

Employees' Knowledge Management Behaviors: Analysis of the Most Dominant Indicators

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Abstract: Knowledge becomes a competitive resource in the knowledgeable era. On this basis, it is necessary to renew and strengthen human capital in the organization to make it intangible firm- resources in the sense of uniqueness and rarity. The purpose of this study is to identify the individual knowledge-based activities that can support organization knowledge management to achieve the sustainability of the organization. The research applied correlational surveys using the Neuroresearch method and explanatory study as the research methodology. Research results show that the most decisive indicator of knowledge management behavior is knowledge-based learning. It implies that knowledge-based learning can be the most dominant indicator to predict employees' knowledge management behavior.

1 INTRODUCTION

The importance of knowledge as the powerful source, has taken the researchers' attention since the late 1990s. Moreover, knowledge is also a part of the societal process since the society produced, processed and integrated knowledge on a daily basis. Recently, knowledge has become a prominent component of organizational capitals just like land, labor and fund (Mohajan et al., 2019).

The organization is the place where knowledge integration occurred between individuals and between groups during the process of creating goods and services at any level of the organization. At this stage, knowledge management takes place. Knowledge Management is the process of creating, managing and sharing the right information to the right person, at the right time and place (Halawi et al., 2005). The core of knowledge management is knowledge sharing because it is the most significant basis for knowledge management (Ibragimova et al., 2012).

As it is known, most activities in service industry relies on knowledge. Consequently, the service industry must focus on facilitating its human capital to renew and strengthen the knowledge they possessed. In this context each person should renew and strengthen his/her human capital since the organiza-

tional effectiveness is the result of the aggregated effects of individual employee behaviors since those are the primary determinants (Jackson et al., 2003). Most previous studies and researches merely focused on knowledge sharing behavior. Yet there are still many knowledge-based activities that can support the success of knowledge management in an organization. Based on the explanation above, the purpose of this study is to identify the individual knowledge-based activities that can support organizational knowledge management in order to create organizational learning to achieve the sustainability of the organization.

2 LITERATURE REVIEW

All the individual capabilities, inherent or learnt, can be considered as human capital since these can create or add values to an organization. Human capital has three key elements. First, the intellectual capital consist of knowledge, skill, creativity and innovative brainpower that can utilize intangible asset that makes the organization worthwhile (Salicru et al., 2007). The second is social capital which is knowledge derived from networks of relationships within and outside the organization. Social capital are mutual trust, values and certain standards. The third is or-

ganizational capital, also known as structural capital, which is the knowledge possessed by an organization that is stored in databases and manuals. Organizational capital include the confidential information that the organization holds in its data bank (Johannessen and Johannessen, 2018). Therefore, each organization member should renew and strengthen his/her individual human capital, one of which is through learning and development.

Learning and Development is the ultimate function of Human Resource Management (HRM). It is commonly known that knowledge creation and knowledge exchange occur in learning and development since this HRM function provides the mechanism for them to exist. Learning and development drives the organizational change. It also contributes to the attainment of strategic organizational objectives. This HRM function also accommodates the acquisition of knowledge, skills and experience, through a learning process between individuals and between groups, both structured and individually (Armstrong, 2011). Furthermore, in highly competitive era, the focus of learning and development in organizations is on individual learning as the source of creation, transfer and use of knowledge. Given the above explanation, it is apparent that individual learning is the starting point of knowledge management as a part of organizational learning (see figure 1 below).

Knowledge management is the planning, organizing, motivating, and controlling of people, processes and systems in the organization to ensure that its knowledge-related assets are improved and effectively employed. There are many kinds of knowledge assets such as patents and manuals (printed knowledge), "best-practices" database (electronic knowledge repositories), knowledge about the best way to do the jobs (individual knowledge), knowledge that is held by teams who have been working on focused problems (group knowledge), and knowledge that is embedded in the organization's products, processes and relationships (Celep and Cetin, 2005). The processes of knowledge management involve knowledge acquisition, creation, refinement, storage, transfer, sharing, and utilization. The goal of knowledge management is to improve organization's knowledge assets in order to effectuate better knowledge practices, improved organizational behaviors, better decisions and improved organizational performance (Darroch, 2003).

