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THE EFFECT OF E-LEARNING-BASED TRAINING AND ORGANIZATIONAL CULTURE ON EMPLOYEE PERFORMANCE WITH MOTIVATION AS AN INTERVENING VARIABLE AT PT. CBA CHEMICAL INDUSTRY, SERANG REGENCY

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Abstract

This study aims to examine the influence of e-learning-based training and organizational culture on employee performance, with work motivation as a mediating variable. A quantitative approach was employed, using survey methods with questionnaires distributed to 81 production operators. The data were analyzed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS). The findings reveal that e-learning-based training does not have a significant direct effect on performance or work motivation, while organizational culture influences both significantly. Work motivation also has a significant direct effect on performance but does not mediate the relationship between training or culture and performance. These results indicate that direct influences are more dominant than indirect effects through motivation. The study draws on motivational theories from Maslow[1], Herzberg[2], McClelland[3], and McGregor[4], which explain that training and organizational values can shape employee behavior, although their effectiveness is largely determined by how individuals perceive organizational stimuli.
Keywords:E-learning-based training, organizational culture, work motivation, employee performance, PT. CBA Chemical Industry.

Abstrak

Penelitian ini dilakukan untuk menguji pengaruh pelatihan berbasis e-learning dan budaya organisasi terhadap kinerja karyawan, dengan motivasi kerja sebagai variabel intervening. Penelitian menggunakan pendekatan kuantitatif dengan metode survei melalui kuesioner terhadap 81 operator produksi, serta dianalisis menggunakan Structural Equation Modeling berbasis Partial Least Square (SEM-PLS). Hasil penelitian menunjukkan bahwa pelatihan e-learning tidak berpengaruh langsung terhadap kinerja dan motivasi kerja, sementara budaya organisasi berpengaruh positif dan signifikan terhadap keduanya. Motivasi kerja juga terbukti berpengaruh signifikan terhadap kinerja, namun tidak memediasi hubungan antara pelatihan maupun budaya terhadap kinerja. Temuan ini menunjukkan bahwa pengaruh langsung lebih dominan daripada pengaruh tidak langsung melalui motivasi. Penelitian ini mengacu pada teori motivasi Maslow, Herzberg, McClelland, dan McGregor, yang menyatakan bahwa pelatihan dan budaya kerja dapat membentuk perilaku karyawan, namun efektivitasnya sangat dipengaruhi oleh persepsi individu terhadap stimulus organisasi.
Kata kunci: pelatihan berbasis e-learning, budaya organisasi, motivasi kerja, kinerja karyawan, PT. CBA Chemical Industry.

[1] A. H. Maslow, "A Theory of Human Motivation," *Psychological Review* 50, no. 4 (1943): 370–96, https://doi.org/10.1037/h0054346.
[2] F. Herzberg et al., *The Motivation to Work*, 2nd ed. (John Wiley & Sons, 1959).
[3] D. C. McClelland, *The Achieving Society* (Van Nostrand, 1961).
[4] D. McGregor, *The Human Side of Enterprise* (McGraw-Hill, 1960).

INTRODUCTION

Industrial development in the era of globalization and digitalization has undergone a very rapid transformation. Globalization opens opportunities for cross-border economic integration, facilitating the flow of goods, services, information, and technology, while creating increasingly fierce market competition. Meanwhile, digitalization is a major driver of efficiency and innovation in modern industrial business processes. Growth and competition in the agrochemical industry in Indonesia are currently quite high. A report by the global agrochemical market research company, Mordor Intelligence, analyzed that the growth of the Indonesian agrochemical market is estimated to grow from USD 629.82 billion (2025) to USD 740.83 billion (2030) with an annual growth of around 3.30%. In this study, the author chose PT. CBA Chemical Industry as the research location, because this company is one of the leading local agrochemical producers in Indonesia, especially in the Serang Regency area. PT. CBA Chemical Industry has built a strong reputation as a company active in the development of pesticides, fertilizers, and agricultural equipment to support the national agricultural sector and food security as a current government program. PT. CBA Chemical Industry has an extensive distribution network with more than 30 distribution points throughout Indonesia, and is known for its various superior products widely used by farmers. PT. CBA Chemical Industry is a company that is transforming in the field of human resource development, including the implementation of digital-based training and strengthening organizational culture. This is very relevant to the focus of the author's research, which is to analyze the influence of training and organizational culture on employee performance through motivation. The availability of data, the suitability of the topic, and support from management make PT. CBA Chemical Industry an ideal and strategic research location. And also because there has been no previous research at PT. CBA Chemical Industry that discusses or examines these two programs, that's why the researcher chose PT. CBA Chemical Industry as the research location.

In the production process at PT. CBA Chemical Industry, there is a production organizational structure that regulates the workflow and systematic division of responsibilities. This structure consists of various positions ranging from production heads, supervisors, technicians, to production operators. Each has an interrelated role in supporting the achievement of production targets and maintaining the quality of the final results. Among this structure, production operators have a very important role as direct implementers in the field. They are tasked with operating machines, monitoring the production process, and ensuring that the resulting product complies with the quality standards set by the company. Improving the performance of production operators is an important factor in supporting the overall operational effectiveness of the company. According to Masram and Mu'ah, "Employee performance is the work results in quality and quantity achieved by an employee in carrying out their duties according to the responsibilities given to them."

