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The Influence of Character Education and Learning Motivation on Competence and Performance of Indonesian Navy PUSDIKLEK Graduates

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Abstract

This study addresses the need to enhance the competence and performance of graduates from the Indonesian Navy's Education and Training Center (Pusdiklek), particularly in response to evolving technological and operational demands that reveal gaps in current training outcomes. The study aims to analyze the direct and indirect effects of character education and learning motivation on competence and performance, with competence acting as a mediating variable. A quantitative approach was employed using Structural Equation Modeling (SEM) with a sample of 164 respondents selected through simple random sampling from a population of 277 personnel. Data were collected a structured questionnaire using a 5-point Likert scale and analyzed using AMOS 24. The results indicate that character education significantly influences competence ($\beta = 0.415$; $p < 0.001$) and performance ($\beta = 0.288$; $p < 0.001$), while learning motivation has a stronger effect on competence ($\beta = 0.522$; $p < 0.001$) and performance ($\beta = 0.454$; $p < 0.001$). Competence also significantly affects performance ($\beta = 0.359$; $p < 0.001$) and mediates the relationship between character education ($\beta = 0.149$; $p = 0.003$) and learning motivation ($\beta = 0.187$; $p = 0.002$) on performance. These findings confirm a partial mediation model and highlight the importance of integrating character development and motivational strategies in military training systems. The study contributes theoretically by developing an integrated SEM-based framework in a military education context and practically by providing strategic insights for improving training effectiveness and personnel performance in the Indonesian Navy.

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Introduction

The Indonesian Navy, as the primary component of maritime defense, as mandated by Law No. 3 of 2025 concerning amendments to Law No. 34 of 2004, Article 9, is responsible for safeguarding sovereignty, enforcing the law within national jurisdiction, and developing maritime power. To optimally carry out these duties, professional and competent personnel are required, particularly the Electronics Corps, which plays a crucial role in the operation of military communications, radar, and navigation systems. Recent internal evaluations and training reports indicate that disparities still

exist in the competence and performance levels of Pusdiklek graduates, particularly in adapting to rapidly evolving defense technologies and operational demands, highlighting the need for more effective educational strategies. Therefore, improving the quality of human resources through strengthening education and competency is a strategic priority to realize a resilient, adaptive, and respected Indonesian Navy.

This study integrates theories from various journals and international studies that link four main variables: character education, learning motivation, competence, and performance. The main theoretical source is research by (Ismail, 2021) evaluating the influence of competence and compensation on civil servant performance through job satisfaction at the Malang Army Polytechnic. The organization itself is a group of two or more people united to achieve a common goal, with members who regularly interact, cooperate, have common goals, and carry out predetermined roles (Jonas, 2021). According to Scott, an organization is a system of coordinated activities involving a group of people working together to achieve a common goal, regulated by a certain authority (Hardjana, 2016). (Robbins, 2011) defines organizational behavior as the study of the influence of individual behavior, groups, and structures on organizations, with the aim of improving organizational performance. (Schermerhorn Jr, 2002) adds that organizational behavior is the study of individuals and groups in organizations, while (McKenna, 1995) stating that measuring individual performance involves indicators of abilities and skills on work, work attitudes, and motivation.

However, previous studies have predominantly examined these variables in civilian or non-military educational contexts, with limited focus on the integrated relationship between character education, learning motivation, competence, and performance within a military training environment, particularly in the Indonesian Navy. This indicates a clear research gap, as the unique structure, discipline, and operational demands of military institutions may influence these relationships differently compared to general organizational settings.

Therefore, this study aims to analyze the direct and indirect effects of character education and learning motivation on the competence and performance of Pusdiklek graduates, with competence acting as a mediating variable. The scientific contribution of this research lies in developing an integrated conceptual framework that systematically links these variables within the context of military education, thereby providing both theoretical enrichment in organizational behavior studies and practical implications for improving training effectiveness in the Indonesian Navy.