Knowledge-based behaviors are organizational routines, at valuable behaviors processes, produced by an organization as well as human capabilities, skills, mind and experiences. Those behaviors and practices effectively tap into, organize, and utilize

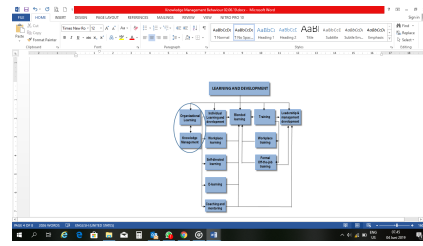


Figure 1: Knowledge Management is a Part of Learning and Development.

people's competencies, experiences, expertise, skills, talents, thoughts, ideas, intuitions, commitments, innovations, practices and imaginations and the integration of these into the information resources of an organization to achieve goals, to have a distinctive capability, and to create a learning organization (Shamim et al., 2019). The concept of knowledge-based behaviors suggests that knowledge management is a "complete managing practice" that provides the individuals of an organization the opportunity of sharing, interacting, using and adding more value to the data, information, knowledge, and wisdom of an organization (Curado and Bontis, 2006).

The definition of knowledge in the context of management is created through social interactions between individuals and organizations, and thus making knowledge dynamic and humanistic (Geisler and Wickramasinghe, 2009). To be succeed in today's challenges, the organization relies on the fast and efficient exchange of information and optimize knowledge as the competitive asset possessed. Resource-based theory has been developed to understand how organizations achieve sustainable competitive advantages. Within the resource-based view (RBV), researchers assumed that the firm is a pool of hard-to copy resources and capabilities. In the resource-based view, knowledge is seen as a strategic asset and as a source of sustainable competitive advantage for an organization (Bratianu and Orzea, 2010). Hence, the RBV focuses specifically on the inside of the firm (i.e., its resources and capabilities) to determine the profit and value of the organization. The RBV suggests that the valuable resources possessed will make the differences in firm performance. Furthermore, the valuable, uncommon, inimitable and non-substitutable capabilities make the firm's unique core competencies. As a result, a lasting competitive advantage will be obtained, specifically, intangible firm-specific resources such as knowledge that will add up the organizational values. To make knowledge as intangible firm-specific resources that is unique and inimitable, each organization members should renew and strengthen their personal human capital and

knowledge is a part of it (Trialih et al., 2017). Theoretical study shows that there is a close relationship among knowledge management, human capital management, and organizational learning. Moreover this tight relationship can empower human resources and knowledge resources within the organization, in order to make knowledge usable as an organization's competitive advantage since human capital and knowledge resources are unique, rare and inimitable.

Most previous studies and researches merely focus on knowledge sharing behavior. Hsiu-Ling Chen, Hsueh-Liang Fan, and Chin-Chung Tsai conducted a research about knowledge management behavior but focusing on knowledge sharing behavior. The research dimensions are knowledge management intention and knowledge sharing behavior. The research results explored altruism and trust as the supporting variables for knowledge sharing intention (Chen et al., 2014). Another research about knowledge management behavior was carried out by Nora Obermayer-Kovacs, Edit Komlosi, Cintia Szenteleki, Erika Viktoria Toth. The dimensions in this research are exchanging ideas and cooperates. The research examined a significant positive relationship between employees' emotional intelligence and knowledge sharing behavior (Obermayer-Kovács et al., 2015). Similar research that also supports the theoretical study of knowledge management behavior was carried out by Sakineh Shahhosseini and Mohammad Ali Nadi. The dimensions of this research is knowledge sharing behavior. The research tested that trust between employees and organization can significantly predict knowledge sharing behavior (Shahhosseini and Nadi, 2015). Next study was carried out by Mehdi Abzari, Arash Shahin, and Ali Abasaltian. The research dimensions are mutual process of knowledge and knowledge generation. The research indicated that social intelligence and emotional intelligence had an impact on knowledge sharing behavior positively and significantly (Abzari et al., 2014). As mentioned above most researches focused on knowledge sharing behavior. In fact, there are still many more knowledge-based activities that can support knowledge management behavior.

