



Dynamic System Model of the Role of Leadership Coaching on Employee Performance

Budi Hartono^{1,2}, Muhamad Erman Darmawansyah¹, Dinda Iryawati Bedy Saskito¹

¹Muhammadiyah Jakarta University, Indonesia

²STikes Hang Tuah Jakarta, Indonesia

Article Info

Article History:

Submitted June 2020

Accepted September 2020

Published July 2021

Keywords:

Causal loop diagram, Dynamic system model, Employee performance, Flow Diagram, Leadership coaching

DOI

<https://doi.org/10.15294/kemas.v17i1.25023>

Abstract

Jakarta Cempaka Putih Islamic Hospital (RSI) experienced a decline in performance. Judging from the 2013 Bed Occupancy Rate (BOR) of 70.59%, it then dropped to 44.12% in 2016. Efforts to improve employee performance by coaching have been carried out, but not comprehensively in each Hospital unit. The study aims to look at the role of leadership coaching with a dynamic system model on employee performance at the Jakarta Cempaka Putih Hospital. Besides that, it is also to find out the role of inspirators, facilitators, motivators, as well as the pattern of system behavior characteristics between the role of leadership coaching on employee performance. Analytical research using quantitative methods with explanatory research design. The research sample was 86 taken by accidental sampling technique from the population of inpatient staff and medical support in May 2018. Data processing techniques were carried out in stages including univariate analysis, bivariate Chi-Square, multivariate logistic regression, and dynamic system models of causal loop diagrams formulated to the flow diagram. The instrument used in the form of a questionnaire. In general, the test results showed the influence of the role of leadership coaching on employee performance. Specifically, it shows the influence of the role of leadership coaching as an inspiration, facilitator, and motivator on employee performance. Then the pattern of system behavior characteristics for the next 10 years is in the form of exponential growth and in the next 20 years in the form of S-Shaped growth. Likewise, the behavior pattern of the coaching leadership system role for the next 10 years in the form of exponential growth. The leadership coaching role was found to have an effect on improving employee performance.


Introduction

Competition in the current era of globalization encourages organizations to improve employee performance. Employee performance is an employee's achievement according to specific criteria that apply to a particular job. When the quality and quantity of employee's work achievement following the responsibilities given to him. Concerning employee performance, several phenomena have emerged in the organization, one of which is the not yet optimal performance of employees. The indications are reflected in the low employee achievement of work targets (Arisa et al., 2018)

The research analysis results by Hallinger

(2016), explained one of the factors that affect employee performance, namely leadership. According to Hao and Yazdanifard (2015), leadership definition is a kind of power where a person can influence or change others' values, beliefs, behavior, and attitudes. Leadership is the main factor in bringing about positive change for the organization; if there is no leadership in the organization, it will not be able to change in the desired direction, vice versa can experience negative changes. (Hao and Yazdanifard, 2015; Arisa, Joko and Uchyani, 2018)

According to Achi & Sleilati (2016), there are five types of leadership, including Inspiring Leader, Autocratic Leader, Democratic Leader, Service Leader, and Situational Leadership.

 Correspondence Address:
Muhammadiyah Jakarta University, Indonesia
Email : coachbudihartono@gmail.com

Vidal et. al. (2017), explained that leadership styles always evolve according to the context faced by the leader, with new elements that complement, enhance, and accompany a more traditional model. In situational leadership, this type of leadership is created by prioritizing the situational approach faced by a leader towards each team member he leads and focuses on responsibility. The four types of situational leadership are Directing, Coaching, Supporting, and Delegating. (Achi & Sleilati, 2016; Vidal et al., 2017)

Coaching is expected to lead to an increase in individual employee performance and ultimately to make a significant contribution to the company's overall performance (Silva, 2016). Lodhi et. al. research (2018), explained that coaching indirectly affects job performance through job involvement, quality of member-leader exchange, job satisfaction, and intention to change places. (Daniëls et al., 2019; Lodhi and Orangzab, 2018)