Employee Performance of PT. CBA *Chemical Industry* This will certainly have a direct impact on the company's productivity in achieving its targets, including improving the quality and quantity of production results. In this casegood or bad indicatorPerformance of PT. CBA production operator employees*Chemical Industry* This can be seen from the routine assessments carried out by the head of production which are routinely stated in the monthly employee report cards, where employee report cards are assessed based on several variables, namely attendance, discipline, competence and work performance achievement. Employee attendance is assessed from the number of absences due to illness, permission, lateness and absence without explanation (alpa). Discipline is assessed from the number of violations committed by employees. Employee competency scores are obtained from the implementation of digital learning training, each employee is required to access e-learning from the Moodle application. And the assessment of work performance achievement is obtained from the results of achieving targets set by the company, where in the report the average report card score of production operator employees from 2022 to 2024 increased each year, namely in 2022 with an average score of 85.87, in 2023 with an average score of 88.29 and in 2024 with an average score of 89.03. It can be seen that the average employee assessment has increased every year. According to Noe, appropriate training can help employees adapt to technological changes and increasingly dynamic job demands. According to Bangun[5], "Training is a process of improving employee work skills to help achieve company goals." According to Marwansyah[6] training concerns mental and physical training of employees, as well as the relationship between superiors and subordinates.E-learning is one way for companies to improve employee knowledge. The e-learning program that has been running at PT. CBA Chemical Industry is a training activity that can be accessed digitally in real time outside of working hours with a time period determined by the company, each employee can access according to the job description required and has been prepared every month, an indication of each employee's success if after completing the learning the employee takes a test with the final result that must be achieved is a score of 100 from the Moodle application, if it has not been achieved then the employee is asked to take remedial or repeat the learning again.

At PT. CBA Chemical Industry, organizational culture is a set of good habits established by the company to build good relationships, improve skills and knowledge, ensure responsibility, achieve work goals, comply with applicable regulations, and create a conducive and productive work environment, as well as encourage the achievement of company targets in a sustainable manner.*Chemical Industry*reflected in the company's policy, namely Continual Improvement (always improving knowledge and abilities continuously), Being Excellent (being the best, results-oriented for customer satisfaction) and Awareness (awareness of responsibility, health, safety,

[5] W. Bangun, *Manajemen Sumber Daya Manusia* (Erlangga, 2012), 202.
[6] Marwansyah, *Manajemen Sumber Daya Manusia* (Alfabeta, 2010).

environment and regulations). The habits that are built are by making continuous improvements and increasing knowledge and the ability to continue learning to know and understand new things by following e-learning and the results can be measured. AT PT.CBA Chemical Industry each department has a daily routine that is by conducting Initial Work Briefing (BAK), every day employees are reminded of the CBA culture, work evaluations, working according to work procedures, work instructions and standards that have been determined and employees are reminded to always work healthily and safely, achieve targets by ensuring the quality and quantity of products that are in accordance with the standards and targets achieved, a neat, clean, safe and comfortable work area environment, this accustoms employees to compete to be the best, provide the best contribution by providing real work whose results are measurable in their work achievements. And employees of PT.CBA Chemical Industry have mWork motivation can be seen from the measurable employee report card assessment, seen from the average employee attendance which is quite high up to 97.52% in 2024, good employee discipline with a low number of employee violations of up to 0.15%, an average e-learning score assessment reaching 95.62% and the achievement of production targets, in this case it can be seen how much employee motivation is to work, to be present on time, to achieve work targets, to take part in training or for the employee's own self-development.Highly motivated employees tend to demonstrate greater commitment to their work, have higher levels of engagement, and are able to achieve company-set targets.[7] Conversely, a lack of motivation can lead to low productivity and increased employee turnover, which can ultimately be detrimental to the company. Hamali[8] states that motivation is a potential force that exists within a human being that can be developed independently or developed by a number of external forces that can influence the results of his performance positively or negatively.

Based on this background, this study aims to analyze the influence of problem-based training.*e-learning*and organizational culture on employee performance with motivation as an intervening variable at PT. CBA Chemical Industry, Serang Regency. This research is expected to contribute to the company in designing more effective and efficient HR development strategies so that the company can compete in the era of globalization and digitalization.to become a leader in the agricultural supply chain in Indonesiaand able to motivate employees and increase the company's productivity and competitiveness.

[7] R. M. Ryan and E. L. Deci, "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions," *Contemporary Educational Psychology* 25, no. 1 (2020): 54–67.

[8] A. Y. Hamali, *Pemahaman Manajemen Sumber Daya Manusia* (Pustaka Setia, 2016).

Conceptual Framework and Research Hypothesis

This research uses a conceptual framework as shown in the following figure:

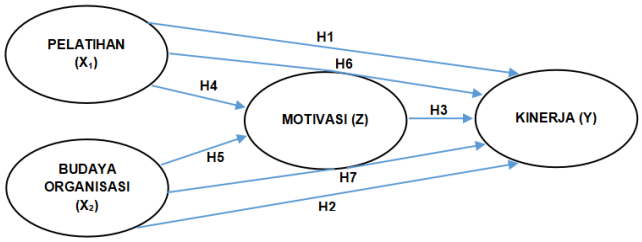

Figure 1. Conceptual Framework of the Research

The training used uses digital technology-based methods that provide flexibility in access and timing. Organizational culture is the values, norms, and beliefs formed within an organization. Work motivation is the internal and external drive that influences work enthusiasm. Employee performance is the level of work achievement commensurate with responsibilities.