As explained previously, it can be summarized that knowledge management behavior is an individual activity and organizational routines at valuable behaviors processes of collecting, managing, applying, sharing and updating knowledge. It acts as a dynamic humanist process to optimize human capabilities, skills, mind and experiences as organizational assets in order to achieve organizational effectiveness (Razi and Habibullah, 2017). The indicators of knowledge management behaviors are: (1) creat-

ing knowledge: gathering information to understand problems, using data and facts, making observations, finding solutions, finding new information to innovate, anticipating change, looking for sources information to gain knowledge, ask experts, learning from experience, and learning from mistakes, (2) sharing knowledge: sharing knowledge and expertise with others, sharing knowledge to help others, working together to find solutions, applying the knowledge owned, building networks with experts, documenting knowledge, preparing information that is ready to use, providing an assessment of new ideas that have been tested, choose work inwardly, choosing to compete outside, learning continuously, working together to develop knowledge, deepening special knowledge, and improving work ability, (3) updating knowledge: working together to update knowledge, share knowledge to update information, and recycling past experiences to update knowledge. The knowledge management behavior parameter in this study is experience that is resulted from the combination between explicit knowledge and tacit knowledge (Hussein et al., 2019) (Perkins and Arvinen-Muondo, 2013) (North and Kumta, 2018). Based on the theoretical review, it is possible to create 30 (thirty) indicators that will determine the indicators of knowledge management behaviors. Those indicators will be put in the research instrument below.

3 RESEARCH METHOD

The research instrument was developed based on the theoretical framework. The questionnaire consists of 30 (thirty) indicators of knowledge management behavior (KMB). Those thirty indicators were created based on previous researches and scholars' opinions. Those are: (1) gathering information to understand problems, (2) using data and facts to get new information, (3) making observations to get new knowledge, (4) looking for the most appropriate solution to overcome problems, (5) looking for new information to innovate, (6) anticipating change to gain new knowledge, (7) looking for various sources of information to gain knowledge, (8) asking the experts to get the right knowledge, (9) learning from experiences, (10) learning from mistakes, (11) sharing knowledge and expertise with others, (12) sharing knowledge and expertise to help others, (13) collaborating to find the most appropriate solution, (14) practicing the knowledge, (15) building a network with experts to exchange information, (16) documenting the knowledge owned to be easily used by others, (17) preparing ready-use information, testing new

ideas, (18) giving an assessment of new ideas that have been proven and tested, (19) building collaboration inside the organization, (20) benchmarking with other organization, (21) learning continuously to develop personal knowledge, (22) working together to develop present knowledge, (23) deepening expertise, (24) increasing the ability to work more optimally, (25) working together to renew the present work processes, (26) updating present knowledge through experiences, (27) recycling past experiences, (28) learning from mistakes to remake present knowledge better, (29) looking for various sources of information to renew present knowledge, and (30) asking experts to renew present knowledge. The aim of this research is determining the most dominant indicators of thirty knowledge management behavior indicators.

The research methodology is correlational surveys, uses the Neuroresearch method. Neuroresearch is a method of social science research that tried to proportionately combine the qualitative research methods (exploratory research) and quantitative research method (explanatory and confirmatory). Due to the balanced combination of qualitative method and quantitative method, it needs valid and reliable research instruments (calibration). One of the calibration phase is testing the construct validity which appropriates to Neuroresearch through Orthogonal Iteration approach and/or Varimax Iteration (Ying et al., 2015). Then, the results of qualitative research will be conducted using quantitative research. The purpose of explanatory studies is to examine the tendency of a dependent variable or endogenous variables. The research results will show the most dominant indicators to determine the formation of endogenous variables. The research instrument is based on a Likert scale questionnaire with a scale range of 1 to 4.

4 ANALYSIS

The respondents of this research were 268 employees of private educational institutions in Tangerang Selatan. The research was conducted by using offline questionnaire for a month research duration. The research instrument was developed into 30 items. The Knowledge Management Behavior (KMB.Y) instrument will be examined by constructing validity which is calculated by the Principle Component Axis and the rotation techniques with Varimax, with the minimum eigen value that is arbitrarily set to 0.600. Based on the iteration of 25 times, 24 items were produced consisting of 9 empirical indicators as indicators with new names with the composition of items such as table 1 below and the rela-

bility index of the KMB instrument of 0.894. Before proving the hypothesis, the linearity test with deviation from linearity was firstly examined based on the standardized score. If the data were not linear, the curve estimation test was carried out to 11 types of lines with the raw data test. The Results of Construct Validity Calculation of KMB.Y Instruments with the Principle Component Axis can be seen on table 1 below.