Methods

Data Sources, Subjects and Objects of Research

According to (Sugiyono, 2021), primary data is the main source in research, obtained directly through interaction with the research subjects. In this study, primary data was collected through interviews with the head of the electronics department and questionnaires given to non-commissioned officers and privates who graduated from the Education and Training Center (Pusdiklek) who served on the Republic of Indonesia Warship (KRI), with additional secondary data from related books and journals.

The subjects of this study consisted of 277 non-commissioned officers and private personnel who graduated from the Education and Training Center (Pusdiklek). This study employed a probability sampling technique using simple random sampling, where each member of the population had an equal chance of being selected as a respondent. The sampling procedure was conducted by randomly selecting respondents from the official list of Pusdiklek graduates assigned to KRI units. According to (Ghozali Imam, 2014), the minimum sample size for a structural equation model is 200 observations, while (Hair et al., 2014) the suggested minimum sample size for SEM analysis is 100 to 200, or at least 5 to 10 times the number of variables in the model formulated as

follows:

$$n = 5 \times Xvariabel\ Model\ up\ to\ 10 \times Xvariabel\ Model$$

The formula above yields a minimum sample size of 150. In addition to the calculation above, the author also applied the Slovin method as a comparison using the following equation:

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

with: n = sample size to be observed, N = population of Pusdiklek graduates, e = precision value (e.g. 95% confidence level, then e = 0.05)

The results of calculations using the Slovin Method show that the number of samples required is 164 respondents, thus the number of respondents has fulfilled the minimum sample size requirements. Thus, from the total population of 277 personnel, a final sample of 164 respondents was selected and used in the analysis, which meets the minimum SEM requirements and resolves the distinction between population size (277) and actual sample size (164).

Data Collection Instruments

The data collection instrument used was a questionnaire. Before the questionnaire could be used to collect data, its validity and reliability were tested. The questionnaire was designed using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree) to measure respondents' perceptions of each variable. The operationalization of variables includes: (1) Character Education measured by 18 indicators (e.g., honesty, discipline, responsibility), (2) Learning Motivation measured by 4 indicators (attention, relevance, confidence, satisfaction), (3) Competence measured by 3 indicators (knowledge, skills, work attitude), and (4) Performance measured by 5 indicators (quality, speed, initiative, ability, communication). After the data was collected, processing and analysis were conducted. Furthermore, ethical considerations were applied by ensuring informed consent, where all respondents were informed about the purpose of the study, confidentiality of responses, and their voluntary participation before completing the questionnaire. The next step involved in-depth exploration and interpretation of the results and conclusions, which significantly contributed to the advancement of science and technology, particularly in the context of education and the performance of Pusdiklek graduates.

Data Analysis Techniques

This study uses quantitative descriptive analysis to describe the research object and variable characteristics, as well as inferential analysis with the SEM (Structural Equation Models) method to test the hypothesis at a significance level of α = 0.05. In addition, model feasibility was evaluated using goodness-of-fit indices, including Chi-square/df, Comparative Fit Index (CFI ≥ 0.90), Tucker-Lewis Index (TLI ≥ 0.90), and Root Mean Square Error of Approximation (RMSEA ≤ 0.08), to ensure that the proposed model fits the empirical data adequately.

Research Model and Indicators

Based on the operational definitions and conceptual understanding that have been described previously, a detailed research model can be compiled, providing an overview of how Character Education and Learning Motivation influence the Competence and Performance of Pusdiklek graduates. Each construct in the model is operationalized into measurable indicators as described in the instrument section, allowing for confirmatory factor analysis (CFA) to validate the measurement model prior to structural testing