To be able to assist in understanding the role of leadership coaching on employee performance, we can use a dynamic system model, namely causal loop diagrams. It is associated with a tendency to incorporate more variables into the model and thus make it more realistic. In the causal loop diagram, there is only positive and negative feedback. It is then formulated as a flow diagram. (Shaikh et al., 2017; Bureš, 2017)

RSI Jakarta Cempaka Putih experienced a decline in performance. Judging from the Bed Occupancy Rate (BOR), in 2013, it was 70.59%. Then decreased to 44.12% in 2016. Although in 2017 it increased to 51.54%, this is not following the parameters of the Indonesian Ministry of Health (2005) which is 60-85%. (Arisa et al., 2018). It is hoped that the research can determine the effect of the role of leadership coaching on employee performance at RSI Jakarta Cempaka Putih using a dynamic system model.

Method

This research type is quantitative analytic research with an explanatory research design. It is research that explains the relationship between research variables and

testing hypotheses that have been formulated previously. We researched in May 2018 at RSI Jakarta Cempaka Putih. The population in this study was employees in the inpatient and medical support units with a total of 362 people. The population is in small numbers or less than 10,000. Then we use the number of simple formulations determined based on the formula according to Notoatmodjo so that a total sample of respondents is 86 people. The sampling technique used was accidental sampling, where the researcher took samples that he happened to meet at that time. (Arisa et al., 2018)

The data analysis method used in this study is the univariate analysis used to describe the characteristics of the respondents. Then bivariate analysis was used to determine the relationship of each variable using the Chi-Square Test. The results of bivariate analysis of independent variables that have a relationship with employee performance were followed by multivariate analysis using logistic regression analysis. Then use causal loop diagrams and flow diagrams to see the role of leadership coaching on employee performance.

Result And Discussion

The first step of data analysis is univariate analysis. The results of this analysis aim to explain or describe the characteristics of each variable. This data is primary data collected through filling out questionnaires conducted by 86 (eighty-six) research respondents. The frequency distribution of respondents' characteristics is mostly in each category, namely age 26-35 years, female gender, DIII education, and working period of more than three years. Then from the frequency distribution, it is also found that only the role of a good inspiration is, while that of a facilitator and motivator is not good. Then the leadership coaching role is inversely proportional to employee performance. When it is lacking, the employee performance is good. The next analysis uses bivariate, where the p-value used in the Chi-Square table is the continuity correction value because the table used is a 2x2 table. There is no expected value < 5 . Then all the tables are combined into one as in Table 1.

Table 1. Effect of Each Role to Employee Performance

	Employee Performance				Total		P Value	OR
	Good		Less		N	%		
	n	%	n	%				
Inspirator Role								
Good	34	67	17	57	51	100	0.049	2.667
Less	15	43	20	33	35	100		
Total	49	57	37	43	86	100		
Facilitator Role								
Good	27	71	11	57	38	100	0.033	2.901
Less	22	46	26	33	48	100		
Total	49	57	37	43	86	100		
Motivator Role								
Good	25	78	7	22	32	100	0.005	5.260
Less	24	44	30	56	54	100		
Total	49	57	37	43	86	100		
Leadership Coaching Role								
Good	28	78	8	22	32	100	0.002	4.883
Less	21	42	29	58	54	100		
Total	49	57	37	43	86	100		

Source: Primary Data 2018

The largest percentage was found in the leadership coaching role as a good inspiration for good employee performance. The statistical test results obtained a p-value of 0.049 ($\alpha < 0.05$), so it can be concluded that there is an influence between the role of leadership coaching as an inspiration to the performance of employees at RSI Jakarta Cempaka Putih. Then from the analysis results, the OR value = 2,667 means that the leadership coaching role as a good inspiration has 2,667 times the opportunity for good employee performance compared to the leadership coaching role as a less inspiration.

The leadership coaching role as a good facilitator for good employee performance is the largest percentage. The statistical test results obtained a p-value of 0.033 ($\alpha < 0.05$), so it can be concluded that there is an influence between the leadership coaching role as a facilitator on employee performance at RSI Jakarta Cempaka Putih. Then from the analysis results, the OR value = 2,901 means that the leadership coaching role as a good facilitator has 2,901 times the opportunity for good employee performance compared to the leadership coaching role as a facilitator is lacking.