A hypothesis is a tentative answer to a research problem statement. Therefore, it is usually formulated in the form of a question. A research hypothesis is based on a conceptual framework and a framework for thinking. A research hypothesis is an assumption, statement, or tentative answer to the question formulated in the research problem statement that will be tested with empirical data collected during the study. Based on the conceptual framework above, the hypothesis in this study can be described as follows:

H1: It is suspected that training has a positive and significant effect on the performance of production operator employees at PT. CBA Chemical Industry

H2: It is suspected that organizational culture has a positive and significant influence on the performance of production operator employees at PT. CBA Chemical Industry.

H3: It is suspected that motivation influences the performance of production operator employees at PT. CBA Chemical Industry.

H4: It is suspected that training has an impact on the motivation of production operator employees at PT. CBA Chemical Industry.

H5: It is suspected that organizational culture influences the work motivation of production operator employees at PT CBA Chemical Industry.

H6: It is suspected that training does not have an effect on employee performance through motivation as a mediator.

H7: It is suspected that organizational culture influences the performance of production operator employees at PT. CBA Chemical Industry through motivation as a mediator.

RESEARCH METHODS

This study uses a descriptive quantitative research method to test hypotheses regarding the relationship and influence between variables.The population is the production operators of PT. CBA Chemical Industry. The number of respondents is 81 people and tThe sampling technique used in this study is saturated sampling..Data collection was carried out by filling out a questionnaire online using Google Forms.on a scaleLikert 5 point. According to Sugiyono, a questionnaire is a data collection technique carried out by giving respondents a number of written questions or statements to answer.Data analysis using SEM-PLS with SmartPLS3.0. Model testing includes construct validity, reliability, and path hypothesis testing.

Outer Model Testing

Outer model testing is a measurement model used to examine the relationship between each indicator and other variables. The outer model is used to test validity and reliability. The following is a path diagram for this research model:

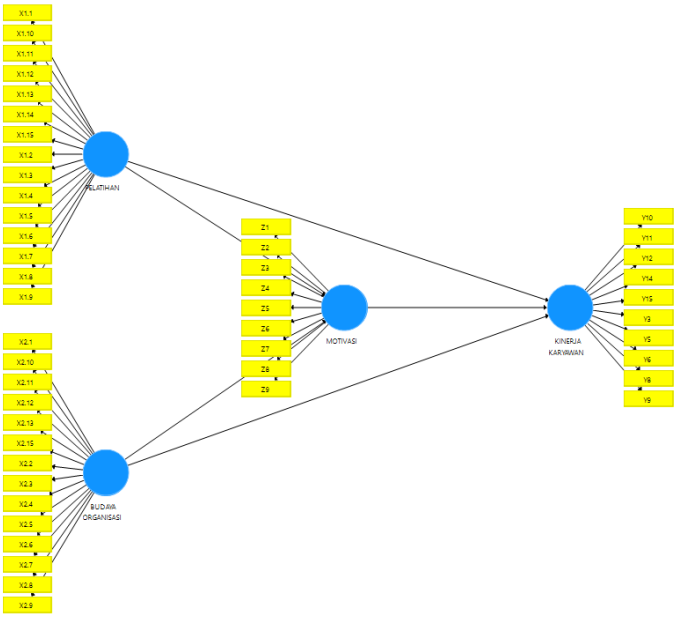

Figure 2. Path Diagram of PLS Algorithm (Outer Model)

Figure 2 generally summarizes the structural model of the constructs studied, along with the validity test values and R-square values. The structural model of the constructs above shows that there are two exogenous latent variables: training and organizational culture. Furthermore, there are two endogenous latent variables: work motivation, which is an intervening variable, and employee performance. The relationship between constructs is analyzed using PLS path analysis. Based on the results of the outer model analysis using the PLS-SEM method, all constructs in this study are measured using a reflective model.

Instrument Validity Test with Outer Loading

Instrument validity testing using outer loading is part of the convergent validity analysis in the Partial Least Squares - Structural Equation Modeling (PLS-SEM) method. Outer loading is the correlation value between an indicator (question/questionnaire) and the construct (latent variable) it represents.

Table 1. Results of the Validity Test of the Variable Instrument with Outer Loading

	Budaya Organisasi	Kinerja Karyawan	Motivasi	Pelatihan	Ket
X1.1				0,825	Valid
X1.10				0,848	Valid
X1.11				0,896	Valid
X1.12				0,905	Valid
X1.13				0,817	Valid
X1.14				0,867	Valid
X1.15				0,714	Valid
X1.2				0,890	Valid
X1.3				0,853	Valid
X1.4				0,899	Valid
X1.5				0,861	Valid
X1.6				0,826	Valid
X1.7				0,764	Valid
X1.8				0,728	Valid
X1.9				0,732	Valid
X2.1	0,768				Valid
X2.10	0,750				Valid
X2.11	0,783				Valid
X2.12	0,883				Valid
X2.13	0,779				Valid
X2.15	0,847				Valid
X2.2	0,758				Valid
X2.3	0,820				Valid
X2.4	0,812				Valid
X2.5	0,736				Valid
X2.6	0,833				Valid
X2.7	0,838				Valid
X2.8	0,716				Valid
X2.9	0,816				Valid
Y10		0,856			Valid
Y11		0,853			Valid
Y12		0,759			Valid
Y14		0,765			Valid
Y15		0,830			Valid
Y3		0,814			Valid
Y5		0,744			Valid
Y6		0,891			Valid
Y8		0,738			Valid
Y9		0,872			Valid
Z1			0,867		Valid
Z2			0,939		Valid
Z3			0,818		Valid
Z4			0,918		Valid
Z5			0,843		Valid
Z6			0,829		Valid
Z7			0,857		Valid
Z8			0,932		Valid
Z9			0,887		Valid

