



## Analysis of increasing employee competence through on-job training and off-job training

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### ABSTRACT

The purpose of this study was to analyze the effect of on job training and off job training methods on increasing employee competence in an oleochemical company. The research design used in this study uses a quantitative associative method. Based on the results of data analysis that has been carried out in the first hypothesis ( $H_1$ ), which states that the on job training method has a positive and significant effect on increasing employee competence, the t-count value is 10,054 greater than the t-table value, which is 1,692, testing the second hypothesis ( $H_2$ ) which states that the off job training method has a positive and significant effect on increasing employee competence, the t value is 10,085 greater than the t table value, which is 1,692, which means that the on job training method and the off job training method has a positive effect and significantly to the increase in employee competence, while the R-square value obtained was 0.805 which stated that the on job training method variables and off job training methods affected increasing employee competency by 80.50% and the remaining 19.50% was influenced by the another variable.

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## INTRODUCTION

In the current era of free trade, the level of business competition between companies will become increasingly complex with a wide variety of products (Bone et al., 2018). These products are created through a research and development process in order to meet the needs and desires of consumers, so each company must be able to take advantage of all of its resources effectively and efficiently (Yusnandar & Nefri, 2020).

In facing increasingly fierce business competition, the existence of human resources is the most important investment that must be made by a company (Mangkunegara & Waris, 2015) due to its role as the subject of implementing company policies and operational activities (Rahmi & Suryalena, 2017) as well as human resources. This is the main element that will influence the

company in developing business units (Efitriana & Liana, 2022) so that management of the quality of human resources must be carried out in a professional manner (Sabuhari & Irawanto, 2020).

Professional management of human resources is one way to improve employee competence (Shabir, 2012) because the resources owned by a company, such as capital, methods, and machines with the most advanced technology, cannot provide maximum results if they are not supported by competent human resources (Rahmi & Suryalena, 2017).

Human resources have advantages compared to other production factors (Marlina, 2015), and competent human resources are the primary source of excellence for a company in carrying out production activities (Ardiansyah, 2014), so increasing employee competence is an unavoidable (Yuniarti et al., 2013) because without competent human resources every company will not be able to develop (Tjutju, Y., 2008) and compete with competitors to capture market share. Employees with a high level of competence in their position will always be encouraged to work effectively, efficiently, and productively (Setiawan & Hidayat, 2015).

Implementation of training is an ongoing effort made by each company to increase employee competence (Ragawanti et al., 2014) based on the results of the training needs analysis that has been conducted (Wibowo et al., 2022) which includes organizational analysis, operational analysis, and personnel analysis (Evers et al., 2005) in addition to creating a conducive working environment (Ragawanti et al., 2014)(Lubis, 2017). Training programs must be executed appropriately, deliberately, methodically, and sustainably to achieve maximum outcomes in enhancing employee competency (Ardiansyah, 2014).

The training program conducted for employees is a process of transferring expertise and knowledge (Girsang et al., 2021) in mastering a practical insight and its implementation to increase employee competence (Husnan, 2000) in accordance with company needs so that each employee can complete every the work given to him (Fajar., Siti., dan Tri, 2013) is in accordance with predetermined quality and quantity standards, whereby participating in training every employee will get the opportunity to improve his competence (Setiawan & Hidayat, 2015), especially in terms of knowledge, abilities, skills, and attitudes (Rivai, 2009) because one factor that influences a company's ability to achieve targets set by management is the availability of competent human resources (Sjahrudin et al., 2022).

In conducting training to improve the competence of employees, each company must incur substantial costs and require quite a long time (Hayati et al., 2021), so that this will cause competency gaps and will result in delays in achieving the set targets. Two training methods can improve employee competency: on-job and off-job training (Siagian, 2010).

The on-job training method is an informal employee competency training and development method (Mondy, 2015), where every employee who takes part in the on-job training method will be confronted directly with real work situations (Chotimah, 2017). In the on-job training method, trainees will learn by observing employees who are competent in doing the job (Dewi, 2018). Then these employees do the same work under the direct supervision of competent employees (Schuler & Jackson, 1997) so that transferring skills and knowledge is carried out more quickly and plays a significant role in increasing employee competence (Bafaneli & Setibi, 2015). The training method of job training consists of job instruction, coaching, job rotation, and apprenticeship (Hariandja, 2002).

The off-job training method is a training program and employee competency development held at a location separate from the employee's workplace (Simamora, 2004). There are two general forms of off-job training, namely in-house training, which is training coordinated by employees and held at training facilities owned by the company, and off-site training, which is training sponsored by professional associations, educational institutions, and independent training consultants (Rahmi & Suryalena, 2017). Off-job training methods include lecture systems, case studies, simulations, laboratory training, and self-learning (Siagian, 2010).

Implementing training to improve employee competence is unavoidable in the face of increasingly complex levels of business competition between companies. This research analyzed

employee competency improvement through job and off-job training at an oleochemical company in East Java.

