# THE INFLUENCE OF CHARACTER EDUCATION, LEARNING MOTIVATION ON THE COMPETENCY AND PERFORMANCE OF PUSDIKLEK GRADUATES IN CARRYING OUT THE MAIN DUTIES OF THE INDONESIAN NAVY

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#### **ABSTRACT**

In carrying out the main tasks of the Indonesian Navy, professional and reliable personnel of the Indonesian Navy's defense equipment are needed. This can be done by improving the quality of character education and learning motivation, especially at the Pusdiklek Kodikdukum Kodiklatal which is responsible for preparing marine soldiers of the electronics corps who are moral, professional and have mastered the technology in the fields of electronics and informatics. This study examines the influence of character education, learning motivation and competence on the performance of Pusdiklek graduates, using the Structural Equation Modeling (SEM) method. This study aims to test the significance of the influence of character education, learning motivation both directly and indirectly through competence on performance. The results of the study indicate that character education has a direct and significant effect on competence with an estimated path coefficient of 0.415; learning motivation has a direct and significant effect on competence with an estimated path coefficient of 0.522; competence has a direct and significant effect on performance of 0.359; character education has a direct and significant effect on performance with an estimated path coefficient of 0.288; learning motivation has a direct and significant effect on performance with an estimated path coefficient of 0.454; character education has a significant influence on the performance of soldiers graduating from Pusdiklek through competence (as a mediating variable) with a mediation coefficient of 0.149; and learning motivation has a significant influence on the performance of soldiers graduating from Pusdiklek through competence (as a mediating variable) with a mediation coefficient of 0.187. All hypotheses proposed are accepted, indicating that increasing character education, learning motivation and competence can have a significant influence on improving the performance of Pusdiklek graduates.

**KEYWORDS**: character education, learning motivation, competence, soldier performance, SEM.

#### 1. INTRODUCTION.

The Indonesian Navy, as the main component of maritime defense according to Law Number 34 of 2004 Article 9, has the responsibility to maintain and defend the sovereignty of the Republic of Indonesia by remaining loyal to Pancasila and the 1945 Constitution. Their main tasks include enforcing the law and sovereignty in the national jurisdictional sea area, implementing diplomacy, developing and building maritime power, and empowering maritime defense areas. To optimize these tasks, competent and responsible Indonesian Navy soldiers are needed, especially Electronic Corps soldiers who play a crucial role in maintaining national security through vital military electronic systems such as communication, radar, and navigation. Improving the competence and performance of these soldiers is important to ensure operational reliability and efficiency. However, there are challenges in achieving the desired competence, which can be seen from indicators such as low quality of work, speed, and initiative. In addition, rapid technological developments require soldiers to always update their knowledge and skills, although the current vocational education curriculum does not fully meet these technical needs. To carry out the vision of a reliable and respected Indonesian Navy and its mission in sustainable strength development, human resource development is the main priority of the Chief of Naval Staff (Kasal). The daily guidelines of the Chief of Naval Staff that focus on developing superior, competent human resources capable of facing various threats emphasize the importance of improving the quality, competence, and performance of Indonesian Navy soldiers for the best service and glory of the nation. Continuous efforts in developing soldier

capabilities ensure that the Indonesian Navy remains a reliable and respected force in carrying out its duties.

This study integrates theories from various journals and international studies that link four main variables: character education, learning motivation, competence, and performance. The main source of theory is research by (Ismail, 2021) which evaluates the influence of competence and compensation on civil servant performance through job satisfaction at the Malang Army Polytechnic. This study highlights the critical role of human resources in achieving organizational goals and uses an innovative approach to assess performance in the ministry/institution environment, which was first implemented by the Indonesian Government in 2012. This study develops a model that links learning motivation with competence and performance of the ministry/institution sector, which was previously used to predict business sector performance. Before discussing the theory of character education, learning motivation, competence, and performance, this study outlines the concept of organizational behavior, emphasizing the importance of the role of human resources in organizations that pay attention to individual actions and responses in various environments. In organizations, individuals are recruited, educated, trained, receive information, receive protection, and experience development, which refers to the way individuals interact in the organization. The organization itself is a group of two or more people who come together to achieve a common goal, with members who regularly interact, work together, have common goals, and carry out assigned roles (Baack, Reilly, 2014). According to Scott, an organization is a system of coordinated activities involving a group of people working together to achieve common goals, regulated by a certain authority (Hardjana, 2016). (Robbins, 2011) defines organizational behavior as the study of the influence of individual, group, and structural behavior on organizations, with the goal of improving organizational performance. (Schermerhorn Jr, 2002) adding that organizational behavior is the study of individuals and groups within organizations, while (McKenna, 1995) states that individual performance measurement involves indicators of ability and skills at work, work attitudes, and motivation.