The influence of leadership coaching

as a good motivator for good employee performance is the highest percentage. The results of statistical tests obtained a p-value of 0.005 ($\alpha < 0.05$). It can be concluded that there is an influence between the leadership coaching role as a motivator on employee performance at the Islamic Hospital Jakarta Cempaka Putih. Then from the analysis results, the OR value = 4,464 means that the leadership coaching role as a good motivator has 4,464 times the opportunity for good employee performance compared to the role of leadership coaching as less motivator.

The study results show that good leadership coaching influence role with good employee performance is the highest percentage. The results of statistical tests obtained a p-value of 0.002 ($\alpha < 0.05$). It can be concluded that there is an influence between the role of leadership coaching on employee performance at RSI Jakarta Cempaka Putih. Then from the analysis results, the OR value = 4.833 means that a good leadership coaching role has 4,833 times the opportunity for good employee performance compared to a less leadership coaching role.

The next step of analysis using multivariate. Each independent variable performed the bivariate analysis with the dependent. If the p-value <0.25 results, the variable will immediately enter the multivariate

stage. On the other hand, if the bivariate result produces a p-value > 0.25 but is substantially important. Then the variable can be included in the multivariate model, as shown in Table 2.

Table 2. Multivariate Model

Variable	B	Wald	P value	OR
Inspirator Role	0.105	0.035	0.852	1.111
Facilitator Role	0.293	0.270	0.604	1.306
Motivator Role	1.494	6.287	0.012	4.260

Source: Primary Data 2018

From the analysis results, two variables have a p-value > 0.05, namely the role variable as an inspiration and a facilitator. The highest

variable is the inspiration role. So it must be removed from the model. Then the next model is shown in Table 3

Table 3. Multivariate Final Model

Variable	B	Wald	P value	OR
Facilitator Role	0.293	0.270	0.604	1.340
Motivator Role	1.494	6.287	0.012	4.457

Source: Primary Data 2018

From the results of the multivariate test, it was found that the variable that has the dominant influence is the role of leadership coaching. It is a motivator with a significant value of 0.012 (PV <0.05) and OR 4.457. It means that the role of leadership coaching as a motivator has a chance of 4,457 times influencing employee performance than the variable leadership coaching role as a facilitator. The last analysis uses a dynamic system model. It is based on the problem identification poured into causal loop diagrams and formulated in flow diagrams.

The causal loop between the leadership coaching roles is built from inspiration, facilitator, motivator. Meanwhile, employee performance is built through work quality, work quantity, knowledge, innovation, creativity, initiative, and personal quality. We can increase employee performance through the leadership coaching role. It comes from the ability to become an inspiration, facilitator, and motivator. From the figure, a positive loop is also obtained. It means that the leadership coaching role can improve employee performance, as shown in Figure 1.

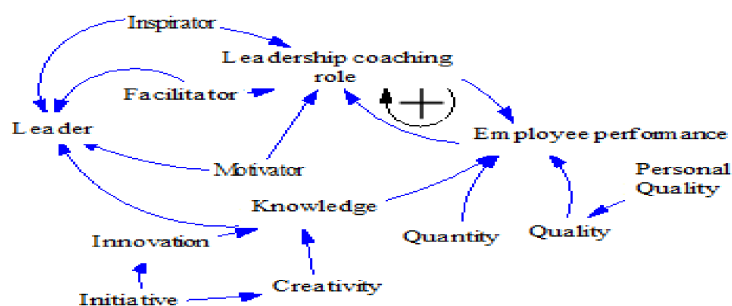


FIGURE 1. Causal Loop of Leadership Coaching Role to Employee Performance

The employee performance flow diagram is formed from the elements of performance improvement, the role of leadership coaching. The leadership coaching role is formed from increasing roles as an inspiration, facilitator, and motivator. Employee performance is

stock and performance improvement is flow. Then, the leadership coaching role is stock, and increasing the leadership coaching role is a flow. Then the inspiration, facilitator, and motivator as auxiliary. The diagram can be seen in Figure 2.