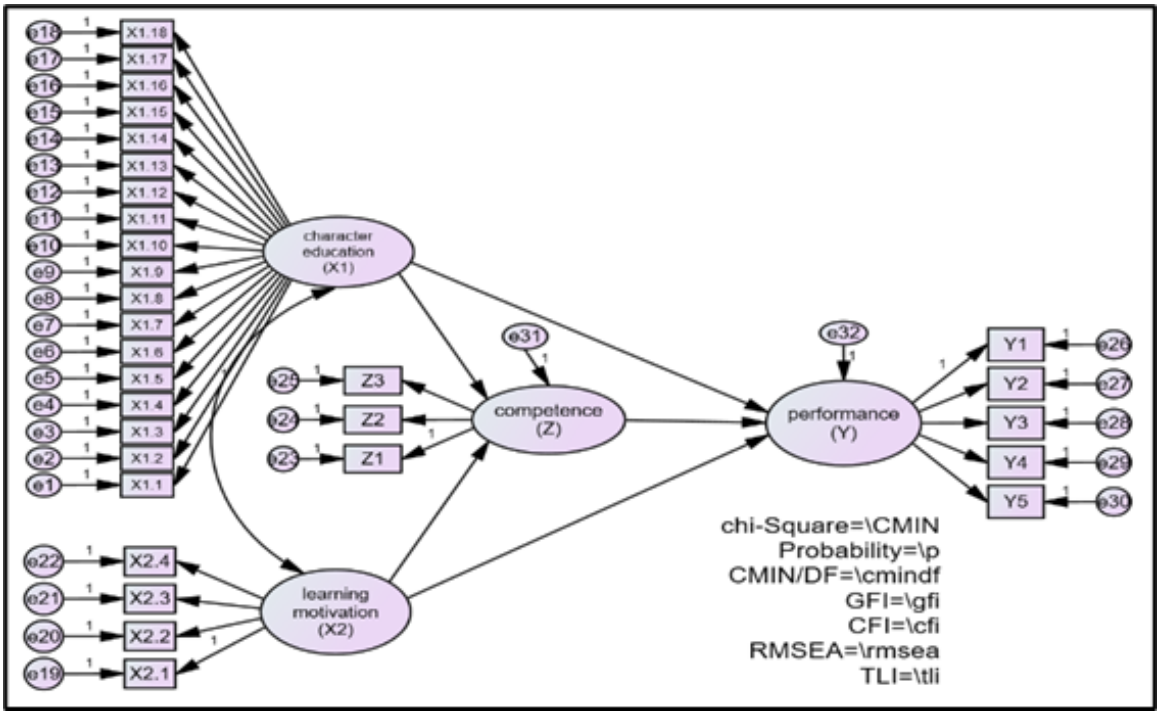

Figure 1. Research Concepts and Variables (Source: AMOS 24)

Data preparation stage with SPSS 25 software

The data obtained through the questionnaire were processed in SPSS file format (*.sav) and standardized into z-scores to maintain variance consistency by subtracting the data value from the mean and dividing it by the standard deviation.

$$z - score = \frac{X - \mu}{\sigma} \quad (2)$$

with: μ = average score, σ = standard deviation

SEM Analysis Stage with AMOS 24 software

After creating the SEM model with AMOS 24, the prepared data were entered for analysis using the Maximum Likelihood method in statistical software such as SPSS and AMOS to estimate the model parameters. To ensure the accuracy of the model, a normality test was performed using the CR or *Critical Ratio value. Skewness* and Kurtosis where according to the accepted (Finney, S. & DiStefano, 2006)*skewness* value <±3 and Kurtosis <±7. Another opinion (Collier, 2020) states that CR Kurtosis <±10 can still accommodate normally distributed data. Multicollinearity examination is carried out by looking at the correlation between variables. A correlation value <0.90 indicates no multicollinearity (Yamin, 2024). Furthermore, the multivariate outlier test uses the *Mahalanobis Distance statistic.* In addition, the evaluation of the SEM model includes both measurement model testing (via CFA) and structural model testing, ensuring construct validity, reliability, and overall model fit before hypothesis testing is conducted.

Conceptual Framework

Based on the theory of organizational behavior, which is a field of study that explores the influence of individual behavior, groups, and structures on an organization, this knowledge improves organizational performance (Robbins, 2011) while according to (McKenna, 1995) measuring individual performance there are several indicators including abilities and skills in work/competence, individual work attitudes, and motivation. The motivation theory used (Thomas

L. Good & Jere E. Brophy, 1990) is competence (Spencer & Spencer, 1993), performance (Stephen P., 1996). The relationships among character education, learning motivation, competence, and performance are structured systematically in the conceptual framework to form the basis for hypothesis development, enabling a clear causal pathway to be tested using SEM.