The objectives of this study are: (i) to test the significance of the influence of character education on vocational competence, (ii) to test the significance of the influence of learning motivation on vocational competence, (iii) to test the significance of the direct influence of vocational competence on performance, (iv) to test the significance of the influence of character education on performance, (v) to test the significance of the influence of character education through competence (as a mediating variable) on performance, and (vii) to test the significance of the indirect influence of learning motivation through competence (as a mediating variable) on performance.

Many studies have been conducted on character education, motivation, competence, and performance, but none have specifically discussed the influence of character education and learning motivation on the competence and performance of Pusdiklek graduates. This is the background for the author to develop this research. This study acknowledges the complexity and intricacy of the relationship between variables and their indicators, so it uses the Structural Equation Modeling (SEM) method. SEM is a multivariate statistical analysis method that can measure latent variables, analyze factors, paths, and regressions simultaneously, and measure direct and indirect effects. The managerial implications of this study are to expand the findings of previous studies and contribute to the knowledge and literature on the impact of character education and learning motivation on the performance of Pusdiklek graduates, using vocational competence as an intermediary variable through SEM. This study also contributes to the development of human resources, especially in improving the performance of Pusdiklek graduates, and provides recommendations to the Indonesian Navy Education Office in implementing

vocational education and improving the performance of non-commissioned officers and privates graduates of Pusdiklek in work units.

# 2. METHODOLOGY

### 2.1. Research Approach

This study uses a descriptive quantitative analysis approach, which is a method that aims to describe and analyze phenomena or characteristics of a population or sample systematically with numerical data. This approach focuses on collecting quantitative data and statistical explanations to explain the distribution, frequency, and relationships between variables. Starting with the identification of problems which are then developed, followed by data processing, analysis, and drawing conclusions according to the research objectives. The significance of the variables is measured continuously through the interaction of variables during the study. This process involves observation, measurement, and data processing to find solutions to existing problems. The instrument used is a questionnaire, which has been tested for validity and reliability to ensure accuracy. After the data is collected, data processing and analysis are carried out, followed by in-depth and interpretation of the results that make a significant contribution to the development of science and technology, especially in the field of personnel competence and performance of non-commissioned officers of the Electronic Corps graduates of Pusdiklek.

# 2.2. Data Sources, Subjects and Objects of Research

(Sugiyono, 2021), Primary data is the main source in research, obtained directly through interaction with research subjects. In this study, primary data was collected through interviews with the head of the electronics department and questionnaires given to NCOs and Privates who graduated from 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 Pusdiklek. According to (Ghozali Imam, 2014), the minimum sample size for a structural equation model is 200 observations, Meanwhile (Hair *et al.*, 2014) suggested that the 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:

$$n = 5 \times Xvariabel\ Model\ s.\ d.\ 10 \times Xvariabel\ Model$$
 (3.1)

From the formulation above, the minimum sample size is 150 samples. In addition to using the calculation above, the author also applies the Slovin Method as a comparison through the following equation:

$$n = \frac{N}{1 + Ne^2} \tag{3.2}$$

with description:

n = sample size to be observed

N = population number of Pusdiklek Graduates

e = precision value (e.g. 95% confidence level, then e = 0.05)

The calculation results using the Slovin Method show that the number of samples needed is 164 respondents, thus the number of respondents has met the minimum sample size requirements.

The object of this research focuses on character education including religious, honest, tolerant, disciplined, hard working, creative, independent, democratic, curiosity, national spirit, love of the homeland, appreciation of achievement, communicative, love of peace, fond of reading, care for the environment, care for society, and

responsible. Learning motivation includes attention, relatedness, self-confidence and satisfaction. Competence includes knowledge, skills and work attitude and performance includes quality of work, speed, initiative, ability and communication possessed by NCOs and Privates who graduated from Pusdiklek.