Training, Organizational Culture, Work Motivation, and Employee Performance have a loading factor value of ≥ 0.7, which means each indicator is valid in measuring its construct. This indicates that the model has met convergent validity. Furthermore, because these indicators are also consistent and do not overlap between constructs, it can be concluded that discriminant validity is also met. Assuming that the Average Variance Extracted (AVE) and Composite Reliability (CR) values also meet the threshold (> 0.5 for AVE and > 0.7 for CR), then all constructs are declared reliable.

Discriminant Validity Test with Cross Loading and Fornell Lacker Criterion

The discriminant validity test using the cross loading approach was carried out to assess whether each indicator represents its original construct more strongly than other constructs.

Table 2. Cross Loading Validity Test Results

	Budaya Organisasi	Kinerja Karyawan	Motivasi	Pelatihan
X1.1	0,775	0,646	0,681	0,825
X1.10	0,788	0,641	0,745	0,848
X1.11	0,802	0,693	0,755	0,896
X1.12	0,761	0,603	0,753	0,905
X1.13	0,746	0,652	0,682	0,817
X1.14	0,739	0,605	0,668	0,867
X1.15	0,548	0,502	0,535	0,714
X1.2	0,752	0,630	0,690	0,890
X1.3	0,713	0,589	0,680	0,853
X1.4	0,785	0,601	0,752	0,899
X1.5	0,725	0,589	0,719	0,861
X1.6	0,684	0,576	0,675	0,826
X1.7	0,731	0,532	0,620	0,764
X1.8	0,741	0,467	0,589	0,728
X1.9	0,700	0,444	0,553	0,732
X2.1	0,768	0,612	0,621	0,759
X2.10	0,750	0,589	0,620	0,528
X2.11	0,783	0,625	0,670	0,631
X2.12	0,883	0,681	0,660	0,711
X2.13	0,779	0,509	0,627	0,725
X2.15	0,847	0,670	0,878	0,806
X2.2	0,758	0,452	0,594	0,692
X2.3	0,820	0,666	0,764	0,684
X2.4	0,812	0,662	0,700	0,622
X2.5	0,736	0,668	0,679	0,790
X2.6	0,833	0,671	0,710	0,728
X2.7	0,838	0,699	0,778	0,819
X2.8	0,716	0,496	0,555	0,642
X2.9	0,816	0,541	0,690	0,686
Y10	0,607	0,856	0,674	0,632
Y11	0,635	0,853	0,663	0,580
Y12	0,593	0,759	0,528	0,527
Y14	0,603	0,765	0,556	0,549
Y15	0,749	0,830	0,750	0,693
Y3	0,663	0,814	0,584	0,617
Y5	0,599	0,744	0,484	0,462
Y6	0,662	0,891	0,618	0,603
Y8	0,552	0,738	0,579	0,493
Y9	0,597	0,872	0,623	0,569
Z1	0,767	0,651	0,867	0,745
Z2	0,835	0,716	0,939	0,808
Z3	0,756	0,630	0,818	0,722
Z4	0,813	0,692	0,918	0,784
Z5	0,746	0,707	0,843	0,640
Z6	0,665	0,584	0,829	0,613
Z7	0,670	0,596	0,857	0,672
Z8	0,787	0,688	0,932	0,734
Z9	0,759	0,647	0,887	0,697

All indicators of each variable, namely training (X1), organizational culture (X2), work motivation (Z), and employee performance (Y), have the highest loading values on their original constructs. Indicator X1.6 has a loading of 0.851 on the training construct, which is higher than its value on organizational culture (0.720), motivation (0.721), and employee performance (0.671). This indicates that the indicator is more valid in measuring the training variable than other variables. Overall, it shows that discriminant validity is met because there are no indicators with a higher correlation to other constructs. Each indicator has shown the highest measurement strength on its original construct, so the measurement model can be said to be discriminant valid.

Table 3. Results of the Fornell Lacker Validity Test

	Budaya Organisasi	Kinerja Karyawan	Motivasi	Pelatihan
Budaya Organisasi	0,797			
Kinerja Karyawan	0,773	0,814		
Motivasi	0,864	0,751	0,878	
Pelatihan	0,883	0,709	0,815	0,831

The results of the discriminant validity test using the Fornell-Larcker approach show that all constructs in this study have met the discriminant validity criteria. These results indicate that each construct in the research model has good discriminant validity, meaning that each construct is able to differentiate itself from other constructs conceptually.