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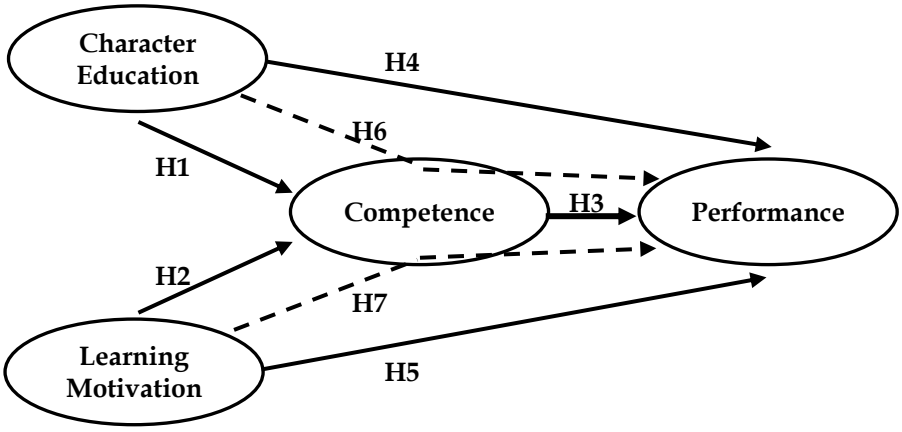

Figure 2. Conceptual framework effect of Character Education, Motivation, and Competence on Performance of the employee

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Result and Discussion

SEM Assumption Test

Before conducting the hypothesis testing, this study first conducted a series of SEM analysis assumption tests. This was done to ensure that the data used in the SEM analysis met the required criteria. The SEM assumption tests included multivariate outlier tests, normality tests, and multicollinearity tests.

Model Goodness-of-Fit Evaluation

In addition to the assumption tests, the overall feasibility of the SEM model was evaluated using goodness-of-fit indices. The results indicate that the model meets the acceptable criteria, with Chi-square/df < 3.00, Comparative Fit Index (CFI) > 0.90, Tucker-Lewis Index (TLI) > 0.90, and Root Mean Square Error of Approximation (RMSEA) < 0.08. These results confirm that the proposed structural model has a good fit with the empirical data and is suitable for hypothesis testing.

Multivariate Outlier Test

The following are the results of AMOS 24 data processing.

Table 1. Multivariate Outlier Test

Observation number	Mahalanobis d-squared	p1	p2
63	56,316	0,003	0,338
120	54,092	0,004	0,168
132	49,672	0,013	0,377
89	48,461	0,018	0,335
101	48,455	0,018	0,171
125	47,058	0,025	0,217
110	46,356	0,029	0,194
79	45,468	0,035	0,216
73	44,956	0,039	0,192

90	44,4	0,044	0,185
30	43,929	0,048	0,173
36	43,306	0,055	0,194
98	42,749	0,062	0,213
80	42,598	0,064	0,161
92	42,253	0,068	0,151
55	41,411	0,08	0,244
130	41,371	0,081	0,176
149	41,25	0,083	0,135

(Source: AMOS 24 Output)

Based on the results of simultaneous processing of the p1 and p2 values in the multivariate outlier test, none of them are less than 0.001, so this result shows that there are no respondents or data rows that are classified as multivariate outliers, none of the respondents' answers are classified as outlier data, the first SEM assumption is fulfilled.

Normality Test

Second, data normality tests can be performed univariately and multivariately, where the normality test is based on the skewness or kurtosis measurement. A Critical Ratio (CR) value of skewness <±3 and kurtosis <±7 (Finney, S. & DiStefano, 2006)indicates a normal data distribution. However, a (Collier, 2020)kurtosis value of <±10 indicates a normal data distribution. The following are the data processing results.