#### 2.3. Research design

### 2.3.1. Data collection technique

The data in this study are divided into two types, namely primary data and secondary data. Data collection is carried out through two main methods, namely measurement activities, observation and interviews for primary data and literature observations including notes, books, and supporting documents for secondary data.

#### 2.3.2. Data Collection Instruments

The data collection instrument used is a questionnaire. Before the questionnaire can be used to collect data, validity and reliability tests are carried out on the instrument. After the data is collected, data processing and analysis are carried out. The next step involves in-depth exploration and interpretation of the results and conclusions, which are significant in contributing to the advancement of science and technology, especially in the context of the field of education and the performance of Pusdiklek graduates.

#### 2.3.3. 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  $\alpha$  = 0.05, which requires certain assumptions related to sample size, measurement scale, and data distribution. In data analysis techniques can be explained as follows:

### a. Operational definition

Operational definitions, developed through literature review and theory analysis, help measure hidden variables and are used as a reference for data collection for the variables Character Education (X1), Learning Motivation (X2), Competence (Z), and Performance (Y), which are broken down into specific indicators.

- 1) Based on Presidential Regulation Number 87 dated September 6, 2017 concerning the Improvement of Character Education (PPK), the variables related to Character Education (X1) can be measured using other latent variables, namely: religious (X1.1), honest (X1.2), tolerant (X1.3), disciplined (X1.4), hard working (X1.5), creative (X1.6), independent (X1.7), democratic (X1.8), curiosity (X1.9), national spirit (X1.10), love of the homeland (X1.11), appreciate achievement (X1.12), communicative (X1.13), love of peace (X1.14), like to read (X1.15), care for the environment (X1.16), care for society (X1.17) and responsible (X1.18).
- 2) Research entitled Learner motivation and E-learning design: a multinationally validated process (Keller & Suzuki, 2004), the ARCS model introduced by John M. Keller and Suzuki Katsuaki can be used as a measurement variable that helps in understanding and assessing the level of learning motivation (X2) including: attention (X2.1), relevance (X2.2), self-confidence (X2.3) and satisfaction (X2.4).
- 3) Based on the Technical Guidelines for Job Competency Standards, the competency variable (Z) can be measured using other latent variables, namely knowledge (Z1), skills (Z2), and attitude

(Z3).

4) Performance measurement indicators (Y) explained by (Nahrisah & Imelda, 2019) include: Quality of Work (Y1), Speed (Y2), Initiative (Y3), Ability (Y4) and Communication (Y5).

#### b. Research Model and Indicators

Based on the operational definition and conceptual understanding that have been described previously, a detailed research model can be prepared, providing an overview of how Character Education, Learning Motivation influence the Competence and Performance of Pusdiklek graduates.

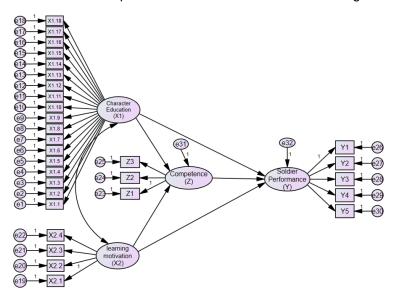


Fig. 1 Research Concepts and Variables (Source: AMOS 24)

#### c. Sequence of Data Processing and Analysis Process

#### 1) 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.

$$z - score = \frac{X - \mu}{\sigma} \tag{3.3}$$

with description:

 $\mu$  = average score

 $\sigma$  = standard deviation

This transformation or standardization of the results aims to obtain a data distribution that is close to normal, especially if the sample size used is large enough. Thus, the average value and standard deviation of the sample can approach the average value and standard deviation of the population of the research object.