Construct Reliability Test with Composite Reliability, Cronbach's Alpha, and AVE

Table 4. Results of Construct Reliability Test

	Cronbach's Alpha	*rho_A*	*Composite Reliability*	*Average Variance Extracted* (AVE)
Budaya Organisasi	0,956	0,959	0,960	0,635
Kinerja Karyawan	0,943	0,946	0,951	0,662
Motivasi	0,962	0,965	0,968	0,770
Pelatihan	0,967	0,970	0,971	0,690

All constructs in this study were tested for reliability using four main indicators: Cronbach's Alpha, rho_A, Composite Reliability, and Average Variance Extracted (AVE). The results showed that the Cronbach's Alpha values for all constructs were above 0.70. Each construct met convergent validity. Therefore, it can be concluded that all constructs in this research model are reliable and valid.

Structural Model or Inner Model Testing

The most commonly used measure for evaluating an inner model is the coefficient of determination (R2). R2 is a model's predictive power, calculated as the squared correlation between the actual and predicted values of a construct on a specific endogenous basis. R2 represents the amount of variance in the endogenous construct explained by all associated exogenous constructs. R2 values include 0.75 (strong), 0.50 (moderate), and 0.25 (weak).

Table 5. R Square

	R *Square*	R *Square Adjusted*
Kinerja Karyawan	0,625	0,611
Motivasi	0,758	0,752

The table above shows that the model has excellent predictive ability. In general, the R-square values obtained are in the strong (between 0.50–0.75) and very strong (above 0.75) categories, indicating that the structural model used in this study adequately explains the relationships between variables.

Path Coefficients

*Path coefficients*is a model for examining the direction of a hypothetical relationship. Path coefficients have a standard value of -1 to +1 (the value can be smaller or larger but generally falls within these limits). Path coefficients closer to +1 indicate a strong positive relationship, and vice versa for negative values. Below are the path coefficient values:

Table 6. Path Coefficients

	Kinerja Karyawan	Motivasi
Budaya Organisasi	0,461	0,654
Kinerja Karyawan		
Motivasi	0,318	
Pelatihan	0,043	0,238

Based on Table 6, the results of the path coefficient test indicate the magnitude of the direct influence between variables in the structural model. Overall, these results indicate that Organizational Culture and Motivation are stronger factors in improving employee performance than the direct influence of training.

T-Statistics

The t-statistic in the inner model test is useful for testing the significance of a hypothesis. Hypothesis testing can be seen from the bootstrapping output. The results of the bootstrapping output test are shown in the image below:

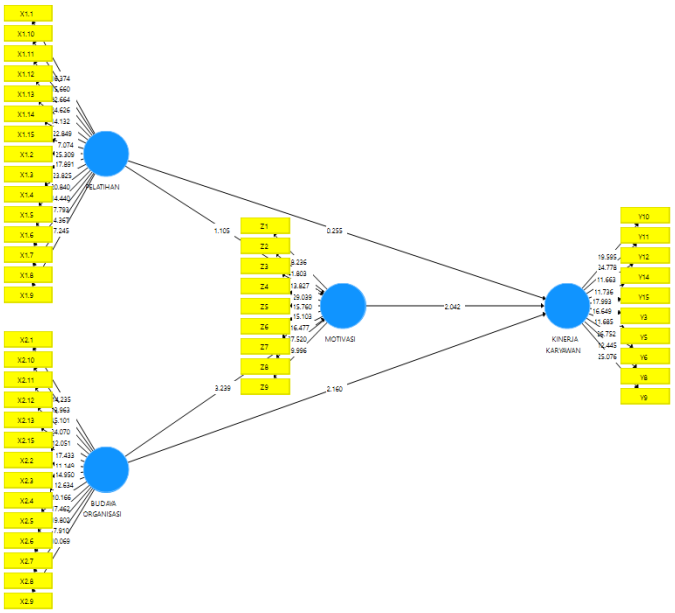

Figure 3. Bootstrapping Path Diagram

Based on Figure 3, the Bootstrapping Path Diagram visualization depicts the results of the path coefficient estimation and the T-Statistics value for each relationship between constructs in the research model. These bootstrapping results strengthen the conclusion that Organizational Culture and Motivation are significant factors in improving employee performance, while training tends not to have a significant direct influence in this model.

Discussion and Results of Hypothesis Testing

This test was conducted using the Partial Least Square (PLS) method using SmartPLS 3.0 software to process data and accommodate direct and indirect influences.

Results of Direct Effect Test

Table 7. Results of Direct Effect Testing

	Original Sample (O)	*Sample Mean* (M)	*Standard Deviation* (STDEV)	T *Statistics* (|O/STDEV|)	P *Values*
Budaya Organisasi -> Kinerja Karyawan	0,461	0,444	0,213	2,160	**0,031**
Budaya Organisasi-> Motivasi	0,654	0,643	0,202	3,239	**0,001**
MotivasiI -> Kinerja Karyawan	0,318	0,312	0,155	2,042	**0,042**
Pelatihan -> Kinerja Karyawan	0,043	0,073	0,170	0,255	**0,799**
Pelatihan -> Motivasi	0,238	0,256	0,215	1,105	**0,270**

1. Hypothesis Testing 1: Digital-based training has a positive and significant effect on the performance of production operator employees at PT CBA. *Chemical Industry.*

   Based on the test, it was found that the effect of training on employee performance only had a path coefficient value of 0.043, with a t-statistic of 0.255 and a p-value of 0.799. The very low t-statistic and p-value far above 0.05 indicate that the fourth hypothesis is rejected. This means that e-learning-based training does not have a direct and significant effect on employee performance. These results differ from several previous studies. Widhi Wicaksono et al.[9] and Musyafa Rois et al.[10] consistently stated that training tailored to job needs can significantly improve employee technical skills and work efficiency.