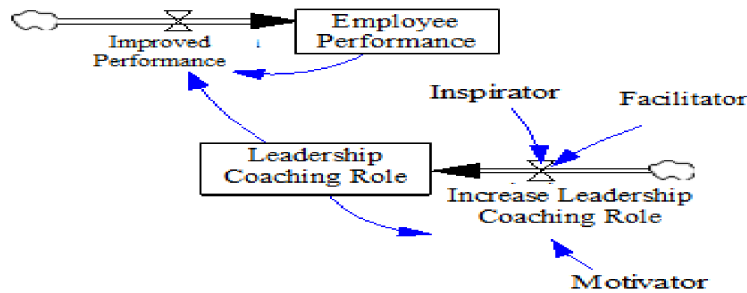


FIGURE 2. Flow Diagram of Leadership Coaching Role to Employee Performance

By using the Vensim application, we get a graph of the behavior pattern of the employee performance system in the next ten years in the form of exponential growth, which means that employee performance will continue to increase. For a 20-year simulation, it shows that the graph of the behavior pattern of the employee performance system in the form of S-Shaped growth. It pictures a balance and does not increase. Then the role of leadership coaching for the next 10, in the form of exponential growth showing an increase through its role as an inspiration, facilitator, and motivator.

According to Gavin (2018), leaders play a vital role in managing change, innovating, have ideal influence, inspirational motivation, and intellectual intelligence. One of the methods leaders can use to develop employee performance is coaching. According to Anthony (2017), Leadership coaching has increased in popularity over the last decade. It is because the leadership coaching development program brings positive value to individuals and organizations. (Anthony, 2017; Gavin, 2018)

The results indicate the influence of the role of good leadership coaching with good employee performance. It is the highest percentage, and has 4.833 times the opportunity for good employee performance compared to the leadership coaching role is less. It is aligned

with the results of Hao & Yazdanifard (2015) research, where the application of leadership coaching brings significant positive changes in employee performance, increases leadership effectiveness, and slightly increases business results. Arisa et al., (2018) and Achi et al. (2016) research explains that coaching is needed. It directs employees to develop skills, creativity, and motivation. Therefore they can improve well in solving a problem, with the result of increased performance. The coaching can use the COACH method, namely C: Connect, Build Relationships by asking how you are doing. O: Outcome, Conversation Goals by finding out what is an important topic. A: Awareness, Awaken Awareness by asking questions and will listen actively. Hear the unspoken, explore discoveries, thoughts, commitments, and actions through a conversation. C: Course, Action Steps by trying to capture understanding and thoughts and then translate them as actions to be carried out. H: Highlights, Reviewing Learning by asking employees to review what they have learned, the understanding gained, and useful things. Meanwhile, Achi & Sleilati (2016) explain that the focus of coaching on self-management and self-awareness is the basis for improving individual functions such as practice leaders and health systems, and frontline doctors. Following the research of Commer et al. (2017) where managerial coaching directly affects employee performance and indirectly

affects organizational performance in the form of behavior towards individuals and organizations (Arisa et al., 2018; Achi and Sleilati, 2016; Achi & Sleilati, 2016; Commer et al., 2017; Hao & Yazdanifard, 2015)

According to Arthur et al. (2016) and Gavin (2018), the ability to lead, inspire and motivate people is a vital human characteristic. So we expect a leader to have ideal influence, inspirational motivation, intellectual prowess, and the ability to connect tasks directly with the vision, the greater one. From the results of this study, we found a significant relationship between the role of leadership coaching as an inspiration and the performance of employees who had 4,833 opportunities to improve employee performance and must continue to be maintained, so that good performance does not decrease by 79.3%. Arisa et al., (2018) explains the role of leadership coaching as an inspiration and motivator, namely the way the leader defines a vision to achieve the future, challenges followers to high standards, speaks optimistically and enthusiastically, and provides encouragement and meaning for things that need to be done. Therefore, by applying leadership coaching as an inspiration, we can conclude that it can improve employee performance. (Arisa et al., 2018; Arthur, Wagstaff and Hardy, 2016; Gavin, 2018)

