, which does not exceed zero. However, because the p-value is still above 0.05, the

hypothesis is still rejected. The f^2 value of 0.171 indicates a small effect. This means that education only makes a small contribution to improving ASN competency.

- 2) The second hypothesis (H2) is accepted, namely that there is a significant influence of training on competence.

The path coefficient value = 0.758 with p value = 0.000 (<0.05) and T value = 7.377 (>1.96) indicates a highly significant effect. CI [0.544 – 0.941] is entirely positive and does not include zero. The f^2 value = 1.927 includes a very large effect, so training is proven to be a dominant factor in improving ASN competence.

- 3) The third hypothesis (H3) was rejected, namely that there was no significant influence of education on performance.

The path coefficient value = -0.098 with a p value = 0.183 (> 0.05) and a T value = 1.332 (< 1.96) indicates an insignificant effect. The CI [-0.239 – 0.051] includes zero, confirming that the effect of education on performance is not significant. The f^2 value = 0.033 includes a very small effect, so education does not directly improve ASN performance.

- 4) The fourth hypothesis (H4) was rejected, namely that there was no significant influence of training on performance.

The path coefficient value = 0.077 with a p value = 0.643 (> 0.05) and a T value = 0.464 (< 1.96) indicates a weak and insignificant effect. CI [-0.208 – 0.438] includes zero. The f^2 value = 0.008 includes a very small effect, so the training does not directly improve ASN performance without being mediated by competency.

- 5) The fifth hypothesis (H5) is accepted, namely that there is a significant influence of competence on performance.

The path coefficient value = 0.854 with p value = 0.000 (<0.05) and T value = 5.493 (> 1.96) indicates a highly significant effect. CI [0.508 – 1.100] is in the positive range, although the upper limit exceeds 1 due to the bootstrapping process, this does not affect the conclusion because the interval does not include zero. The f^2 value = 0.864 indicates a large effect, confirming that competence is the main factor that improves ASN performance.

Mediation Test

Next, a mediation test is conducted to determine whether the relationship between the independent and dependent variables is mediated by a mediator variable. The mediation test is based on bootstrapping results, which display the Total Indirect Effects values of the variables in the tested model.

Based on table 11 above, the following conclusions can be drawn:

- 1) The sixth hypothesis (H6) was rejected, namely that competence was not able to mediate the influence of education on performance.

The path coefficient value of 0.193 with a p value of 0.077 (> 0.05) and a T value of 1.771 (< 1.96) indicates an insignificant effect. The Confidence Interval range [0.001 – 0.420] indicates that competence is not a mediator between education and performance. This confirms that improving ASN performance does not occur through the education → competence → performance pathway.

- 2) The seventh hypothesis (H7) was accepted, namely that competence was proven to mediate the effect of training on performance.

The path coefficient value of 0.647 with a p-value of 0.000 (<0.05) and a T-value of 4.597 (>1.96) indicates a highly significant effect. The CI [0.381 – 0.944] does not include zero, thus strengthening the significance of the results. This means that new training can improve ASN performance if it first contributes to developing competency. Thus, competency is a very important mediator in the relationship between training and performance.

Discussion

H1: There is a significant influence of education on competence

The research findings indicate that education has a positive but insignificant effect on competency at the North Maluku Provincial Mining Inspector's Office. This means that while increasing educational attainment tends to lead to increased competency, the effect is not statistically strong enough to be considered a determining factor. This suggests that employee competency is not solely determined by formal educational background, but is likely influenced by other factors such as work experience, training intensity, and individual motivation in carrying out their duties.

This finding is consistent with the study by Afdal Zulhendri and Henmaidi (2021), which stated that education level does not always significantly influence employee competency improvement. However, this finding contradicts research by Agung Nugraha et al. (2020) and Yuswardi (2021), which found that education level has a positive influence and significantly improves competency. These differences in results may be due to variations in organizational context, type of work, and differences in the characteristics of the respondents studied in each study.

Furthermore, the analysis shows that knowledge relevance to the job is the most dominant indicator influencing competency. This confirms that what's more crucial is not the level of formal education an employee possesses, but rather how relevant their knowledge is to the demands of their daily work. The more relevant the knowledge, the greater its contribution to improving competency, even though educational levels may vary.

H2: There is a significant influence of training on competence

The research results show that training has a positive and significant impact on competency at the North Maluku Provincial Mining Inspector's Office. This means that the better the quality and intensity of the training programs attended by employees, the higher their competency. This finding aligns with studies by Afdal Zulhendri & Henmaidi (2021); Giri Dwinanda (2022); A. Ridhuan Habena & Sri Mulyani (2023), which corroborate broader findings that training not only improves technical knowledge and skills but also builds competencies, which serve as the primary foundation for developing productive and high-performing human resources.

