# Effect of Recruitment, Selection and Employment Training Process on Employee Performance the Fitter Department of PT NOV Profab

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Abstract:     This study aims to examine the effect of the Recruitment, Selection, and Job Training process on Employee Performance at the Fitter Department of PT NOV Profab. This study uses quantitative methods. The population of this study consisted of employees of the PT NOV Profab assembly department with a total sample of 73 people. The sampling technique used the Accidental Sampling (Convenience Sampling) method through a questionnaire given directly to the respondents. The data analysis method used is a descriptive analysis using multiple linear regression, classical assumption test, t-test, and F test with a significance level of 0.05 and the coefficient of determination. The results of the study prove that the variables of recruitment, selection, and work training at the same time have a positive and significant impact on the variable performance of PT NOV Profab's fitter department employees and the independent variable that has the greatest influence on the performance variable of PT NOV Profab's fitter department employees is recruitment because it shows the Standardized Coefficients Beta value, which is greater than the other independent variables.

## 1 INTRODUCTION

The factor that supports the company's success is Human Resource Management, an approach to human management based on four basic principles. First, human resources are the most important assets owned by an organization, while effective management is the key to an organization's success. Second, this success is very likely to be achieved if the rules or policies and procedures related to the company's people are interconnected, and contribute to the achievement of company goals and strategic planning. Third, the culture and values of the company, organizational atmosphere, and managerial behavior that comes from that culture will have a significant influence on the best achievement results. Fourth, HR management is related to integration, making all members of the organization members, and working together to achieve common goals (Hamali, 2016).

The most essential Human Resources (HR) activity is recruiting and selecting prospective new employees. The process of recruiting and selecting employees is a stage that can affect the efficiency and productivity of the company. In addition, the recruitment and selection process is very it is important to manage prospective employees who come from different backgrounds, skills, and abilities to hiring employees with skills and types of work that match their abilities.

This research is focused on PT NOV Profab, a manufacturing company in the field of steel equipment construction with international market orientation and experience in the manufacture of pressure vessels, piping systems, heavy constructions, anchoring systems, and modular processes. for oil and gas production. PT NOV Profab recruits new employees based on the Request Manpower Supply. Each company has its recruitment objectives, which are related to what has been made by the workforce planner so that what the recruiting party wants to do must be aligned and adjusted to the needs of the workforce. For example, in terms of the time required, the amount required and the qualifications required.

One of the departments in the production team is the fitter department. Fitter is an expert in the fabrication, installation of production, and construction equipment, as well as an expert in the repair or maintenance of industrial machines. In the fabrication and construction project at PT NOV Profab, there are 3 (three) types of fitters, namely

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fitter structure, fitter piping, and fitter's vessel. Fitter structure is the expertise that people have in fabricating activities from metal and steel starting from a drawing, marking, adjustment, and erection or fit-up techniques and is more directed to plate making. Meanwhile, a piping fitter is a partner for a welder. The fit-up is carried out first by a piping fitter before a welder performs a series of welding on a pipe. Fitter's vessel is to efficiently fabricate various types of ASME-coded pressure vessels safely by company quality standards.

To improve the performance of PT NOV Profab employees, company leaders are required to be able to implement human resource management (HR). The achievement of an organization's objectives is generally determined by the presence of high-performing human resources (HR). PT NOV Profab has an excellent and comfortable work environment that facilitates good relations between workers. A good working environment can reduce fatigue and a sense of burden for employees at work. The appearance of problems led the company to create a program to maintain, maintain and improve the quality of human resources (HR). Training activities need to be carried out to support these programs. Job training is the right solution to build human resource (HR) capabilities which are expected to help face the challenges of corporate competition. Job training is expected to be able to improve employee skills which will ultimately affect employee work results. Training can also minimize the mistakes that have been made by employees, thereby reducing the decline in employee performance in the future.

The foundation of this study was to identify the method of recruitment, selection, and job training that affects worker performance and to identify the main weight factors behind worker performance in the assembly department.