According to Bureš (2017), in the dynamic system model, causal loops are used to capture the dynamic nature of the system modeled. Causal loops provide a method for mapping the complexity of a concerned system consisting of variables, causal relationships and polarity of the two links, and feedback cycles. The structure of the causal loop is clear. It can be easily understood by the clear reader as said by Jamil and Shaharane (2017). The causal loop diagram in this study explains that employee performance coming from work quality, work quantity, job knowledge, creativity, cooperation, initiative, dependence, and personal ability, can increase through the leadership coaching role obtained from the ability to be an inspiration, facilitator, and motivator. There is also a positive loop, which means that the role of leadership coaching can improve employee performance. It is aligned with the research of Achi & Sleilati (2016) explaining that coaching can improve

the performance of both individuals and organizations. Employee performance itself is an employee's work performance which is considered a vital component in organizational success and productivity (Achi & Sleilati, 2016; Bureš, 2017; Jamil and Shaharane, 2017; Shaikh, Shaikh et al, 2017; Tunio and Shah, 2017).

To make the model, so the flow structure is described in detail, the causal loop diagram needs to be changed to a flow diagram. In his research, Arisa et al., 2018 explained that flow diagrams can describe the relationship between variables and have been expressed in the form of symbols, such as stock, flow, and auxiliary. Where stock states the condition of the system at any time, is an accumulation that occurs in the system. Flow is a policy structure that explains why and how a decision is made based on the information available in the system, this flow is the only variable in the model that can affect stock. The auxiliary is some things that can complement the variables in the dynamic system model. In this study, the flow diagram of employee performance is formed from the elements of performance improvement and the role of leadership coaching. The leadership coaching role is formed from increasing roles as an inspiration, facilitator, and motivator. Where employee performance is stock and performance improvement is flow. This flow is aligned with the research of Osta et al., (2017), which found a positive relationship between situational leadership that contained coaching in it and increased employee performance. Then the role of leadership coaching is stock, and increasing the leadership coaching role is flow. While the inspiration, facilitator, and motivator an auxiliary. As explained in Khusniyah's research (2014) that the leader as an inspiration as well as a motivator has characteristics that include knowledge, skills, humility, and the ability to develop people's motivation and commitment to bond with each other so that they can influence to make real changes that achieve goals together. Meanwhile, Rasmussen and Hansen (2018) explain that leaders as facilitators must be able to create an environment for dialogue and discussion. The next step is computer simulation using the *vensim* application. (Khusniyah, 2014; Osta

et al., 2017; Arisa et al., 2018; Rasmussen and Hansen, 2018)

The characteristic pattern of system behavior is analyzed in the next ten years with a dynamic system model using the vensim application. The graph is in exponential growth form, which means leadership coaching the role can improve employee performance. For the next 20 years, the pattern of behavioral characteristics of the employee performance system will form an S-Shaped growth, meaning towards balance. It is in line with the results of research by Núñez-Cacho et al. (2015) founding a positive relationship between increasing individual performance as a result of coaching. Likewise, research by Losch et al. (2016) showed that individual and group coaching is effective in reducing procrastination and facilitating goal attainment. Individual coaching created a high level of satisfaction and was superior in helping participants achieve their goals. Meanwhile, group coaching was successful in encouraging the acquisition of relevant knowledge. (Núñez-Cacho, Grande and Lorenzo, 2015; Losch et al., 2016)

Conclusion

There is an influence between the leadership coaching role as an inspiration, facilitator, and motivator on the performance of employees at RSI Jakarta Cempaka Putih. Where the motivator has a very dominant role from the results of this study. Then from the dynamic system model, it is found that the leadership coaching role can improve employee performance. Predictions for the next ten years are based on the results of the exponential growth graph. The leadership coaching role is expected to improve employee performance. Meanwhile, for the next 20 years, the pattern of behavioral characteristics of the employee performance system will form an S-Shaped growth which means towards balance.

Reference

Achi, S., & Sleilati, E., 2016. The Effect of Coaching on Employee Performance in the Human Resource Management Field: The Case of the Lebanese Banking Sector. *International Journal of Trade and Global Markets*, 9, pp. 137.