# 2) SEM Analysis Stage with AMOS 24 software

After the SEM model was created with AMOS 24, the prepared data was entered for analysis using the Maximum Likelihood method in statistical software such as SPSS and AMOS to estimate model parameters. To ensure the accuracy of the model, a normality test was carried out using the C.R or Critical Ratio Skewness and Kurtosis values where according to (Finney, S. & DiStefano, 2006) the skewness value was accepted <±3 and Kurtosis <±7. Another opinion (Collier, 2020)

states that C.R Kurtosis <±10 can still accommodate normally distributed data. Multicollinearity testing 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 where in (Yamin, 2024) this value can be seen from the AMOS 23 output from the p1 and p2 values. If the value of p1 and p2 together is <0.001, then the respondent or row data is a multivariate outlier. With 164 respondents, the number of samples meets the minimum requirements multiplied by five with the number of indicators, which is 150. Furthermore, the evaluation of the CFA model is carried out through validity testing with loading factors, reliability with Cronbach's Alpha and Construct Reliability, and convergent and discriminant validity using metrics such as Average Variance Extracted and HTMT to ensure accuracy between variables.

#### 2.4. Conceptual Framework

The conceptual model in this study is formulated based on a literature review and supported by previous research findings. The use of a conceptual framework is expected to provide a comprehensive picture of the research design to be implemented. Based on the theory of organizational behavior, which is a field of study that explores the influence of individual, group, and structural behavior 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. To understand the correlation between motivation variables, competence, and employee performance, exploration of their relationship is very important. The motivation theories used (Thomas L. Good & Jere E. Brophy, 1990), competence (Spencer & Spencer, 1993), performance (Stephen P., 1996). This conceptual framework is supported by previous studies that describe the relationship between variables, as seen in Figure 2.

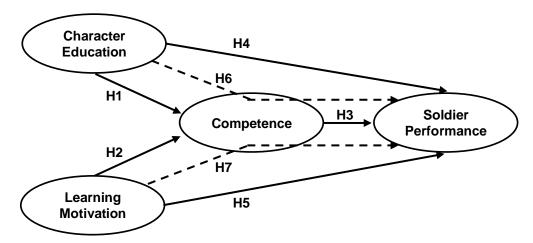


Fig. 2 Conceptual framework effect of Character Education, Motivation, and Competence on Performance of the employee

# 3. RESULT AND DISCUSSION

#### 3.1. SEM Assumption Test

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

#### 3.1.1. 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 met.

# 3.1.2. Normality test

Second, data normality tests can be carried out univariately and multivariately where the normality test is seen from the size of skewness or kurtosis. The Critical Ratio (CR) value of skewness <± 3 and kurtosis <± 7 (Finney, S. & DiStefano, 2006) can be said that the data distribution is normal. However, according to (Collier, 2020) the Kurtosis value <±10 data can be said to be normally distributed. The following are the results of data processing.

**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

Variable	min	max	skew	c.r.	kurtosis	c.r.
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

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

# 3.1.3. Multicollinearity Test

(Ghozali:73) 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

Corre	elation Betw Variables	Estimate	
X1	<>	Z	0,710
X1	<>	Υ	0,794
X2	<>	Υ	0,884
X2	<>	Z	0,760
Z	<>	Υ	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.

# 3.2. Outer Model Evaluation

Aims to assess the validity and reliability of measurement constructs, ensuring that the indicators used accurately reflect the latent variables being studied.

# 3.2.1. Convergent Validity

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

**Table. 4** Validity of Character Education Variables

Indica	Loading Factor	Note			
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
Hardworking	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 of the Country	X1.11	<	X1	0,682	Valid
Appreciate Achievement	X1.12	<	X1	0,694	Valid
Communicative	X1.13	<	X1	0,747	Valid
Peace-loving	X1.14	<	X1	0,722	Valid
Like to Read	X1.15	<	X1	0,687	Valid
Care for the Environment	X1.16	<	X1	0,694	Valid
Care for Society	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

lı	ndicator	Loading Factor	Note		
Attention	X2.1	<	X2	0,790	Valid
Relationship	X2.2	<	X2	0,807	Valid
Self-Confidence	X2.3	<	X2	0,780	Valid
Satisfaction	X2.4	<	X2	0,714	Valid

Learning Motivation (X2) is measured by 4 indicators with all loading factors > 0.60 (valid). The loading factor value is between 0.714 - 0.809 which shows 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	Note		
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 value lies between 0.763 - 0.787 which shows that the three indicators are valid in reflecting the measurement of the Competence variable (Z).