# 2 LITERATURE REVIEW

## 2.1 Recruitment

Recruitment is a company or organization's process to attract potential employees with skills and qualifications related to the company or organization's needs (Mardianto, 2014).

## 2.2 Selection

Selection is the process of using company regulations to select employees who meet the available work standards (Danang, 2012).

## 2.3 Work Training

That the company plans to provide training and development for employees to learn various job skills and attitudes (Daft, 2012).

## 2.4 Employee Performance

Performance is the result or level of success of an individual as an entire during a certain period in carrying out assignments compared to different possibilities, such as work measures, targets, or criteria that have been already agreed upon (Rivai & Basri, 2016).

In a company, filling vacancies caused by growth, changes in structure and function, or employee turnover requires the search for people who can meet the standard requirements for vacant positions from internal and external sources. Therefore, one aspect of the selection decision is the decision on where to recruit.

The company will pay great attention to the selection process because it is the initial step to build the quality of the company so that the results of a careful selection can be beneficial for both employees and the company. Performance has become the most frequently used concept in the framework of driving the success of companies or human resources. Training is needed in the company because the program can help improve the abilities and skills of employees.

The importance of training as an effort to develop the intellectual abilities and personality of employees. Therefore, every company that wants to develop, training its employees must receive greater attention to improve the performance of these employees. Efforts to improve performance with quality human resources are training programs. Lack of attention to employee job training will hamper employee performance and also work productivity will be low, so a training program is needed in order to raise the level of perseverance and discipline in carrying out an activity so as to increase employee performance.
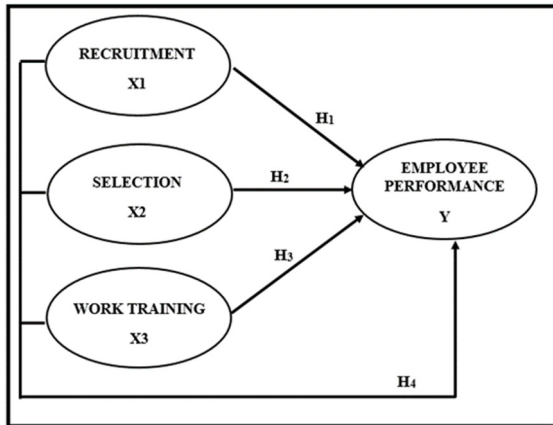
(Source: Data Processing Results, 2020)

Figure 2.1: Framework for Thinking.

# 3 METHODOLOGY

## 3.1 Populations and Samples

The populace in this consider were workers of the fitter department at PT NOV Profab divided into three work positions, specifically fitter structure, fitter piping, and fitter vessel, which were shaded by 20 foremen. The sample used in the study were workers who had attended OHC (Over Head Crane) job training, totalling 73 people.

## 3.2 Methods of Data Collection

The quantitative methodology is used as a research process that generates data in the form of numbers and is generally analysed using descriptive and inferential statistics (Silaen, 2018). This study uses a questionnaire survey technique, which is a data collection tool.

The research method used is descriptive analysis with Multiple Linear Regression, Classical Assumption Test, t-test, and F Test with a significance level of 0.05 and the Coefficient of Determination.

# 4 DATA ANALYSIS AND INTERPRETATION

## 4.1 Validity Test

The following is a table of validity test results foreach variable used in this study, which can be seen inside the taking after table:

Table 4.1: Validity Test Results.