2. Hypothesis Testing 2: Organizational culture has a positive and significant influence on the performance of production operator employees at PT CBA. *Chemical Industry*.

   Based on the test results, it is known that the influence of Organizational Culture on Employee Performance has a path coefficient value of 0.461, a t-statistic of 2.160, and a p-value of 0.031. The t-statistic value is greater than the critical value of t table 1.984 and the p-value is less than 0.05, so the effect is declared statistically significant. This finding is in line with previous research, such as that conducted by Novia Alvionita Dewi and Muhammad Gandung[11] and research by Saade, Sultan S., Theresia Pradiani, and Fathorrahman[12] which concluded that a strong organizational culture contributes significantly to employee

[9] W. Wicaksono et al., "Pengaruh Pelatihan, Motivasi, Dan Budaya Organisasi Terhadap Kinerja Karyawan," *Jurnal Ilmu Manajemen* 9, no. 1 (2021): 1–12.

[10] M. Rois et al., "Pengaruh Motivasi, Pelatihan, Dan Lingkungan Kerja Terhadap Kinerja Sales People," *Jurnal Riset Manajemen* 7, no. 1 (2023): 55–70.

[11] I. Dewi and G. Gandung, "Pengaruh Disiplin Kerja Dan Budaya Organisasi Terhadap Kinerja Karyawan Pada PT Kimia Farma Tbk Plant Jakarta," *Jurnal Administrasi Bisnis* 8, no. 2 (2022): 23–34.

[12] S. S. Saade et al., "The Influence of Organizational Culture and Competence on Employee Performance with Work Motivation as Intervening Variable," *Journal of Business and Management Studies* 10, no. 2 (2023): 88–104.

engagement and the achievement of work targets, especially in the manufacturing industry sector. This means that the results of this study confirm previous results and no contradictory gaps were found.

3. Hypothesis Testing 3: Work motivation has a positive and significant effect on the performance of production operator employees at PT CBA. *Chemical Industry*.

   The test results showed that the effect of motivation on employee performance had a path coefficient of 0.318, with a t-statistic of 2.042 and a p-value of 0.042. This t-statistic exceeded the critical value and the p-value was below 0.05, thus the third hypothesis was accepted. This means that work motivation has a positive and significant influence on employee performance. This finding is in line with previous research. Maulia Sri Dewi, Julianto Hutasuhut, Tukimin Lubis, and Nurain Harahap[13], as well as research by Lasarudin, Sumarsono, and Natsir[14], in their research concluded that motivation is the dominant variable influencing employee performance, both in the manufacturing and service sectors. In other words, the results of this study support and strengthen the results of previous studies, so no significant gaps were found.

4. Hypothesis Testing 4: Digital-based training has a positive and significant effect on the work motivation of production operator employees at PT CBA. *Chemical Industry*.

   In testing Hypothesis 4, the results of testing the effect of Training on Motivation showed a path coefficient of 0.238, a t-statistic of 1.105, and a p-value of 0.270. These values indicate that the effect of training on employee work motivation is not statistically significant, because the t-statistic is smaller than the critical value and the p-value is greater than 0.05. Thus, the fifth hypothesis is rejected. These results differ from the findings of Septifana Rosiani, Eny Setyariningsih, and Kasmono[15] who stated that structured and competency-based training has been shown to significantly increase employee work motivation, especially when accompanied by greater role allocation and reinforcement from management. Similarly, Mutiya, Machasin, and David Chairilsyah[16] in their research confirmed that participatory training designed to meet employees' real needs has been shown to increase intrinsic motivation and work loyalty.

[13] R. Dewi et al., "Pengaruh Budaya Organisasi, Motivasi Kerja, Dan Lingkungan Kerja Terhadap Kinerja Karyawan," *Jurnal Administrasi Bisnis* 7, no. 2 (2023): 60–72.

[14] A. Lasarudin et al., "Analisis Budaya Organisasi Terhadap Kinerja Karyawan Melalui Motivasi Kerja Sebagai Variabel Intervening," *Jurnal Ilmu Manajemen* 10, no. 2 (2021): 98–109.

[15] S. Rosiani et al., "Pengaruh Pelatihan Dan Pengembangan SDM Terhadap Kinerja Karyawan Dengan Motivasi Sebagai Variabel Intervening," *Jurnal Eksekutif* 11, no. 1 (2023): 33–46.

[16] M. Mutiya et al., "Pengaruh Pelatihan Dan Kepemimpinan Terhadap Kinerja Karyawan Dengan Motivasi Sebagai Variabel Intervening," *Jurnal Ekonomi Dan Bisnis* 15, no. 4 (2022): 78–89.

5. Hypothesis Testing 5: Organizational culture has a positive and significant influence on the work motivation of production operator employees at PT CBA. *Chemical Industry*.