## RESEARCH METHOD

### Research Design and Sample

This study employs the quantitative associative technique to investigate the influence or relationship between the variables of the on-the-job training method and the off-the-job training method on enhancing employee competency at an oleochemical firm in East Java.

The sample used in this study were employees of the production section of an oleochemical company in East Java, with a total sample of 35 employees in the production section data collection techniques carried out in this study were interviews, questionnaires, and observation (Sugiyono, 2017).

### Instrument Test

#### 1. Validity test

The validity test is one of the processes used to evaluate the validity of the study variables. If the statements on the questionnaire can reveal something that is measured by the questionnaire, then the questionnaire is legitimate. To be able to determine whether or not each question item is valid by examining the total correlation value for the rectified item. If each question item's r-count value exceeds the r-table value, the question item is considered valid (Suharsimi, 2006b).

#### 2. Reliability test

The reliability test is used to determine the consistency of the measuring instrument used and shows the extent to which the measuring instrument can be trusted and relied upon in conducting research. Measuring the level of reliability of a research variable can be seen from the statistical results of Cronbach's alpha ( $\alpha$ ), a research variable used is said to be reliable if it gives a Cronbach's alpha value greater than 0.60 (Tarigan & Sanjaya, 2013).

### Classic Assumption Test

#### 1. Heteroscedasticity Test

The heteroscedasticity test is one of the tests to determine whether there is an inequality of variance in a regression model from the residuals in one observation to another (Priyatno, 2011). The heteroscedasticity test in this study used the scatter plot method by looking at the scatter plot pattern of the regression plot. If the dots on the scatter plot spread in an irregular pattern above and below zero on the Y axis, then there is no heteroscedasticity problem (Kalesaran et al., 2014).

### Hypothesis Test

#### 1. Coefficient of Determination Test ( $R^2$ )

The coefficient of determination test is carried out to measure the extent to which the ability of the independent variable explains the dependent variable. The coefficient of determination test is expressed as a percentage whose value ranges from  $0 < R^2 < 1$ , if the  $R^2$  value obtained is close to 1, then it shows a stronger influence (Mulyani & Saputri, 2019).

#### 2. t-Test

The t-test is one of the individual partial regression coefficient tests used to determine the independent variables affecting the dependent variable (Sujarweni, 2015). To determine the validity of the hypothesis, several criteria are applied. If the t count produced is more significant than the t table, then  $H_0$  is rejected, and  $H_a$  is accepted, indicating that the dependent variable influences the independent variable (Lussy, 2018).

## RESULTS AND DISCUSSIONS

### Instrument Test Results

#### 1. Validity Test Results

The validity test is one of the procedures used to measure whether or not the research variables used are valid. The questionnaire can be valid if the closing of the questionnaire can reveal something that is measured by the questionnaire. To be able to find out whether each question item is valid or not by looking at the total correlation value of the corrected items. If each question item has an r-count value more significant than the r-table value, then the question item can be valid (Suharsimi, 2006a).

**Table 1.** Validity test results

Variable	Inquiry Code	Corrected Item-Total Correlation	r Table	Information
On Job Training Method	X <sub>1.1</sub>	0.807	0.334	Valid
	X <sub>1.2</sub>	0.800	0.334	Valid
	X <sub>1.3</sub>	0.776	0.334	Valid
	X <sub>1.4</sub>	0.767	0.334	Valid
Off Job Training Method	X <sub>2.1</sub>	0.743	0.334	Valid
	X <sub>2.2</sub>	0.817	0.334	Valid
	X <sub>2.3</sub>	0.727	0.334	Valid
	X <sub>2.4</sub>	0.797	0.334	Valid
Competency Improvement	Y <sub>1.1</sub>	0.877	0.334	Valid
	Y <sub>1.2</sub>	0.855	0.334	Valid
	Y <sub>1.3</sub>	0.885	0.334	Valid
	Y <sub>1.4</sub>	0.815	0.334	Valid

Source : Primary Data Processed 2022

Based on the table above, it can be seen the results of the validity test of each variable, including the on-job training method variable with 4 statements having an r-count value between 0.767 to 0.807 greater than the r-table value, which is equal to 0.334, the training method variable is off-job training with 4 statements has an r-count value between 0.727 to 0.817 which is greater than the r-table value of 0.334 and the employee competency improvement variable with 4 statements has an r-count value between 0.815 to 0.885 greater than the r-table value that is equal to 0.334.

Based on these results, all statement items on this research variable can be valid because they have an r-count value greater than the r-table value, so all statement items on this research variable can be used. The way to get the r-table value is  $df = n - 2$ , where the number of respondents is 35 respondents, so  $35 - 2 = 33$ , then the r-table value obtained is 0.334.

#### 2. Reliability Test Results

The reliability test is used to determine the consistency of the measuring instrument used. It shows the extent to which the measuring instrument can be trusted and relied upon in conducting research. Measuring the level of reliability of a research variable can be seen from the statistical results of Cronbach's alpha ( $\alpha$ ), a research variable used is said to be reliable if it gives a Cronbach's alpha value greater than 0.60 (Tarigan & Sanjaya, 2013).