| Variable | Validity | | | |
|---|---|---|---|---|
| | Items | r count | r table | Decision |
| Recruitment (X1) | X1.1 | 0,560 | 0,2303 | *Valid* |
| | X1.2 | 0,636 | 0,2303 | *Valid* |
| | X1.3 | 0,662 | 0,2303 | *Valid* |
| | X1.4 | 0,616 | 0,2303 | *Valid* |
| | X1.5 | 0,707 | 0,2303 | *Valid* |
| | X1.6 | 0,830 | 0,2303 | *Valid* |
| | X1.7 | 0,543 | 0,2303 | *Valid* |
| | X1.8 | 0,544 | 0,2303 | *Valid* |
| Selection (X2) | X2.1 | 0,652 | 0,2303 | *Valid* |
| | X2.2 | 0,698 | 0,2303 | *Valid* |
| | X2.3 | 0,768 | 0,2303 | *Valid* |
| | X2.4 | 0,798 | 0,2303 | *Valid* |
| | X2.5 | 0,689 | 0,2303 | *Valid* |
| | X2.6 | 0,663 | 0,2303 | *Valid* |
| Work Training (X3) | X3.1 | 0,566 | 0,2303 | *Valid* |
| | X3.2 | 0,686 | 0,2303 | *Valid* |
| | X3.3 | 0,630 | 0,2303 | *Valid* |
| | X3.4 | 0,677 | 0,2303 | *Valid* |
| | X3.5 | 0,600 | 0,2303 | *Valid* |
| | X3.6 | 0,704 | 0,2303 | *Valid* |
| | X3.7 | 0,728 | 0,2303 | *Valid* |
| | X3.8 | 0,683 | 0,2303 | *Valid* |
| Employee Performance (Y) | Y.1 | 0,588 | 0,2303 | *Valid* |
| | Y.2 | 0,711 | 0,2303 | *Valid* |
| | Y.3 | 0,752 | 0,2303 | *Valid* |
| | Y.4 | 0,498 | 0,2303 | *Valid* |
| | Y.5 | 0,642 | 0,2303 | *Valid* |
| | Y.6 | 0,688 | 0,2303 | *Valid* |
| | Y.7 | 0,771 | 0,2303 | *Valid* |
| | Y.8 | 0,714 | 0,2303 | *Valid* |

(Source: SPSS Data Processing version 21, 2021)

Based on Table 4.1 above, test the validity of the variable indicators of recruitment statements (X1), selection (X2), job training (X3) and employee performance (Y) which were tested with SPSS version 21, it can be seen that the r-value counts all explanation items/indicators more prominent than r table of 0.2303 so it can be said that all statements are

valid and meet the requirements to be utilized as a measuring instrument.

## 4.2 Reliability Test

The following is a table of reliability test results for each variable used in this study, shown in the table below:

Table 4.2: Reliability Test Results.

| Variable | Alpha Cronbach | Standard Value | Decision |
|---|---|---|---|
| Recruitment (X1) | 0,794 | 0,60 | Reliable |
| Selection (X2) | 0,806 | 0,60 | Reliable |
| Work Training (X3) | 0,814 | 0,60 | Reliable |
| Employee Performance (Y) | 0,820 | 0,60 | Reliable |

(Source: SPSS Data Processing version 21, 2021)

Based on the results of the reliability test in Table 4.2, it can be observed that all the statements / indicators for the variables recruitment (X1), selection (X2), job training (X3), and employee performance (Y) they have Cronbach's alpha values. Greater than 0.60, so that all statements / indicators are reliable.

A classical assumption test is performed to test whether the regression model used in this study is feasible or not. You need to make classical assumptions. Classical assumption test used is the multiple linear regression test, the normality test, the multicollinearity test, and the heteroscedasticity test.

## 4.3 Multiple Linear Regression

Multiple linear regression analysis is an analysis that measures the effect of two or more independent variables on a dependent variable.

The multiple linear regression formula is as follows:

$$Y = 6.487 + 0.297X1 + 0.320X2 + 0.257X3 + e \quad (1)$$

The regression coefficients result from the results of this multiple linear regression calculation as follows:

1) The constant of 6.487 means that recruitment (X1), selection (X2), job training (X3) are 0, then employee performance (Y) is 6.487.

2) Recruitment (X1) has a regression coefficient value of 0.297 and is positive. That is, if the independent variable has a fixed value or does not change, the increase in an employee performance unit increases by 0.297.