**Table. 7** Validity of Soldier Performance Variables

Inc	Loading Factor	Note			
Quality of Work	Y1	<	Υ	0,794	Valid
Speed	Y2	<	Υ	0,839	Valid
Initiative	Y3	<	Υ	0,785	Valid
Ability	Y4	<	Υ	0,835	Valid
Communication	Y5	<	Υ	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).

# 3.2.2. Construct Reliability Test and Variance Extract

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

Table. 8 Construct Reliability Test and Variance Extract

Construct	Indicator	SFL	SFL Kuadrat	Error	Construct Reliability	Variance Extracted	
	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			
	X1.5	0,750	0,563	0,438			
	X1.6	0,777	0,604	0,396			
	X1.7	0,734	0,539	0,461			
	X1.8	0,764	0,584	0,416			
Character Education	X1.9	0,774	0,599	0,401	0,956	0,548	
(X1)	X1.10	0,741	0,549	0,451	0,930	0,540	
	X1.11	0,682	0,465	0,535			
	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			
	X2.1	0,790	0,624	0,376			
Learning Motivation	X2.2	0,807	0,651	0,349	0,856	0,856	
(X2)	X2.3	0,780	0,608	0,392	0,030	0,030	
, ,	X2.4	0,714	0,510	0,490			
0	Z1	0,787	0,619	0,381			
Competence (Z)	Z2	0,763	0,582	0,418	0,820	0,603	
(=)	<b>Z</b> 3	0,779	0,607	0,393			
	Y1	0,794	0,630	0,370			
Soldier	Y2	0,839	0,704	0,296			
Performance	Y3	0,785	0,616	0,384	0,907	0,661	
(Y)	Y4	0,835	0,697	0,303			
	Y5	0,810	0,656	0,344			

# 3.3. SEM Research Model Testing

Hypothesis testing in SEM analysis consists of direct effect hypothesis testing and mediation effect testing. In direct hypothesis testing, it is seen from the estimate value which shows the magnitude of the direct effect and significance is seen from the CR (Critical ratio) and p-value. If CR> 1.96 or p-value <0.05 then there is a significant effect.

# 3.3.1. Direct Effect Hypothesis Test

The results of testing the hypotheses proposed in this study are briefly shown in table 9.

Table. 9 Direct influence test results

Hypothesis	Hypothesis Statement	Estimate	S.E.	C.R.	P value	Note
H1	X1> Z	0,415	0,089	4,682	0.000	Signifikan
H2	X2> Z	0,522	0,093	5,603	0.000	Signifikan
H3	Z> Y	0,359	0,098	3,649	0.000	Signifikan
H4	X1> Y	0,288	0,068	4,253	0.000	Signifikan
H5	X2> Y	0,454	0,084	5,402	0.000	Signifikan

# 3.3.2. Indirect Effect Hypothesis Test

Next is the mediation test, namely testing the role of competency variables that mediate the indirect influence between Character Education (X1) and Learning Motivation (X2) on Soldier Performance (Y).

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

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

(Source: AMOS 24 Output)

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

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

(Source: AMOS 24 Output)

# 3.4. Managerial Implications and Research Recommendations

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

# 3.4.1. 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 who graduate from Pusdiklek.

### 3.4.2. Implications and recommendations for the Learning Motivation variable

The relevance 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.

#### 3.4.3. Implications and recommendations for Competency variables

Knowledge (Z1) with a loading factor value of 0.787 is the highest indicator in the Competence variable (Z), so increasing knowledge must be the main focus to improve the competence and performance of soldiers who graduate from Pusdiklek.

# 3.4.4. Implications and recommendations for the Performance variables of Pusdiklek graduate soldiers

Speed (Y2) with a loading factor value of 0.839 is the highest indicator in the Soldier Performance variable (Y), so to improve the performance of soldiers who graduate from Pusdiklek, intensive technical training, repeated simulations, use of the latest technology, and efficient time management methods need to be carried out.

