

The Influence of Knowledge Management on Employees Performance (Case Study on Technician at PT. Telkom Akses Solo)

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Abstract. Knowledge is very important to be managed in the era of globalization. Applying Knowledge Management will be able to provide great contribution. This research aims to determine the influence of Knowledge Management that divided into 4 variables which are socialization, externalization, combination, and internalization either simultaneously or partially on Employee Performance (Technician) at PT. Telkom Akses Solo. This research uses quantitative methods and questionnaires as data retrieval tool. This study uses multiple regression techniques and data processed using Microsoft Excel or IBM SPSS 22. The Results have shown that socialization, externalization, combination, and internalization have a significant effect on employees performance either simultaneously or partially.

Keywords. Knowledge management, socialization, externalization, combination, internalization, performance measures

I. INTRODUCTION

In this modern era, globalization becomes a challenge to any company or industry. Basically, any company or organization wants to be the number one company in its field and be a company that continues to grow. The number of companies competing to make the need for a Human Resources (HR) quality continues to increase, so we need a strategy to develop human resources in order to improve competitiveness and have a competitive advantage. Human Resources a key success factor of a company or organization, because human knowledge is able to find a new idea or a new strategy for the advancement of the company or organization. One of the best strategies to enhance the competitiveness of the company is to maximize knowledge assets. Knowledge is very important to be managed in the era of globalization.

Applying Knowledge Management will be able to improve employee performance and lead to increased performance of the company as well. Research conducted by Kosasih [3] shows that knowledge management indirectly affect employee performance. In addition to the research Nasser et al [4] knowledge management capabilities has a positive correlation to the performance at 1% level of significance, which indicates a good influence between knowledge management capabilities with the company's performance.

Other research results studied by Ahmed et al [1] shows the results indicate that the activity of knowledge management as knowledge acquisition, knowledge conversion, knowledge application and knowledge protection resulted in a quality service to customers, high customer satisfaction, efficiency in resource utilization , higher profits and improved overall organizational performance.

Being aware of the phenomenon, PT. Telkom akses into one company in Indonesia that have implemented knowledge management. PT. Telkom Akses is a subsidiary of PT. Telekomunikasi Indonesia, Tbk. PT. Telkom Akses is still relatively new in applying knowledge management for this new company established in 2012. PT. Telkom Akses Solo is the author's object of the research, They apply knowledge mangement aimed at improving skill or ability of employees to be competitive in a globalized world.

Purpose of this research was to find how much is the influence of knowledge management on employees performance either simultaneously or partially.

II. SUPPORTING THEORY

A. Knowledge Management Definitions

To enrich understanding, Tannebaum in Nawawi [5] provides the definition of the various formulations to provide an understanding of knowledge management as follows:

1. Knowledge Management includes the processes taking, organizing, storing and accessing information to create knowledge, with appropriate use of information technology to support knowledge management such as computers, will teteapi knowledge management is not concerned about the information technology.
2. Knowledge management includes sharing knowledge. Efforts to manage knowledge will fail without any knowledge sharing. Dynamics and practices as payroll system can also affect the process of sharing knowledge. Cultural and social aspects of becoming a significant challenge in managing knowledge.
3. Knowledge management involves the knowledge possessed by a person. Organizations will need people who are competent in using and understanding the information effectively. Organizations concerned with the people to be able to provide innovation and guidance to the organization. In addition, the organization is also concerned about persoalan expertise to provide input for applying knowledge management. As part of the authority of knowledge management, organizations should consider ways to attract, develop, and maintain knowledge of its members.
4. Knowledge management involves in terms of improving organizational effectiveness. Knowledge management is believed to contribute to the strength and success of the company. To measure the intellectual assets and to assess the effectiveness of knowledge management should be able to help members understand the knowledge management area that has been done.

B. Benefits of Knowledge Management

Wiig in Nasser, et al. [4] states that knowledge management has the first purpose to facilitate the organization to be able to act intelligently, then to protect the viability and success, and the second to create an organization able to realize the best value from knowledge assets.