**Table 2.** Reliability test results

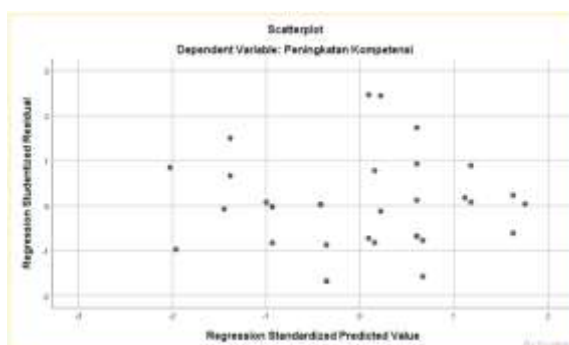
Variable	Cronbach's Alpha	Cronbach's Alpha standard	Decision
<i>On Job TrainingMethod</i>	0.815	0.60	Reliable
<i>Off Job TrainingMethod</i>	0.821	0.60	Reliable
Competency Improvement	0.834	0.60	Reliable

Source : Primary Data Processed 2022

Based on the table above, it can be seen that the reliability test results obtained Cronbach's alpha values for each variable, namely the on-job training method of 0.815, the off-job training method of 0.821, and the increase in employee competence of 0.834. The Cronbach's alpha value obtained from each research variable is greater than the comparative Cronbach's alpha value, so it can be concluded that all the variables used in this study are declared reliable and have good measurement consistency.

**Classic Assumption Test Results**

1. Heteroscedasticity Test Results



**Figure 1.** Heteroscedasticity results

The picture above shows that the points in the scatter plot graph spread in an irregular pattern above and below zero on the Y-axis or do not form a specific pattern. This shows that there is no heteroscedasticity in the regression model.

**Hypothesis Test Results**

1. Coefficient of Determination Test Results ( $R^2$ )

The coefficient of determination ( $R^2$ ) value ranges from  $0 < R^2 < 1$ . The small value of  $R^2$  means that the ability of the independent variable to explain variations in the dependent variable is very limited. Conversely, if the value of  $R^2$  is close to 1, the independent variable provides all the information needed to predict the dependent variable.

**Table 3.** Coefficient of determination test results

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	0.897 <sup>a</sup>	0.805	0.792	0.287

Source : Primary Data Processed 2022

Based on the table above, it can be seen that the results of the coefficient of determination test ( $R^2$ ) obtained an R-square value of 0.805, which means that the variability of the independent variables can explain the dependent variable of 80.50% or this value states that the variables of on-

job training methods and training methods off job training affects increasing employee competency by 80.50%. Other variables influence the remaining 19.50%.

## 2. t-Test Results

Hypothesis testing with the t-test is used to determine which partial hypotheses are accepted. The first hypothesis ( $H_1$ ) states that the job training method positively and significantly increases employee competency.

**Table 4.** Hypothesis test results on-job training training method to improve employee competence

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.027	.679		2.097	.000
	On-Job Training Method ( $X_1$ )	.840	.084	.868	10.054	.000

Source : Primary Data Processed 2022

Based on the table above, it can be seen that the results of the first hypothesis test ( $H_1$ ) obtained a t-value of 10,054, greater than the t-table value of 1,692. Thus the first hypothesis proposed can be accepted; namely, the job training method has a positive and significant effect on increasing employee competence. This follows the results of the coefficient of determination ( $R^2$ ) test that has been carried out, where the on-job and off-job training methods influence an 80.50% increase in employee competence.

The second hypothesis ( $H_2$ ) states that the off-job training method positively and significantly increases employee competence.

**Table 5.** Hypothesis test results off-job training training method to improve employee competence

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.443	.210		2.414	.000
	Off-Job Training Method ( $X_2$ )	.881	.087	.869	10.085	.000

Source : Primary Data Processed 2022

Based on the table above, it can be seen that the results of the second hypothesis test ( $H_2$ ) obtained a t value of 10,085, greater than the t table value of 1,692. Thus the second hypothesis proposed can be accepted; namely, the off-job training method has a positive and significant effect on increasing employee competency. This is consistent with the test results for the coefficient of determination ( $R^2$ ) that has been carried out, where the on-job and off-job training methods influence an 80.50% increase in employee competence.

## CONCLUSION

The research that has been done aims to analyze the effect of job and off-job training methods on increasing employee competence. Based on the results of the research that has been done, the following conclusions can be drawn: (1) Based on the results of data analysis that has been carried out in the first hypothesis ( $H_1$ ), the t-count value of 10,054 is greater than the t-table value, which is 1,692. In the second hypothesis ( $H_2$ ), the t value obtained is 10,085 greater than the t table value, which is 1,692, which means that the on-job and off-job training methods have a positive and significant effect on increasing employee competence. (2) The R-square value obtained is 0.805,

which states that the variables of on-job training methods and off-job training methods affect increasing employee competency by 80.50%, and other variables influence the remaining 19.50%.

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