3) Selection (X2) has a regression coefficient of 0.320 and is positive. That is, if the independent variable has a fixed value or does not change, the increase in one unit of employee performance increases by 0.320.

4) Job training (X3) has a regression coefficient of 0.257 and is positive, which means that if the explanatory variable is constant or invariant, an increase by one unit of worker productivity will increase by 0.257.

To find out which independent variables between recruitment (X1), selection (X2), and job training (X3) have the most significant influence on employee performance variables (Y), the Standardized Coefficient Beta test is used by looking at the highest test results. It can be seen that the variable that has the most significant influence is the recruitment variable (X1) with the Standardized Coefficient Beta value, which is greater than the other independent variables, which is 0.363.

## 4.4 Normality Test

The normality test is a test that aims to evaluate the normality of the data distribution to find out whether the data distribution is normally distributed or not. The test of normality of the data used in this study is the Kolmogorov-Smirnov test. According to Sunariah (2014), it is provided that the distribution of the data is usually distributed, that is when the value of the asymptotic significance (2-tailed) is greater than the alpha value of 0.05.

The results of the normality test in this study are shown in the following table:

Table 4.3: Normality Test Results.

| One-Sample Kolmogorov-Smirnov Test | | |
|---|---|---|
| | | Unstandardized Residual |
| N | | 73 |
| Normal Parameters[a,b] | Mean | .0000000 |
| | Std. Deviation | 1.71591779 |
| Most Extreme Differences | Absolute | .061 |
| | Positive | .061 |

| | | |
|---|---|---|
| | Negative | -.039 |
| Kolmogorov-Smirnov Z | | .523 |
| Asymp. Sig. (2-tailed) | | .947 |
| a. Test distribution is Normal. | | |
| b. Calculated from data. | | |

(Source: SPSS Data Processing version 21, 2021)

## 4.5 Multicollinearity Test

The multicollinearity test is used to test whether the independent variables are correlated with each other or not. The existence of a correlation is called multicollinearity (Ghozali, 2011). Multicollinearity can be seen within the tolerance value and the Variance Inflation Factor (VIF). If the tolerance value is> 0.1 and the VIF value & lt; 10 means there is no multicollinearity. The results of the multicollinearity test can be found in the following table:

Table 4.4: Multicollinearity Test Results.

| Variable | *Tolerance* | *VIF* |
|---|---|---|
| **Recruitment (X1)** | **0,753** | **1,328** |
| **Selection (X2)** | **0,917** | **1,091** |
| **Work Training (X3)** | **0,729** | **1,371** |

(Source: SPSS Data Processing version 21, 2021)

## 4.6 Heteroscedasticity Test

This test is used to test whether the variance of the regression error depends on the values of the independent variables. The heteroscedasticity test in this consideration uses the glacier test, to be more precise, returning the absolute value of the residual on the independent variable when the value of t counts < t > 0.05.

To see if heteroscedasticity can be seen in the following table:

Table 4.5: Heteroscedasticity Test Results.

| Variable | Sig. |
|---|---|
| **Recruitment (X1)** | **0,411** |
| **Selection (X2)** | **0,364** |
| **Work Training (X3)** | **0,852** |

(Source: SPSS Data Processing version 21, 2021)

Based on Table 4.5, it can be observed that the significance of the variables recruitment, selection, and job training is more significant than 0.05. Thus,

it can be said that there are no symptoms or problems of heteroscedasticity in the regression model of this study.

## 4.7 T-test

A t-test is required to partially test (o) the significance of the influence of the independent variable (X) on the dependent variable (Y). The criteria to tolerate or reject the hypothesis are:

- If t-count < t-table, until H0 is acknowledged, Ha is rejected, which influences significantly.

- If t-count < t-table, until H0 is rejected, Ha is acknowledged, which influences significantly.