Anthony, E., 2017. The Impact of Leadership Coaching on Leadership Behaviors. *Journal of Management Development*, 36(7), pp.930-939.

Arisa, N., Joko, S., & Uchyani, F.R., 2018. The Influence of Leadership and Motivation of Employee Performance in UPTD BPKB of Maluku Province, Indonesia. *Russian Journal of Agricultural and Socio-Economic Sciences*, 9, pp.37-51.

Arthur, C., Wagstaff, C., & Hardy, L., 2016. Leadership in Sport Organizations, in *The Organizational Psychology of Sport: Key Issues and Practical Applicants*. Abingdon: Routledge, pp. 153-176.

Bureš, V., 2017. A Method for Simplification of Complex Group Causal Loop Diagrams Based on Endogenisation, Encapsulation and Order-Oriented Reduction. *Systems*, 5(3), pp.46.

Commer, P.J., Sci, S., Raza, B., Ali, M., Ahmed, S., & Moueed, A., 2017. Impact of Managerial Coaching on Employee Performance and Organizational Citizenship Behavior: Intervening Role of Thriving at Work. pp. 790-813.

Daniëls, E., Hondeghem, A., & Dochy, F., 2019. A Review on Leadership and Leadership Development in Educational Settings. *Educational Research Review*, 27, pp.110-125.

Gavin, C.S., 2018. The Impact of Leadership Development. *Leadership and Management Development in Education*, pp. 107-124.

Ghazzawi, K., Osta, B.E., & Choughri, R., 2017. Situational Leadership and Its Effectiveness in Rising Employee Productivity: A Study on North Lebanon Organization. *Human Resource Management Research*, 2017(3), pp.102-110.

Hallinger, P., 2016. Bringing Context Out of the Shadows of Leadership. *Educational Management Admonistration & Leadership*, 2016.

Hao, M.J., & Yazdanifard, R., 2015. How Effective Leadership can Facilitate Change. *Global Journal of Management and Business Research: A Administration and Management*, 15(9), pp.1-6.

Jamil, J.M., & Shahanee, I.N.M., 2017. A System Dynamic Simulation Model for Managing the Human Error in Power Tools Industries. *AIP Conference Proceedings*, 1891.

Khusniyah, N., 2014. Management by Inspiration: Implementation of Transformational Leadership on Business at Pondok Pesantren

- Sunan Drajat. *Procedia - Social and Behavioral Sciences*, 115, pp.79 – 90.
- Lodhi, S., & Orangzab., 2018. Examining the Impact of Managerial Coaching on Employee Job Performance: Mediating Role of Work Engagement, Leader-Member-Exchange Quality, Job Satisfaction, and Turnover Intentions. *Pakistan Journal of Commerce and Social Science*, 12.
- Losch, S., Traut-Mattausch, E., Muhlberger, M.D., & Jonas, E., 2016. Comparing the Effectiveness of Individual Coaching, Self-Coaching, and Group Training: How Leadership Makes the Difference. *Frontiers in Psychology*. 7, pp.629.
- Núñez-Cacho, P., Grande, F., & Lorenzo, D., 2015. The Effects of Coaching in Employees and Organizational Performance: The Spanish Case. *Intangible Capital*, 2015, pp.166–189.
- Rasmussen, L.B., & Hansen, M.S., 2018. Learning Facilitating Leadership. *Studies in Higher Education*, 43(8), pp. 1484–1506.
- Shaikh, M.R., Tunio, R.A., & Shah, I.A., 2017. Factors Affecting to Employee's Performance. A Study of Islamic Banks. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(1), pp.312–321.
- Silva, A., 2016. What is Leadership?. *Journal of Business Studies Quarterly*, 8(1)
- Vidal, G.G. Campdesuñer, R.P., Rodríguez, A.S., Vivar, R.M., 2017. Contingency Theory to Study Leadership Styles of Small Businesses Owner-managers at Santo Domingo, Ecuador. *International Journal of Engineering Business Management*, 9, pp. 1–11.