Table 2. Univariate and Multivariate Normality Tests

Variable	min	max	skew	c.r.	Kurtosis	c.r.
X1.1	-3,871	1,953	-1,268	-6,627	2,907	7,598
X1.2	-3,790	1,938	-1,128	-5,896	2,542	6,644
X1.3	-3,790	1,938	-1,128	-5,896	2,542	6,644
X1.4	-3,744	1,955	-0,729	-3,809	1,482	3,875
X1.5	-3,681	2,082	-0,694	-3,629	1,260	3,295
X1.6	-3,924	1,939	-1,006	-5,259	2,144	5,605
X1.7	-3,618	1,966	-0,525	-2,742	1,115	2,916
X1.8	-3,627	1,919	-0,951	-4,971	1,955	5,110
X1.9	-3,688	1,978	-0,948	-4,956	2,081	5,440
X1.10	-3,489	1,947	-0,789	-4,123	1,496	3,910
X1.11	-4,050	2,030	-0,688	-3,596	1,237	3,234
X1.12	-3,913	1,619	-0,709	-3,705	1,273	3,328
X1.13	-3,485	1,758	-1,002	-5,236	2,150	5,620
X1.14	-3,765	1,687	-0,814	-4,254	1,711	4,472
X1.15	-3,566	1,703	-0,807	-4,220	1,744	4,558
X1.16	-3,516	1,498	-0,655	-3,424	0,959	2,507
X1.17	-3,782	1,768	-0,821	-4,292	1,738	4,543
X1.18	-3,518	1,977	-0,643	-3,364	1,508	3,943
X2.1	-4,125	1,584	-0,920	-4,810	2,675	6,993
X2.2	-3,584	1,429	-0,762	-3,983	1,560	4,077
X2.3	-3,630	1,480	-0,562	-2,941	0,963	2,516
X2.4	-3,579	1,183	-0,697	-3,643	0,679	1,774
Z1	-3,648	1,369	-0,782	-4,090	1,279	3,344
Z2	-3,660	1,605	-0,706	-3,689	1,339	3,500
Z3	-3,633	1,322	-1,000	-5,230	2,013	5,263
Y1	-3,500	1,480	-1,072	-5,606	2,281	5,964
Y2	-3,336	1,381	-0,940	-4,914	1,891	4,942
Y3	-3,389	1,321	-0,791	-4,133	1,119	2,924
Y4	-3,360	1,310	-1,058	-5,529	2,078	5,432
Y5	-3,382	1,338	-0,713	-3,727	0,992	2,593
Multivariate					50,56	7,388

(Source: AMOS 24 Output)

Although the data in univariate skewness is not normally distributed, the data in multivariate kurtosis is normally distributed. The SEM assumption of data normality is met.

Multicollinearity Test

(Gunawan et al., 2023)states that with a significance level of 90% the existence of multicollinearity between independent variables can be seen using the following correlation matrix:

Table 3. Multicollinearity Test

Correlation Between Variables			Estimate
X1	<-->	Z	0,710
X1	<-->	Y	0,794
X2	<-->	Y	0,884
X2	<-->	Z	0,760
Z	<-->	Y	0,897
X1	<-->	X2	0,583

(Source: AMOS 24 Output)

Based on the results of the multicollinearity test, it can be seen that the correlation between variables is <0.90, so it can be said that there is no multicollinearity between the variables, thus the SEM assumption is met.

Convergent Validity

This evaluation was carried out by examining the loading factor values ≥ 0.60 (Chin et al., 1998), Cronbach's Alpha and Construct Reliability ≥ 0.70 and Variance Extracted ≥ 0.50 (Hair et al., 2014), along with the results of AMOS 24 processing.