To find the value of t-table can be searched using the formula for the value of df (degree of freedom) as follows:

$$df = (\ n - k\ ) \qquad\qquad (2)$$
$$df = (\ 73 - 3\ )$$
$$df = (\ 70\ )$$

With a significance level of =5%, so that the t-value is 1.994. So the partial effect in this study can be seen in the following table:

Table 4.6: T Test Results.

| Coefficients[a] | | | | | |
|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 6.487 | 3.120 | | 2.079 | .041 |
| | Recruitment | .297 | .077 | .363 | 3.842 | .000 |
| | Selection | .320 | .084 | .327 | 3.822 | .000 |
| | Work Training | .257 | .083 | .298 | 3.101 | .003 |
| a. Dependent Variable: Kinerja | | | | | |

(Source: SPSS Data Processing version 21, 2021)

Table 4.6 shows the results of the t-test with the following explanation:

1) Effect of Recruitment on Worker Performance

Based on the results of the t-test (partial), the t-count value of recruitment (X1) is 3.842 > 1.994 and sig value is 0.00 < 0.05. It can be expressed

that the recruitment variable (X1) features an upbeat and most significant impact on the worker performance variable based on the results of previous research conducted by Andrian, Utami, & Mayowan (2017), that found that "recruitment has a significant positive effect on performance".

2) Effect of Selection on Worker Performance

Based on the results of the t-test (partial) the t-count selection value (X2) is 3.822 > 1.994 and sig value is of 0.00 < 0.05. It can be expressed that the selection variable (X2) features an upbeat and most significant impact on the worker performance variable based on the results of previous research conducted by Andrian, Utami, & Mayowan (2017), that choice has a significant positive effect on performance.

3) The Impact of Work Training on Worker Performance

Based on the results of the t-test (partial) the t-count value of work training (X3) is 3.101 > 1.994 and the sig value is 0.00 < 0.05. It can be expressed that the work training variable, which is based on the results of previous research conducted by Dwihatmojo, Nelwan, & Kawet (2016), states that job training has an effect on employee performance.

## 4.8 F Test

The F test was used to test the significance of the influence of the independent variable (X) on the dependent variable (Y) at the same time. The results of the F test in this study are shown in the following table:

Table 4.7: F Test Results.

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 245.567 | 3 | 81.856 | 26.642 | .000[b] |
| | Residual | 211.995 | 69 | 3.072 | | |
| | Total | 457.562 | 72 | | | |
| a. Dependent Variable: Kinerja | | | | | | |
| b. Predictors: (Constant), Work Training, Selection, Recruitment | | | | | | |

(Source: SPSS Data Processing version 21, 2021)

Based on Table 4.7 above, the F count value is 26,642 with a Sig value. 0.000. The value of the F table can be found using the formula for the value of df (degree of freedom) with a significance level of 5% of 5% as follows:

$$\text{df1 (numerator)} = k-1 \qquad (3)$$
$$= 4-1$$
$$= 3$$

$$\text{df2 (denominator)} = n-k \qquad (4)$$
$$= 73-4$$
$$= 69$$

So that the value of F table is 2.74.

Based on the table above, the calculation results obtained with the value of F count 26.642 > F table 2.74 and sig value is 0.00 < 0.05. This appears that there is an upbeat and significant impact between recruitment, selection, and job training on the performance of PT NOV Profab's fitter department employees.

## 4.9 Coefficients of Determination Test

It is required to test the coefficient of determination (R2) to calculate the contribution of all the independent variables to the variance of the dependent variable, which can be observed in the following table:

Table 4.8: Coefficient of Determination Test Results.

| Model Summary | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .733[a] | .537 | 517 | .753 |
| a. Predictors: (Constant), Pelatihan Kerja, Seleksi, Rekrutmen | | | | |

(Source: SPSS Data Processing version 21, 2021)

Based on Table 4.8 above, the results of the Summary Model show that the independent variables of recruitment, selection, and job training contribute 53.7% to the dependent variable of employee performance. The rest is explained by other variables that do not fit in this study.

