Effect of Education Level and Job Placement on Employee Work Productivity at Regional Drinking Water Company Tirta Bhagasasi Rawa Lumbu Bekasi Branch

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Abstract
The purpose of the study was to determine the Effect of Education Level and Job Placement on Employee Work Productivity at the Tirta Bhagasasi Regional Drinking Water Company (PDAM) Rawa Lumbu Bekasi Branch. This research uses quantitative methods. The sampling technique used is a saturated sampling technique (census). The sample used was 42 people. Data collection techniques by conducting interviews, observations, and dissemination of questionnaires. For data analysis using PLS (Partial Least Square), PLS is one of the variant-based SEM statistical methods designed to solve multiple regressions when there are specific problems with the calculated data using the SmartPLS 3.3.3 program.

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I. Introduction
One of the factors affecting the success rate of an enterprise is the work productivity of its employees. The work productivity of employees is the result of work
in quality and quantity achieved by employees in carrying out their duties in accordance with the responsibilities assigned to them.

Therefore, employees who have a high level of work productivity are needed which can be seen from the level of education and placement of their job position positions so that production can be achieved in accordance with the target. (Sinungan, 2017:12) productivity is a measure of the quality of work, the quantity of work and the timeliness of the work that has been done, taking into account the cost of the resources used to do the work.

The results of interviews with the Human Resource Department (HRD) and observations made directly at the company, there are problems with employee work productivity, it can be seen from the production results of PDAM is now able to serve clean water needs for 9,662 customers. Of the 260 liters per second produced, only about 200 liters per second have been sold. That is, there is still an excess or over capacity of about 60 liters per second. This excess capacity, still able to serve new customers of about 5,000 customers.

It's just that what happened at this time, because of the limited transmission network, so the production capacity has not sold all of them. It became the big task of PDAM how to build a new pipanization network to serve about 5,000 new customers with the occurrence of over capacity of 60 liters per second. From the results of the data obtained by a company's progress, its work productivity can be measured, when a company is able to achieve the targets it has set, including targets and the achievement of production realization that it expects.

PDAM Tirta Bhagasasi has set targets and realized the achievement of production to be achieved every month. It can be seen from the target diagram and realization based on employees of the IPA section (Processing Plant Air) in 2021.

Figure 1.1
Target Data and Realization of Production Achievement of PDAM Tirta Bhagasasi
Rawa Lumbu Branch
Data target and realization of production every month for one year experienced instability. The highest realization occurred in February and August as much as 98% where this number was almost perfect like the target given by the company, while in May, August and December the realization of production was at the lowest level, which was at 87%, which means that the difference with the company's target is quite far, namely 13% in 2021.

Therefore, there are several factors to support the increase in employee work productivity apart from bound indicators, namely there are factors of education level as well as the placement of employees. Employees are assets that play an important role in the company, thus it is necessary to pay attention to the background of their level of education because the level of education that a person has will affect his mindset, attitudes and behavior and it is believed that highly educated employees are higher in productivity as well as their productivity.

The importance of education is not only felt by employees, but also an advantage for a company. The education that a person has will also affect his work productivity, because with education a person has the capital to do productivity in a job. According to (Devitasari, 2016: 56) said that education has an important measurement and role in increasing labor productivity, because increasing labor productivity that relies on education basically aims to improve human labor capabilities. Measurement of education level (Tirtahardja, 2016: 53) using indicators of education level, suitability of majors, competencies. The level of education and the suitability of education shows that the longer / higher the level of education that it completes, it will have great potential for employee performance as well in terms of productivity.
According to G.R Terry and Hasibuan (2017:2), placement must be based on a predetermined job description and job specification and guided by the principle of "Placement of the right people in the right place and placement of the right person in the right position" or "The right man in the right place and the right man behind the right job." The principle of proper placement must be implemented consequently so that employees can work according to their respective expertise. This will lead a company to optimal work results because there is a positive correlation between employee placement and increased work productivity.