   The analysis results show that the influence of Organizational Culture on Motivation has a path coefficient value of 0.654, with a t-statistic of 3.239 and a p-value of 0.001. Because the t-statistic value far exceeds the t-table value and the p-value is far below the 0.05 threshold, it can be concluded that the second hypothesis is accepted. This finding is consistent with the results of research by Saade, Sultan S., Theresia Pradiani, and Fathorrahman[17] which stated that a healthy, adaptive organizational culture that supports employee development can significantly increase work motivation. Furthermore, research by Lasarudin, Sumarsono, and Natsir[18] also found that a strong organizational culture that aligns with employees' personal values can encourage increased motivation, both in terms of loyalty, work enthusiasm, and the desire to develop.

Results of Indirect Effect Testing

Table 8. Results of Direct Effect Testing

	Original Sample (O)	*Sample Mean* (M)	*Standard Deviation* (STDEV)	T *Statistics* (|O/STDEV|)	P *Values*
Budaya Organisasi > Motivasi > Kinerja Karyawan	0,208	0,210	0,135	1,542	**0,124**
Pelatihan > Motivasi > Kinerja Karyawan	0,075	0,071	0,073	1,038	**0,300**

The explanation for the results of the hypothesis test in Table 8 is as follows,

1. Testing Hypothesis 6: Training influences the performance of production operator employees through motivation as a mediating variable.

   The results of the indirect path test from Training to Employee Performance through Motivation showed an original sample value of 0.075, a t-statistic of 1.038, and a p-value of 0.300. The p-value, which is far above the 0.05 significance limit, and the t-statistic below the critical value, indicate that this second hypothesis is also rejected, because the indirect effect of training on performance through motivation is not statistically significant. This finding is in line with the results of research by Mutiya, Machasin, and David Chairilsyah[19], which stated that training does not have a significant effect on work motivation.

[17] Saade et al., "The Influence of Organizational Culture and Competence on Employee Performance with Work Motivation as Intervening Variable."

[18] Lasarudin et al., "Analisis Budaya Organisasi Terhadap Kinerja Karyawan Melalui Motivasi Kerja Sebagai Variabel Intervening."

[19] Mutiya et al., "Pengaruh Pelatihan Dan Kepemimpinan Terhadap Kinerja Karyawan Dengan Motivasi Sebagai Variabel Intervening."

2. Testing Hypothesis 7: Organizational culture influences the performance of production operator employees through motivation as a mediating variable.

   Based on the results of the indirect effect test, it is known that Organizational Culture influences Employee Performance through the intermediary variable (mediator) Motivation, with an original sample value of 0.208, a t-statistic of 1.542, and a p-value of 0.124. Although the direction of the effect is positive, the t-statistic value is smaller than the critical value of the t table (1.984) and the p-value is greater than 0.05 indicating that this indirect effect is not statistically significant. Thus, the first indirect hypothesis is rejected. This finding is in line with the results of research by Saade, Sultan S., Theresia Pradiani, and Fathorrahman[20] which found that the indirect effect of organizational culture on performance through motivation is negative and insignificant. Although the direction of the effect in this study is positive, both show no statistical significance, which strengthens the assumption that the mediation relationship is still weak. On the other hand, this finding differs from the research results of Lasarudin, Sumarsono, and Natsir[21], which found that organizational culture can increase motivation, and this motivation significantly drives performance.

RESULTS AND DISCUSSION

The Impact of E-Learning-Based Training on Employee Performance

Based on the analysis conducted on hypothesis testing regarding the effect of e-learning-based training on the performance of production operators at PT. CBA Chemical Industry, the findings indicate that training does not have a significant direct impact on improving employee performance.Table 7 shows that the original sample (O) value is 0.043, the t-statistic is 0.255, and the p-value is 0.799. These values indicate that the effect of training on employee performance is not statistically significant, as the t-value is <1.984 and p>0.05. This means that the training, particularly e-learning-based training, that has been implemented has not been able to provide a direct influence on improving the performance of production operators at PT CBA.*Chemical Industry*.

The Influence of Organizational Culture on Employee Performance

The results of the hypothesis testing analysis indicate that organizational culture has a positive and significant effect on the performance of production operator employees at PT. CBA

[20] Saade et al., "The Influence of Organizational Culture and Competence on Employee Performance with Work Motivation as Intervening Variable."

[21] Lasarudin et al., "Analisis Budaya Organisasi Terhadap Kinerja Karyawan Melalui Motivasi Kerja Sebagai Variabel Intervening."

Chemical Industry. Based on the results of the direct influence test in Table 7, the original sample (O) value was obtained at 0.461 with a t-statistic of 2.160 and a p-value of 0.031. A t-statistic value greater than the t-table (1.984) and a p-value smaller than 0.05 indicates that this hypothesis is accepted, which means that organizational culture has a positive and significant effect on employee performance. These results indicate that the better the organizational culture implemented in the company, the higher the performance of production operator employees. A strong, consistent, and supportive organizational culture that supports the achievement of shared goals can create a productive work climate and shape responsible, disciplined, and collaborative work behavior. In the context of PT CBA Chemical Industry, an organizational culture built through values such as discipline, openness, and a focus on work quality has been proven to positively influence employee work results.