# 5 DISCUSSION

This discussion is examined to examine and analyze how the influence of the dependent variable, namely recruitment, selection, and job training on the dependent variable, namely the performance of PT NOV Profab's fitter department employees. The results of the hypothesis test demonstrate that:

1. The Effect of Recruitment on Employee Performance

Based on the results of the hypothesis test, there is a significant positive effect between hiring on the performance of employees in the fitter department of PT NOV Profab Indonesia. This is supported by the average result (mean) in the description of the answers to the recruitment variable which shows a high mean value of 4.33. From these results, it can be seen that the company has a good recruitment process so that it can improve employee performance, such as employees of the fitter department who can understand their job descriptions well. However, the recruitment process must be ensured so that it can be carried out without being complicated or the process is not too long by measuring "Time to Hire" such as dividing the recruitment process from CV screening to interviews.

2. The Effect of Selection on Employee Performance

According to the results of the hypothesis test, there is a significant positive effect between the selection on the performance of the employees of the fitter department of PT NOV Profab Indonesia. This is supported by the average result (mean) in the description of the answers to the selection variable which shows a high mean value of 4.36. From these results, it can be seen that the company has a good selection process so that it can improve employee performance, such as employees of the fitter department having a good health record before starting work.

3. The Effect of Job Training on Employee Performance

According to the results of the hypothesis test, there is a significant positive effect between job training on the performance of employees in the fitter department of PT NOV Profab Indonesia. This is supported by the average result (mean) on the description of the answers to the job training variable which shows a high mean value of 4.40. From these results, it can be seen that the company has a good job training process so that it can improve employee performance, such as employees of the fitter department who feel their productivity has increased after attending job training. However, in the job training process, it must also be ensured that the facilities and infrastructure are more adequate when they want to be used. With the hope that after participating in job training, employees can reduce the rate of work accidents at work.

4. The Effect of Recruitment, Selection and Job Training on Employee Performance

Based on the results of the hypothesis tests, which are interpreted (simultaneously) through recruitment, selection, and job training, this has a significant positive influence on the performance of employees in PT NOV Profab Indonesia's fitter department employees. Test results show that recruiting, selection, and training processes can improve employee performance. This means that the company must ensure that the process can have a significant positive effect and that there are other variables outside of this study that also affect the performance of the fitter department employees.

5. Which variable has the most influence on Employee Performance

From the results of the Standardized Coefficient Beta Test, the results for the recruitment variable of 0.363, the selection variable of 0.327, and the job training variable of 0.298. From these results, it can be seen that the attitude variable has the greatest impact on employee performance, with a higher score than other independent variables.

# 6 CONCLUSION

Based on the results of research on recruitment, selection, and job training to influence the performance of employees in the fitter department of PT NOV Profab Indonesia. So, the conclusions of this study are as follows:

1. The recruitment process has a positive and significant impact on the performance of PT NOV Profab Indonesia's fitter department employees. If the company wants the performance of its

employees to be higher, the quality and effectiveness of the recruitment process will always be improved.

2. The selection process has a positive and significant impact on the performance of PT NOV Profab Indonesia's fitter department employees. If the company wants the performance of its employees to be higher, then the selection process will always be improved in terms of ability and quality.

3. The job training process has a positive and significant effect on the performance of the fitter department employees of PT NOV Profab Indonesia. If the company wants the performance of its employees to be higher, then the job training process is constantly improving their skills and expertise.

4. The process of recruitment, selection, and job training have a positive and significant effect on the performance variables of PT NOV Profab Indonesia's fitter department employees. With the results of these tests, there are other variables outside of this study that can affect the performance of the fitter department employees.

5. The recruitment process has the greatest influence on the performance of PT NOV Profab Indonesia's fitter department employees. This can be seen from the value generated from the Standardized Coefficients Beta test by looking at the highest test results.

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