H3: There is a significant influence of education on performance

The research findings indicate that education has a negative and insignificant effect on employee performance at the North Maluku Province Mining Inspector's Office. This means that the level of formal education of employees at the North Maluku Province Mining Inspector's Office does not directly determine their performance. This finding is interesting, as it is not a common conclusion compared to many other studies that show a positive effect of education on performance. However, in some studies,

this finding aligns with previous research by Azzahro & Subarno (2024) and Alsadilla et al. (2022). The results of these studies found that education had a negative or insignificant effect on performance, indicating that education alone is not a sufficient factor in determining performance improvement. Therefore, education cannot be viewed as the sole variable determining employee performance without considering the work environment and other external factors.

In the context of the North Maluku Provincial Mining Inspectorate Office, these results are understandable, as most employees have relatively uniform educational backgrounds that meet civil service recruitment standards. Therefore, variations in formal education are no longer a key differentiator in influencing performance. Other factors such as work experience, technical competence, and adaptability to the challenging dynamics of the mining sector play a more significant role in determining employee performance.

H4: There is a significant influence of training on performance

The research findings indicate that training has a positive but insignificant effect on employee performance at the North Maluku Provincial Mining Inspector's Office. This means that the training provided to employees at the North Maluku Provincial Mining Inspector's Office does have a positive relationship with performance, but the effect has not been proven strong or statistically significant.

These findings are consistent with studies conducted by Syuhud Akbar (2024) and Batistuta and Atmajawati (2024), which both confirmed that while training can improve employee skills, this impact has not yet reached a significant level in the context of organizational performance. This indicates that the success of training is determined not only by its implementation, but also by the quality of its design and its suitability to job requirements.

H5: There is an influencesignificantcompetence to performance

The research findings indicate that competence has a positive and significant impact on employee performance at the North Maluku Provincial Mining Inspector's Office. This means that the higher the competence of employees at the North Maluku Provincial Mining Inspector's Office, the better their performance. This finding is supported by research showing that increasing competence, including knowledge, skills, and work attitudes, directly improves employee performance in government and private organizations (Herlambang et al., 2022; Sariana et al., 2022).

In these findings, socio-cultural competencies, such as the ability to build relationships and adapt to the work environment, were the dominant indicators. These results confirm that socio-cultural competency aspects play a strategic role in creating a harmonious and productive work environment at the North Maluku Provincial Mining Inspector's Office. The ability to build good relationships among employees not only strengthens teamwork but also improves effective organizational communication. Meanwhile, an adaptive attitude towards the work environment demonstrates employee flexibility in dealing with regulatory changes, organizational dynamics, and technical challenges in the field.

H6: There is an influencesignificanteducation on performance through competency

The research findings indicate that competency does not significantly mediate the relationship between education and performance. This means that competency does not act as a significant bridge in the relationship between education and employee performance. In other words, although formal education is expected to improve competency, which then drives performance, the reality obtained at

the North Maluku Province Mining Inspector's office does not indicate a significant mediating role for competency. Although this finding is inconsistent with the results of studies that state that competency can mediate the relationship between education and performance (Agung Nugraha et al., 2020), this finding does strengthen the theoretical framework of human resource development, which states that formal education is only one component in a series of processes to improve employee capabilities (Swanson, 2022). As explained by Noe et al. (2025), competency is a combination of knowledge, skills, and attitudes needed to carry out tasks effectively, and does not always follow a linear progression with formal education. Therefore, the role of competency as a mediator must be supported by other factors such as ongoing training, work experience, and organizational conditions to optimally contribute to performance. This confirms that in areas with high technical and regulatory challenges such as North Maluku, a holistic approach that combines formal education, continuous training, and a good internal management system is very necessary to make a real contribution to improving the performance of the apparatus, including Mining Inspectors.

H7: There is a significant influence of training on performance through competence.

The research findings show that competency significantly mediates the relationship between training and performance. This means that competency is a significant mediator between training and employee performance. This confirms that training functions not only as a knowledge transfer process but also as a strategic instrument in building individual competency, ultimately contributing directly to achieving optimal performance.

This finding is in line with the results of research conducted by Muhtadin (2020) and Dwinanda (2022), which strengthens the argument that competence is a key factor that bridges the effectiveness of training in improving organizational performance. In the context of the North Maluku Provincial Mining Inspectorate further underscores this urgency. As an institution tasked with technical and environmental oversight of mineral and coal mining activities, employees are required to possess specific technical and managerial competencies, ranging from an understanding of the latest mining regulations to skills in using environmental monitoring technology. Needs-based training relevant to the complexities of the field is crucial to ensure employee competency is truly developed and implemented in daily work.

CONCLUSION

In the context of the North Maluku Province Mining Inspector's Office, improving ASN performance in the mineral and coal subsector is more influenced by competencies acquired through training than formal education, so that competency-based training becomes a more strategic instrument in improving performance. It is recommended that civil servant training programs be designed based on competencies and job requirements, that formal education be aligned with agency duties and functions, and that post-training coaching be provided. Furthermore, performance evaluation systems should incorporate competency indicators, and that human resource management policies be integrated sustainably to ensure long-term improvements in civil servant competency and performance.

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