Table 4. Validity of Character Education Variables

Indicator				Loading Factor	Information
Religious	X1.1	<---	X1	0.767	Valid
Honest	X1.2	<---	X1	0.788	Valid
Tolerant	X1.3	<---	X1	0.785	Valid
Discipline	X1.4	<---	X1	0.766	Valid
Work Hard	X1.5	<---	X1	0.750	Valid
Creative	X1.6	<---	X1	0.777	Valid
Independent	X1.7	<---	X1	0.734	Valid
Democratic	X1.8	<---	X1	0.764	Valid
Curiosity	X1.9	<---	X1	0.774	Valid
National Spirit	X1.10	<---	X1	0.741	Valid
Love for the Homeland	X1.11	<---	X1	0.682	Valid
Appreciating Achievements	X1.12	<---	X1	0.694	Valid
Communicative	X1.13	<---	X1	0.747	Valid
Love peace	X1.14	<---	X1	0.722	Valid
Loves Reading	X1.15	<---	X1	0.687	Valid
Environmental care	X1.16	<---	X1	0.694	Valid
Social Care	X1.17	<---	X1	0.709	Valid
Responsible	X1.18	<---	X1	0.729	Valid

(Source: AMOS 24 Output)

Character Education (X1) is measured by 18 indicators where the loading factor value lies between 0.682 – 0.788. All indicators have a loading factor > 0.60 so all indicators are valid in measuring the Character Education variable (X1) (Chin et al., 1998).

Table 5. Validity of Learning Motivation Variables

Indicator				Loading Factor	Information
Attention	X2.1	<---	X2	0,790	Valid
Relatedness	X2.2	<---	X2	0,807	Valid
Self-confident	X2.3	<---	X2	0,780	Valid
Satisfaction	X2.4	<---	X2	0,714	Valid

(Source: AMOS 24 Output)

Learning Motivation (X2) is measured by 4 indicators with all loading factors > 0.60 (valid). The loading factor values are between 0.714 – 0.809, indicating that the four indicators are valid in reflecting the measurement of the Learning Motivation variable (X2).

Table 6. Validity of Competency Variables

Indicator				Loading Factor	Information
Knowledge	Z1	<---	Z	0,787	Valid
Skills	Z2	<---	Z	0,763	Valid
Work Attitude	Z3	<---	Z	0,779	Valid

(Source: AMOS 24 Output)

Competence (Z) is measured by 3 indicators with all loading factors > 0.60 (valid). The loading factor values are between 0.763 – 0.787, indicating that the three indicators are valid in reflecting the measurement of the Competence (Z) variable.

Table 7. Validity of Soldier Performance Variables

Indicator				Loading Factor	Information
Quality of Work	Y1	<---	Y	0,794	Valid
Speed	Y2	<---	Y	0,839	Valid
Initiative	Y3	<---	Y	0,785	Valid
Ability	Y4	<---	Y	0,835	Valid
Communication	Y5	<---	Y	0,810	Valid

(Source: AMOS 24 Output)

The loading factor value > 0.60 (valid) is between 0.785-0.839 which shows that the five indicators are valid in reflecting the measurement of the Soldier Performance variable (Y).

Test and Variance Extract

In SEM analysis, the Reliability Construct and Variance Extract tests were conducted to ensure the internal consistency and reliability of the constructs being measured. The test results can be seen in Table 8.

Table 8. Construct Reliability Test and Variance Extract

Construct	Indicator	SFL	SFL	Construct	Indicator	SFL
	X1.1	0,767	0,588	0,412		
	X1.2	0,788	0,621	0,379		
	X1.3	0,785	0,616	0,384		
	X1.4	0,766	0,587	0,413		
Education	X1.5	0,750	0,563	0,438		
Character	X1.6	0,777	0,604	0,396	0,956	0,548
(X1)	X1.7	0,734	0,539	0,461		
	X1.8	0,764	0,584	0,416		
	X1.9	0,774	0,599	0,401		
	X1.10	0,741	0,549	0,451		
	X1.11	0,682	0,465	0,535		