While the advantages or benefits of knowledge management in the organization, according Nawawi [5] is as follows: 1. Improving the quality of decision making; 2. Improving the quality of customer handling; 3. Accelerate response to critical business issues; 4. Improve the skills of employees; 5. Increase productivity; 6. Increase profit; 7. Increase the variety of best practices; 8. Reduce costs; 9. Improve collaboration within the enterprise; 10. How it works better; 11. Increase market share; 12. Creating new business opportunities; 13. Enhancing the development of new products; 14. The system better employee retention; 15. Enhance products and services.

C. Knowledge Management Model

According to Nonaka and Takeuchi in Dalkir [2], there are four models of knowledge management, which are :

1. Socialization: The process of socialization within the organization is one done through face to face meetings that is natural, and usually in the form of social interaction. This involves understanding through the sharing of mental models, mentoring interactions, brainstorming to get new ideas, and so on. Socialization is one of the easiest to exchange knowledge as is natural while being assembled or engaged in an emergent meeting.
2. externalization: Externalization is the process of converting tacit knowledge into explicit. Tacit knowledge can be written, recorded, or made more real or concrete in a variety of ways. In this case the intermediary is required to convert from tacit to explicit knowledge in order to extract, modeling, and synthesize in some way (format,

duration or length, level of detail, and others), thereby increasing the scope. After making the externalization of knowledge into real and permanent, it can be easier to be shared and utilized by the organization.

3. **Combination:** Combination is the process of transforming knowledge from explicit to explicit. The process combines a variety of explicit knowledge into a new form. The new form can be the review report, trends analysis, a brief executive summary, or a new database for organizing content. No new knowledge is created, only new combinations or representation of knowledge that already exists or is already explicit. In other words, the combination occurs when knowledge is sorted and arranged systematically in the knowledge system.
4. **Internalization:** Internalization is the process of converting knowledge from tacit to explicit. Internalization of integrating experience, either individually or jointly and insights into individual mental models. Triggers on the internalization process is related to the concept of "learning by doing". After the process of internalization, new knowledge is then used employees expand their knowledge, extend, and reframe. This will make employees understand, learn, and apply new knowledge. This is a manifestation of the changes observed so that the employee is able to work and their tasks in different ways

D. Performance Assessment Definitions

The performance assessment is an important procedure for management that are used to explain the objectives and performance standards and is able to motivate one's performance the next time. Working performance of the basis for decision-making that will affect salary, dismissal, promotion, training, transfer, and other employment conditions [6].

Fahmi [7] argues that performance appraisal is an assessment made against the management company either employees or managers during the period had been doing his job. From the definition above can be concluded that the performance appraisal is the process of evaluating the performance of employees in an organization that is committed by certain parties and can affect salary, dismissal, transfer of employees, and several other aspects.

E. Performance Measures

According Bernardin in Kosasih [3], explained that there are six basic criteria for assessing the performance of employees:

1. **Quality :** Size at which the procedure or adjustment in the ideal model in run activities or fulfill activities compatible with the goals.
2. **Quantity :** Quantity produced or formed through the value of the currency, the quantity of units, or quantity of cycles of activity that has been completed.
3. **Timeliness :** The size of which the activities have been completed with a faster time than that specified and maximize the time to be used on other activities.
4. **Cost Effectiveness :** A measure in which the use of company resources are tangible human, financial, technological, which are then utilized and maximized useful to obtain maximum results and minimize the disadvantages of each unit.
5. **Need for Supervision :** A measure in which an employee is able to complete each task without help or guidance from superiors.
6. **Interpersonal Impact :** Size where employees feel confident, have good willpower, and able to work together in a team or co-workers