#### 4. CONCLUSION.

Using the Structural Equation Modeling (SEM) method, this study provides strong empirical evidence regarding the direct and indirect influence of character education, learning motivation on the competence and performance of Pusdiklek graduates with the following conclusions:

- a. Character Education has a direct influence on Competence with an estimated path coefficient value of 0.415, CR 4.682, and p-value of 0.000, formulated as: **Soldier Competence = 0.415** \* **Character Education**.
- b. Learning Motivation directly affects Soldier Competence, with an estimated path coefficient value of 0.522, CR 5.603, and p-value of 0.000, which is formulated as: **Soldier Competence = 0.522 \* Learning Motivation**.
- c. Competence has a direct effect on soldier performance with an estimated path coefficient value of 0.359, CR 3.649, and p-value of 0.000, formulated as: **Soldier Performance = 0.359** \* **Competence.**
- d. Character Education has a direct influence on Soldier Performance with an estimated path coefficient value of 0.288, CR 4.253, and p-value of 0.000, formulated as: **Soldier Performance = 0.288** \* **Character Education**.
- e. Learning Motivation has a direct effect on Soldier Performance with an estimated path coefficient value of 0.454, CR 5.402, and p-value of 0.000, formulated as: **Soldier Performance = 0.454** \* **Learning Motivation**.
- f. Character Education has an indirect influence on Soldier Performance through Competence with a mediation coefficient of 0.149, standard error of 0.052, and Z 2.881, formulated as: **Soldier Performance** = 0.149 \* Character Education.

g. Learning Motivation has an indirect influence on Soldier Performance through Competence with a mediation coefficient of 0.187, standard error of 0.061, and Z of 3.067, formulated as: **Soldier Performance** = 0.187 \* Learning Motivation.

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#### **REFERENCES**

Baack, Reilly, and M. (2014) *The five functions of effective management*. 2nd edn. San Diego: Bridgepoint Education. Inc.

Chin, W.W., Chinn, W.W. and Chin, W.W. (1998) 'The partial least squares approach to structural equation modelling. In Marcoulides G. A. (Ed.)', *Modern Methods for Business Research*, 295(2), pp. 295–336.

Collier, J.E. (2020) Applied Structural Equation Modeling Using AMOS: Basic to Advanced Techniques.

Finney, S. & DiStefano, C. (2006) Nonnormal and categorical data in structural equation modeling.

Ghozali Imam (2014) Model Persamaan Struktural Konsep dan Aplikasi dengan Program AMOS 22 Update Bayesian SEM.

Hair, J.F. *et al.* (2014) 'Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research', *European Business Review*, 26(2), pp. 106–121. Available at: https://doi.org/10.1108/EBR-10-2013-0128.

Hardjana (2016) 'Komunikasi Organisasi: Strategi dan kompetensi. Jakarta: PT Kompas Media Nusantara.'

Ismail, R. (2021) 'Pengaruh Kompetensi dan Kompensasi Terhadap Kinerja Pegawai Negeri Sipil Melalui Kepuasan Kerja di Politeknik Angkatan Darat Malang', *Sketsa Bisnis*, 8(1), pp. 1–18. Available at: https://doi.org/10.35891/jsb.v8i1.2623.

McKenna (1995) The Essence of Human Resource Management. 6th edn. Edited by beechNich. Prentice Hall.

Robbins (2011) Organizational Behavior. New Jersey: Pearson Prentice Hall.

Schermerhorn Jr (2002) Organizational Behavior. Seventh Ed. USA: John Wiley & Sons, Inc.

Spencer & Spencer (1993) Competence at Work: Models for Superior Performance. New York: John Wiley & Sons, Inc.

Stephen P., R. (1996) *Perilaku Organisasi: Konsep, Kontroversi, Aplikasi*. ke 7 (jili. Jakarta: Prehallindo. Available at: http://kin.perpusnas.go.id/DisplayData.aspx?pld=54871&pRegionCode=UNTAR&pClientId=650.

Sugiyono (2021) Metodologi Penelitian Kuantitatif Kualitatif dan R&D. edisi 2 ce. bandung: Alfabeta.

Thomas L. Good & Jere E. Brophy (1990) 'Educational Psychology', in. New York: longman, p. 103.

Yamin, M. (2024) 'Pengaruh Kepemilikan Manajerial, Leverage, Growth Opportunitiesdan Financial Distressterhadap Konservatisme Akuntansi Pada Perusahaan Manufaktur Sektor Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia Periode 2018-2022', *Accounting Research and Business Journal*, 1(2).