Construct	Indicator	SFL	SFL	Construct	Indicator	SFL
	X1.12	0,694	0,482	0,518		
	X1.13	0,747	0,558	0,442		
	X1.14	0,722	0,521	0,479		
	X1.15	0,687	0,472	0,528		
	X1.16	0,694	0,482	0,518		
	X1.17	0,709	0,503	0,497		
	X1.18	0,729	0,531	0,469		
Learning Motivation (X2)	X2.1	0,790	0,624	0,376	0,856	0,856
	X2.2	0,807	0,651	0,349		
	X2.3	0,780	0,608	0,392		
	X2.4	0,714	0,510	0,490		
Competence (Z)	Z1	0,787	0,619	0,381	0,820	0,603
	Z2	0,763	0,582	0,418		
	Z3	0,779	0,607	0,393		
Performance (Y)	Y1	0,794	0,630	0,370	0,907	0,661
	Y2	0,839	0,704	0,296		
	Y3	0,785	0,616	0,384		
	Y4	0,835	0,697	0,303		
	Y5	0,810	0,656	0,344		

(Source: AMOS 24 Output)

SEM Research Model Testing

Research hypothesis testing in SEM analysis consists of testing the direct effect hypothesis and testing the mediation effect hypothesis. In direct hypothesis testing, the estimate value indicates the magnitude of the direct effect, and significance is determined by the CR (Critical Ratio) and p-value. If the CR > 1.96 or p-value < 0.05, a significant effect is present.

Direct Effect Hypothesis Test

The results show that character education has a significant effect on competence ($\beta = 0.415$), which is consistent with the competency theory proposed by Spencer & Spencer (1993), stating that individual character forms the foundation of competency development. This finding is also in line with previous research (Ismail, 2021), confirming that internal individual factors significantly influence performance-related competencies. Furthermore, learning motivation has a stronger effect on competence ($\beta = 0.522$), indicating that motivational aspects play a dominant role in enhancing soldiers' capabilities. This supports motivational learning theory (Good & Brophy, 1990), which emphasizes that motivated individuals are more likely to achieve higher levels of skill mastery and performance. The significant effect of competence on performance ($\beta = 0.359$) reinforces the organizational behavior perspective (Robbins, 2011), which states that employee competence directly contributes to organizational performance outcomes. In the military context, this finding highlights that technical and behavioral competencies are critical for operational effectiveness. Additionally, the direct effects of character education ($\beta = 0.288$) and learning motivation ($\beta = 0.454$) on performance indicate that both variables not only influence performance indirectly through competence but also have an immediate impact, suggesting a partial mediation model. This finding enriches the literature by demonstrating a dual-path influence mechanism in a military education context

Table 9. Results of direct influence test

Hypothesis	Hypothesis Statement	Estimate	SE	CR	P value	Information
H1	X1 --> Z	0,415	0,089	4,682	0.000	Significant
H2	X2 --> Z	0,522	0,093	5,603	0.000	Significant
H3	Z --> Y	0,359	0,098	3,649	0.000	Significant
H4	X1 --> Y	0,288	0,068	4,253	0.000	Significant

H5	X2 --> Y	0,454	0,084	5,402	0.000	Significant

(Source: AMOS 24 Output)

Indirect Effect Hypothesis Test

The mediation analysis reveals that competence significantly mediates the relationship between character education and performance, as well as between learning motivation and performance. This finding confirms the theoretical assumption that competence acts as an intervening variable that translates individual attributes into measurable performance outcomes. Compared to previous studies, this research provides a more comprehensive model by simultaneously testing both direct and indirect effects within a military training environment, thereby contributing to the development of integrated SEM-based models in human resource studies.

Table 10. Mediation Test of the Indirect Effect of Character Education (X1) on Soldier Performance (Y) through the mediation of Competence (Z)

Hypothesis	Size	X1 --> Z	Z --> Y	X1 → Z → Y	Z	P-value
H6. Indirect Effect of Character Education (X1) on Soldier Performance (Y) through the mediation of Competence (Z)	Estimates	0,415	0,359	0,149	2,881	0.003
	S.E	0,089	0,098	0,052		

(Source: AMOS 24 Output)

Table 11. Mediation Test of the Indirect Effect of Learning Motivation (X2) on Soldier Performance (Y) through the mediation of Competence (Z)