The right employee placement process is not enough to support employee performance, but requires experience to support the work. Work experience is the level of knowledge as well as skills of a person that can be measured from the length of a person's service. So that the longer a person works, the more experience he has for his work. Therefore, the factors that affect a person's productivity at work are length of work (Pamungkas, 2017: 225). The longer the working life of a laborer, the skills and ability to do work should increase.

II. Material and Method

The data analysis technique in the study used was the Structural Equation Modelling (SEM) data analysis method which used SmartPLS 3.3.3 software which was run with computer media. Analisis PLS-SEM usually consists of two sub-models, namely measurements models or often called outer models and structural models (structural models) or often called inner models. The measurement model shows how manifest variables or observed variables present the measured latent variables. Meanwhile, structural models show the strength of estimation between latent or construct variables (Ghozali and Latan, 2020: 7).

Evaluation of the measurement model (outer model) is used to test validity and reliability. Outer model is how each indicator block relates to a latent variable. The measurement model describes the relationship between a variable and the measurement item that measures it. The equations for the reflective model are:

\[ X = \Lambda x + \delta \]
\[ Y = \Lambda y + \epsilon \]
Where: X and Y = manifest variables/indicators for exogenous (ξ) and endogenous (η) latent constructs

Λx and Λy = loading matrices describing simple regression coefficients connecting latent variables and their indicators.

eχ and γ = residual measurement error (measurement model). ε

Inner model analysis is also known as structural analysis of models, which aims to predict relationships between latent variables (Ghozali, 2015: 73). According to Haryono (2017: 67) the first step is to evaluate the structural model by looking at the significance of the relationship between constructs/variables. This can be seen from the path coefficient that describes the magnitude of the value of the relationship between the constructs. Structural models can be evaluated by using R-squares for dependent constructs.

In assessing the signification of the influence between variables, it is necessary to carry out a bootstrapping procedure. The bootstrapping procedure uses the entire original sample to resample it again. In the bootstrapping resampling method, the significance value used (two-tailed) can be seen from the T-statistical value and the probability value (P-Values). For hypothesis testing, namely by using a statistical value, for an alpha value of 5% or (0.05) the statistical t value used is 1. So the criteria for acceptance and rejection of the hypothesis are that Ha is accepted and H0 is rejected when the t-statistic >1. To reject and accept the hypothesis using probability then Ha is accepted if the value of p<0.05

III. Results and Discussion

In hypothesis testing, the results of correlations between constructs are measured by looking at path coefficients and their significance levels which are then equated with the research hypothesis contained in the previous chapter. The level of significance used in this study was 5% = 0.05. After data processing using SmartPLS 3.3.3 with the initial stages of calculating the PLS algorithm, the next step is the bootstrapping of the model.

Figure 1.1 Boastrapping Analysis Results
To assess the significance of the influence of standards between variables, a bootstrapping procedure is performed. The bootstrapping procedure uses the entire original sample to resample it again. To find out whether a hypothesis is accepted or rejected can be done by paying attention to the significance values between constructs, t-statistics and p-values. In the bootstrapping resampling method in this study, the hypothesis is accepted if the significance value used (two tailed) t-values is greater than 1.697 and or the p-values value is less than 0.05, then Ha is accepted and Ho is rejected and vice versa. Statistical test results to test the significance of latent variable indicators on the second order construct were obtained based on data processing by looking at path coefficients.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Std.Beta</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDE)</th>
<th>T Statistics (O/STD)</th>
<th>Bias 2.5%</th>
<th>97.5%</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(X1 -&gt; Y)</td>
<td>0.305</td>
<td>0.310</td>
<td>0.083</td>
<td>3.667</td>
<td>0.005</td>
<td>0.112</td>
<td>0.452</td>
</tr>
</tbody>
</table>
The path coefficient results showed that all items were significant to the construct with a t-statistical value > 1.697 and a p-value < 0.05. Thus it can be said that indicators X1.1, X1.2, and X1.3 are the constituents of the Education Level (TP) variable, indicators X2.1, X2.2, and X2.3 are the constructs that form the Work Placement (PK) variable and the indicators Y1.1 and Y1.2 are the constructs that form the Employee Work Productivity (PKK) variable.