F. Conceptual Framework

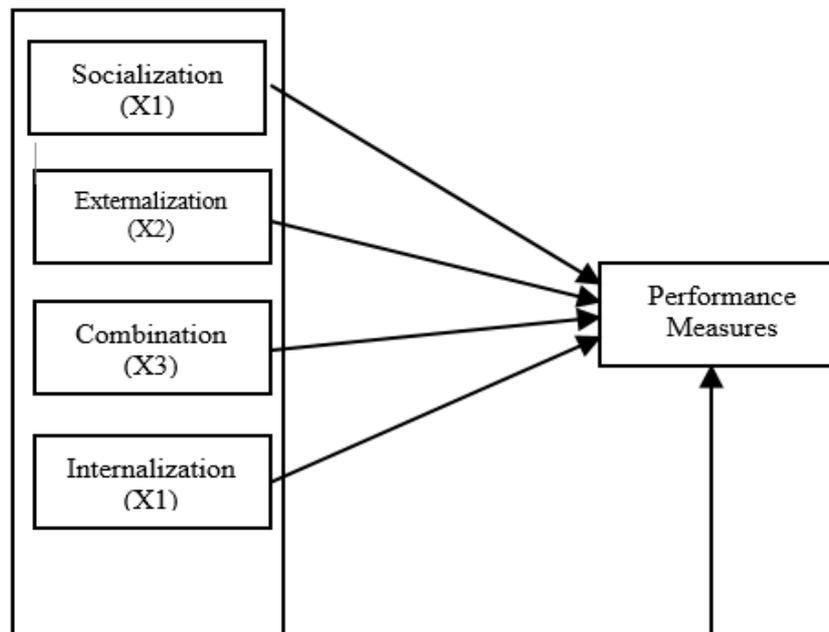


Figure 1. Conceptual Framework of Research

III. RESEARCH METHODOLOGY

A. Characteristics of The Research

Based on this research method, this research is quantitative research. Quantitative methods are called traditional methods, because this method is long enough to use and already become a tradition. This method is called method positivistik because it is based on the philosophy of positivism. This method is a scientific method because it has met scientific characteristics that concrete, objective, measurable, rational, and systematic. This method is called discovery method because this method is able to find and develop new science and technology. This method is called quantitative methods for research data and analysis using statistical figures [8].

Based on the objective of this research, this research is a descriptive study, according Sugiyono [8] descriptive research has the objective to describe an object or activity to the attention of researchers. Descriptive research can be thesis or research intermediaries for further research and descriptive research beneficial to those who make policy and planning.

For the type of investigation of this study is a correlational study to measure the relationship between knowledge management and employee performance. Then based on the unit of analysis of this research is the study individually. While based on the timing of this study was cross sectional study.

B. Data Collection

The population in this research is technician at PT. Telkom Akses Solo. In this study the authors using sampling techniques such as nonprobability sampling. Methods of data collection by the author by distributing questionnaires to be filled in by the respondent.

The scale of measurement used in this research is the ordinal scale and scaling method used in this research used a Likert scale. In this study the authors used four score levels, which are Strongly Agree, Agree, Disagree, and Strongly Disagree.

C. Validity and Reliability

In this research the authors measure the validity of the questionnaire item by using IBM SPSS software 22. Once measured and seen the value of r and r -table count every item questionnaire. This research uses a significance level of 5% ($\alpha = 0.05$), with respondents to test are 30 people, the obtained value of r table 0.361. If the value of r is bigger than r table the item questionnaires valid, and if the value of r count is smaller than r table the item questionnaire is not valid. All of the items used in the research are valid.

For the reliability tests, the authors measured using IBM SPSS 22 by using reliability analysis with Cronbach alpha technique. According Darmawan [9] if the coefficient obtained > 0.60 , it means the research instruments reliable.

Table 1. Reliability Test Results

Variable	Cronbach's Alpha	Total Item	Explanation
Socialization	0.805	6	Reliable
Externalization	0.698	5	Reliable
Combination	0.753	3	Reliable
Internalization	0.744	4	Reliable
Performance Measures	0.816	24	Reliable

The results have shown that all variables had a Cronbach Alpha values above 0.60. It means variable socialization, externalization, combination, internalization, and employee performance are reliable.