The Influence of Motivation on Employee Performance

The results of testing the hypothesis regarding the influence of work motivation on the performance of production operator employees at PT. CBA Chemical Industry, based on the results of the direct effect test in Table 7, show that the original sample value (O) is 0.318, with a t-statistic of 2.042 and a p-value of 0.042. A t-statistic value greater than the critical value of 1.984 and a p-value smaller than 0.05 indicates that motivation has a positive and significant influence on employee performance. These results indicate that the higher the level of work motivation of production operators at PT CBA Chemical Industry, the better the performance displayed. High motivation encourages employees to be more proactive, take initiative, and be responsible in completing work tasks. In the operational context of the chemical industry such as PT CBA Chemical Industry, motivation is a key element in ensuring efficiency, production quality, and compliance with occupational safety standards. Therefore, management efforts to improve work motivation greatly influence the achievement of performance targets.

The Influence of E-Learning-Based Training on Work Motivation

Based on the results of the hypothesis testing, the direct effect of e-learning-based training on the work motivation of production operators at PT. CBA Chemical Industry in Table 7, obtained an original sample value (O) of 0.238, a t-statistic of 1.105, and a p-value of 0.270. Because the t-value is smaller than the t-table (1.984) and the p-value is greater than 0.05, it is concluded that the training does not have a significant effect on employee work motivation. This finding indicates that the training conducted at PT CBA Chemical Industry has not been able to encourage a significant increase in work motivation. This can be caused by several factors, including: training materials that are less interesting or irrelevant to employee psychological needs, digital training methods (e-

learning) that are one-way without interaction, and the absence of follow-up in the form of awards, new challenges, or role enhancement after the training. When training does not generate a sense of belonging, recognition, and hope for development, employees tend to be unmotivated even after attending the training.

The Influence of Organizational Culture on Work Motivation

Based on the results of the path analysis in Table 7, the original sample (O) value was 0.654, the t-statistic was 3.239, and the p-value was 0.001. Since the t-value is greater than 1.984 and the p-value is less than 0.05, it can be concluded that organizational culture has a positive and significant effect on employee work motivation. These results indicate that the better the organizational culture built and implemented at PT CBA Chemical Industry, the higher the level of work motivation felt by production operators. A clear, consistent, inclusive work culture, and oriented towards employee psychological and professional development will foster a sense of belonging, security, and high work enthusiasm. Organizational cultural values such as discipline, responsibility, collaboration, and openness applied in the PT CBA Chemical Industry work environment have been proven to be able to create a work atmosphere that motivates employees to work optimally.

The Influence of Training on Employee Performance Through Work Motivation as an Intervening

In this study, training is hypothesized to not only directly influence employee performance but also indirectly through work motivation as an intervening variable. Based on the results of Table 8, the value of the indirect effect of training on employee performance through motivation shows an original sample value (O) of 0.075, with a T-statistic value of 1.038 and a P-Value of 0.300. Because the P-value is greater than 0.05, statistically, the indirect effect of training on employee performance through motivation is not significant. This indicates that work motivation does not significantly mediate the relationship between training and employee performance in this study.

The Influence of Organizational Culture on Employee Performance Through Work Motivation as an Intervening Factor

The test results on the indirect effect indicate that work motivation does not significantly mediate the relationship between organizational culture and the performance of production operators at PT. CBA Chemical Industry. The test results in Table 8 show that the indirect effect of organizational culture on employee performance through motivation produces an original sample (O) value of 0.208, a T-statistic of 1.542, and a P-Value of 0.124. Because the P value is greater

than 0.05, then statistically, the effect is not significant. Although organizational culture has a positive influence on work motivation, and work motivation also influences performance, but indirectly organizational culture has not been able to provide a significant impact on employee performance through motivation as a mediator. These results indicate that the role of motivation as an intervening variable is not effective in bridging the relationship between organizational culture and performance.

CONCLUSION

This study aims to examine the influence of e-learning-based training and organizational culture on employee performance, with work motivation as an intervening variable, among production operators at PT. CBA Chemical Industry, Serang Regency. The results show that e-learning-based training has no significant direct or indirect effect on employee performance or work motivation, indicating that this training method is still not optimal in building motivation and improving work performance at the operational level. Conversely, organizational culture is proven to have a positive and significant effect on performance and work motivation, which emphasizes the importance of strengthening organizational values in driving individual performance. Other findings indicate that work motivation has a positive direct effect on performance, but is unable to mediate the relationship between e-learning-based training and organizational culture on performance. The strengths of this study lie in the simultaneous testing of the relationship model between training, culture, motivation, and performance, and the use of a quantitative approach that provides empirical evidence of the relationships between variables. However, limitations arise in terms of the research context being limited to one company and the relatively homogeneous characteristics of respondents, thus limiting the generalizability of the results. In addition, the complexity of the e-learning training process that is not fully measured in the research instrument is also a limitation that deserves attention.

Suggestions and Recommendations

Based on the limitations of this study, it is recommended that future research consider expanding the research object to other companies with different characteristics and industrial sectors to test the consistency of the findings. Variable development can also be done by adding other factors such as leadership style, work environment, and compensation systems that may play a significant role in influencing employee motivation and performance. Furthermore, the effectiveness of e-learning training should be evaluated more thoroughly by considering instructional design, participant engagement, and organizational support, so that factors that need to be improved to increase its impact on motivation and performance can be identified. Future

research can also utilize qualitative or mixed-method approaches to capture broader and more in-depth perspectives from training participants, particularly regarding their perceptions, experiences, and obstacles encountered during the digital learning process.

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