Hypothesis	Size	X2 --> Z	Z --> Y	X2 → Z → Y	Z	P-value
H7. Indirect Effect of Learning Motivation (X2) on Soldier Performance (Y) through the mediation of Competence (Z)	Estimates	0,522	0,359	0,187	3,067	0.002
	S.E	0,093	0,098	0,061		

(Source: AMOS 24 Output)

Managerial Implications and Research Recommendations

In this study, there are several findings that need to be followed up in order to provide a positive influence on increasing the strengthening of character education and learning motivation towards competency so that it can improve the performance of soldiers who graduated from Pusdiklek.

Implications and recommendations for Character Education variables

This study shows that the honesty indicator (X1.2) with a loading factor value of 0.788 is the most influential in the formation of the Character Education variable (X1), so that increasing honesty must be a top priority to improve the competence and performance of soldiers graduating from Pusdiklek.

Strategic Implications

From a strategic perspective, the findings suggest that the Indonesian Navy should prioritize integrated training programs that simultaneously enhance character development, learning motivation, and competency-based training. This can be achieved through curriculum redesign, incorporation of technology-based learning systems, and continuous evaluation of training effectiveness to align with modern defense demands.

Implications and recommendations for Character Education variables
In addition, strengthening ethical values such as honesty should be institutionalized through leadership modeling and structured character-building programs to ensure long-term behavioral consistency.

Implications and recommendations for the Learning Motivation variable

The correlation indicator (X2.2) with a loading factor value of 0.807 is the highest in the Learning Motivation variable (X2), so the relevance of learning materials to students' needs and interests needs to be increased through active participation, consistency in assignments, and utilization of additional learning resources. Furthermore, increasing learning motivation requires adaptive learning strategies, including interactive learning methods, simulation-based training, and personalized learning approaches to maintain engagement and relevance.

Implications and recommendations for Competency variables

Competency development should also be aligned with emerging technological advancements in naval defense systems to ensure that graduates remain competitive and operationally ready..

Implications and recommendations for the performance variables of soldiers graduating from Pusdiklek

Improving performance should not only focus on speed but also on accuracy, adaptability, and decision-making under pressure, which are critical in military operations.

Research Limitations and Future Directions
This study has several limitations, including the use of cross-sectional data, which limits causal generalization, and the focus on a single training institution, which may affect the generalizability of the findings. Future research is recommended to use longitudinal designs, include broader military units, and incorporate additional variables such as leadership style or organizational culture to further enrich the model.

Conclusion

This study provides strong empirical evidence that character education and learning motivation significantly influence the competence and performance of Pusdiklek graduates, both directly and indirectly through competence as a mediating variable. Empirically, character education has a significant effect on competence ($\beta = 0.415$; $p < 0.001$), while learning motivation shows a stronger influence ($\beta = 0.522$; $p < 0.001$). Furthermore, competence significantly affects performance ($\beta = 0.359$; $p < 0.001$), and both character education ($\beta = 0.288$; $p < 0.001$) and learning motivation ($\beta = 0.454$; $p < 0.001$) also directly influence performance. Mediation analysis confirms that competence partially mediates these relationships, with indirect effects of character education ($\beta = 0.149$; $p = 0.003$) and learning motivation ($\beta = 0.187$; $p = 0.002$) on performance. These findings highlight that learning motivation is the most dominant factor in shaping competence, while competence serves as a critical pathway in improving overall performance, reinforcing both theoretical and practical perspectives

in military human resource development. Based on the findings, it is recommended that the Indonesian Navy, particularly Pusdiklek, implement integrated training strategies that simultaneously develop character education, enhance learning motivation, and strengthen competency-based curricula aligned with technological advancements in defense systems. Practically, this can be achieved through adaptive learning methods, simulation-based training, and leadership-driven character development programs. For future research, it is suggested to expand the scope by including multiple training institutions, applying longitudinal designs, and incorporating additional variables such as leadership style, organizational culture, or technological readiness to further refine the model and improve its generalizability in broader military and organizational contexts.

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