IV. RESULTS AND DISCUSSIONS

A. Normality Test

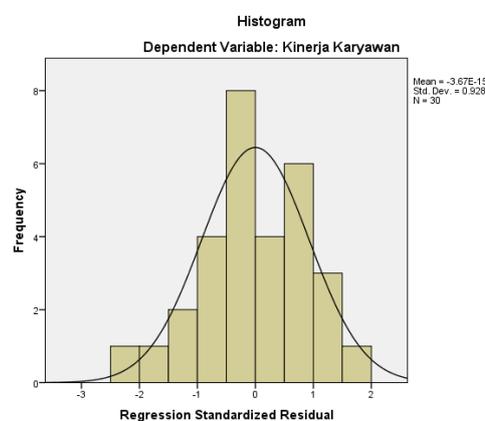


Figure 2. Normality Test of Research

From the figure above shows that the distribution pattern close to normal, but if the normal conclusion whether or not the data is only seen from the histogram graph, it is too subjective. To strengthen the visual test results are presented in the histogram and normal probability plot graph above, can be used Kolmogorov-Smirnov test. If the probability value

is greater than 0.05, it can be concluded that the residual in the regression model are normally distributed. The hypothesis tested was as follows

H0: normal distribution data

H1: Data is not normal

$\alpha = 5\%$

Test criteria: H0 rejected if the p-value $< \alpha$

By using IBM SPSS version 22 program obtained test results kolmogorof-smirnof (K-S) of the sample showed on Table 2.

Table 2. Kolgomorov-Smirnov Test Results

		Unstandardized Residual	
N		30	
Normal Parameters ^{a,b}	Mean	.0000000	
	Std. Deviation	4.27880152	
Most Extreme Differences	Absolute	.087	
	Positive	.086	
	Negative	-.087	
Test Statistic		.087	
Asymp. Sig. (2-tailed)		.200 ^{c,d}	
Monte Carlo Sig. (2-tailed)	Sig.	.957 ^e	
	95% Confidence Interval	Lower Bound	.944
	Upper Bound	.970	

Based on Kolmogorov Smirnov test shows that the significance value of 0.200 is greater than 0.05. It means can be concluded that the distribution of data is normal, so that the model meets one of the assumptions to do regression testing.

B. Regression Model

By using the IBM SPSS software, the output obtained multiple linear regression calculation results showed on Table 3.

Table 3. Multiple Linear Regression

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1 Constant	13.849	5.255	
Socialization	0.665	0.307	0.284
Externalization	0.947	0.428	0.271
Combination	1.072	0.505	0.274
Internalization	1.059	0.419	0.313

Dependent Variable: Performance Measures

Based on output of table VIII can be a constant value and the regression coefficients so that it can be formed of multiple linear regression equation as:

$$Y = 13.489 + 0.665(X_1) + 0.947(X_2) + 1.072(X_3) + 1.059(X_4)$$

Based on the regression equation above can be seen that the constant value is 13 489 which represents the average score of the performance of the employee if the variable socialization, externalization, combination, and Internalization worth 0. Note also that the variable socialization, externalization, combination, and Internalization have a positive influence shows that increased scores by one unit in the variable, while the other variables constant, the performance of employees will be increased by regression coefficient respectively.

C. Correlation Coefficient Analysis

Table 4. Correlation Coefficient Analysis Results

Variable		Value of r	p-value	Explanation
Employee Performance	Socialization	0.677	<0.001	High
Employee Performance	Externalization	0.629	<0.001	High
Employee Performance	Combination	0.655	<0.001	High
Employee Performance	Internalization	0.660	<0.001	High

Variable socialization, externalization, combination, and Internalization have a strong relationship where socialization variables are variables that have the highest level of closeness compared to other variables.

D. Coefficient of Determination

Table 5. Coefficient of Determination (R^2) Results

Model	R	R square	Adjusted R Square	Std. Error of the estimate
1	0.865	0.748	0.708	4.608

The coefficient of determination (R^2) is 0.748. In other words, it shows that a large percentage of variation of the employee's performance can be explained by the variation of the four independent variables that Socialization, externalization, Combination, Internalization amounted to 74.8%, while the remaining amount $(1-R^2) = 25.2\%$ explained by causes other outside the model.