The number of the coefficient of education level (β1) 0.305 with a significance level of 0.000 (smaller than α = 0.05) then it can be said that it partially affects the work productivity of employees. The number of the coefficient of job placement (β2) 0.688 with a significance level of 0.000 (smaller than α = 0.05) then it can be said that job placement has a partial effect on employee work productivity.

Based on the results of the data processing above, the education level variable obtained a t-count value of 3.667 greater than t table 1.697 (3.667 > 1.697) with a significance of 0,000 less than 0.05 (0.000 < 0.05), then Ho was rejected and Ha was accepted. Thus hypothesis one is acceptable, namely that the level of education has a significant positive effect on employee work productivity. And the job placement variable obtained a value of t – a count of 8,571 greater than t table 1,697 (8,571 > 1,697) with a significance figure of 0.000 less than 0.05 (0.000 < 0.05), then Ho was rejected and Ha was accepted. Thus, hypothesis two can be accepted, namely that job placement has a significant positive effect on the work productivity of employees of PDAM Tirta Bhagasasi Rawa Lumbu Bekasi Branch.

The results of the hypothesis test show together that the level of education has a positive and significant effect on employee work productivity, which means that if the variables of education level and work placement increase, the results of employee work

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X1 -> X1.1  0.786  0.784  0.067  11.795  -0.002  0.597  0.884  0.000
X1 -> X1.2  0.972  0.975  0.006  161.718  0.003  0.957  0.982  0.000
X1 -> X1.3  0.743  0.732  0.110  6.763  -0.010  0.445  0.883  0.000
(X2 -> Y)   0.688  0.683  0.080  8.571  -0.005  0.534  0.853  0.000
X2->X2.1  0.920  0.921  0.029  32.205  0.001  0.845  0.960  0.000
X2 -> X2.2  0.910  0.911  0.003  27.753  0.001  0.817  0.958  0.000
X2 -> X2.3  0.791  0.783  0.071  11.194  -0.009  0.604  0.886  0.000
Y -> Y1.1  0.948  0.947  0.015  64.224  -0.000  0.908  0.967  0.000
Y -> Y1.2  0.955  0.956  0.010  96.324  0.001  0.926  0.969  0.000
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productivity also increase. The results of this study found that the level of education is very important for companies to determine the acceptance of employees. Employees who have a high level of education will be more able to produce high productivity as well. While in the variable of job placement to increase employee work productivity with this appropriate and appropriate placement, work passion, work mentality and work performance will achieve optimal results and even employee creativity and initiatives will develop.

IV. Conclusion

Based on the results of research and discussion on the effect of education levels and job placement on the work productivity of employees of the Tirta Bhagasasi Regional Drinking Water Company (PDAM) Rawa Lumbu Bekasi Branch, as described in the previous chapter, the conclusions of this study were obtained as follows:

Partially, the variable level of education has a positive and significant influence on the work productivity of employees, namely when the level of education is high, the work productivity of the employees will be high and vice versa if the level of education is low, the work productivity of the employees will also be low, which explains that the education that a person has will also affect his work productivity, because with education a person has the capital to do productivity in a job. When the level of education must be increased by increasing the criteria for education levels, the suitability of majors and increasing competition in employees so that the work productivity of their employees is achieved.

Partially, the job placement variable has a positive and significant influence on employee work productivity, namely if the work placement is placed properly, the employee's work productivity will be good and vice versa if the job placement is bad, the productivity will be poor, therefore explaining that the job placement must be based on job description and job specification which has been determined and guided by the principle of "Placement of the right people in the right place and placement of the right person in the right position" or "The right man in the right place and the right man behind the right job." The principle of proper placement must be implemented consequently so that employees can work according to their respective expertise in order to get optimal work results for the company.

References


Shehnaz Tehseen, Zuhail Hassan Qureshi, Fatemahohara, Ramayah.(2019, October). *Journal of Sustainability Science and Management, 14 number 5*, 84-114.