E. F-Test

Table 6. F-Test Results

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1577.377	4	394.334	18.568	.000
Residual	530.936	25	21.237		
Total	2108.273	29			

Based on the table above obtained calculated F value of 18 568 with alpha = 0:05 and the degree of freedom $v_1 = k = 4$ and $v_2 = n - (k + 1) = 30 - (4 + 1) = 25$, then obtained F table 2.76. The F value is greater than F table ($18.568 > 2.76$), other than that obtained results of significant value 0,000 lower than the level of belief ($0.000 < 0.05$), so that H_1 is accepted. Thus, it can be concluded socialization, externalization, combination, and internalization have a significant effect simultaneously on employee performance

F. T-Test

Table 7. T-Test Results

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
Constant	13.849	5.255	2.567	0.017
Socialization	0.665	0.307	2.164	0.040
Externalization	0.947	0.428	2.215	0.036
Combination	1.072	0.505	2.122	0.044
Internalization	1.059	0.419	2.524	0.018

The significance level (α) is 5% and the degrees of freedom (df) = $n(k + 1) = 30 - (4 + 1) = 25$ was found t table of distribution t table value is 2,059. The table shows that the t value of each variable is higher than t-table. It means socialization, externalization, combination, and internalization have a significant effect partially on employee performance.

G. The Influence Of Knowledge Management On Employee Performance

1. The influence of socialization on employee performance: For the first results are the influence of socialization on employee performance, found that t value > t-table $2.164 > 2.059$, in addition to the known p-value $(0.040) < 0.05$. It means that H1 is accepted, which means that socialization has significant effect on the performance of employees with positive direction. It shows that the better socialization applied will impact on employees performance to get higher, and the lower of socialization applied will impact on employees performance to get lower.
2. The influence of externalization on employee performance: For the second results are the influence of externalization on employee performance, found that t value > t-table, $2.215 > 2.059$, in addition to the known p-value $(0.036) < 0.05$. It means that H2 is accepted, which means that externalization has significant effect on the performance of employees with positive direction. It shows that the better externalization applied will impact on employees performance to get higher, and the lower of externalization applied will impact on employees performance to get lower.
3. The influence of combination on employee performance: For the third results are the influence of socialization on employee performance, found that t value > t-table $2.122 > 2.059$, in addition to the known p-value $(0.044) < 0.05$. It means that H3 is accepted, which means that combination has significant effect on the performance of employees with positive direction. It shows that the better socialization applied will impact on employees performance to get higher, and the lower of socialization applied will impact on employees performance to get lower.
4. The influence of internalization on employee performance: For the fourth results are the influence of externalization on employee performance, found that t value > t-table, $2.524 > 2.059$, in addition to the known p-value $(0.018) < 0.05$. It means that H4 is accepted, which means that internalization has significant effect on the performance of employees with positive direction. It shows that the better externalization applied will impact on employees performance to get higher, and the lower of externalization applied will impact on performance employees to get lower.
5. The influence of knowledge management (socialization, externalization, combination, internalization) on employee performance: Knowledge management model such as socialization, externalization, combination, and internalization have a significant effect simultaneously on employee performance. It shows that the better knowledge management applied will impact on employees performance to get higher, and the

lower of knowledge management applied will impact on employees performance to get lower.

V. CONCLUSIONS

This research aims to determine the influence of Knowledge Management that divided into 4 variables which are socialization, externalization, combination, and Internalization either simultaneously or partially on Employee Performance (Technician) at PT. Telkom Akses Solo. The Results have shown that socialization, externalization, combination, and internalization have a significant effect on employees performance either simultaneously or partially. The most dominant factor in knowledge management that impact on employees performance is socialization. This is because sharing sessions and training on access learning academy that owned by PT. Telkom Akses Solo strongly supports the process to improve performance. This research has limitations, the number of the respondents are small, it makes impossible to generalize.

For further research, the authors suggest to do research by increasing the number of respondents that can give more accurate results, and the authors expected to do research by linking knowledge management with other aspects.

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