Table 1: The Results of Construct Validity Calculation (KMB.Y) Instruments with the Principle Component Axis.

Indicators Number(Xn)	The New Indicators Based On The New Composition Of The Instrument Using The Varimax Iteration on (KMB.Y) Instrument	The new name of the indicators based on the new composition of the (KMB.Y) Instrument
1.	3, 5, 6, 7	Knowledge-Based Discovering
2.	14, 21, 22, 24, 25	Knowledge-Based Learning
3.	26, 27, 28	Knowledge-Based Recycling
4.	16, 17, 18	Knowledge-Based Disseminating
5.	8, 30	Knowledge-Based Capturing
6.	11, 12, 13	Knowledge-Based Collaborating
7.	9, 10	Knowledge-Based Developing
8.	1	Knowledge-Based Solving
9.	19	Knowledge-Based Strengthening

The Summary of the linearity test is the relationship between each exogenous variable (X1 to X9) with the Knowledge Management Behavior variable (KMB.Y) as a dependent variable that functions as an endogenous variable (appendix 1). The relationship of each exogenous variable with Knowledge Management Behavior (KMB.Y) as a dependent variable, that functions as endogenous variables, has all been proven linear even though 4 (four) exogenous vari-

ables must be followed by curve estimation analysis of 11 line data (raw data test), and all of them produced a very significant F Linear test at $\alpha;0.01$. Thus, the line relationship between each exogenous variable with the Knowledge Management Behavior (KMB_Y) as an endogenous dependent variable is all variable in linear tolerance.

To prove the hypothesis, the effect of each exogenous variable (X1 through X9) on the endogenous variable (KMB_Y) was analyzed. The results of the exogenous variable's own influence analysis include Knowledge-Based Discovering (X1), Knowledge-Based Learning (X2), Knowledge-Based Recycling (X3), Knowledge-Based Disseminating (X4), Knowledge-Based Capturing (X5), Knowledge-Based Collaborating (X6), Knowledge-Based Developing (X7), Knowledge-Based Solving (X8), and Knowledge-Based Strengthening (X9) towards the endogenous variable, Knowledge Management Behavior (KMB_Y).

Knowledge-Based Learning (X2) itself is the most decisive variable in determining the condition of Knowledge Management Behavior (KMB_Y). This is illustrated through the results of relationship analysis in the sample between Knowledge-Based Learning (X2) and the Knowledge Management Behavior (KMB_Y) of r^2 that is equal to 0.794 which means (X2) is having a positive relationship. Determination of variance that describes the close relationship between Knowledge-Based Learning (X2) and Knowledge Management Behavior (KMB_Y) is r^2 of 0.628 (62.8%) (appendix 2).

While the relationship in the population between Knowledge-Based Learning (X2) with the Knowledge Management Behavior (KMB_Y) is indicated by (t) of 21,276, which is very significant at $\alpha;0.01$. The influence in the sample Knowledge-Based Learning (X2) on the Knowledge Management Behavior (KMB_Y) is shown through the linear regression line equation $\hat{Y} = 3.010X_2$. While the influence in the population Knowledge-Based Learning (X2) on Knowledge Management Behavior (KMB_Y) is indicated by Freg is 452.67 that is very significant at $\alpha;0.01$. The analysis found that Knowledge-Based Learning (X2) is the most dominant indicator in determining the realization of Knowledge Management Behavior (KMB_Y) with a contribution of 62.8%. Graphically, the results can be shown with the following figure (see figure 2).

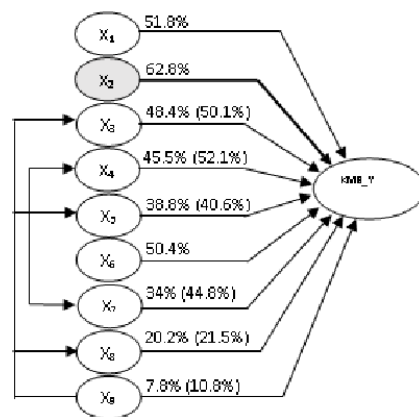


Figure 2: The Most Dominant Indicator in Determining the Realization of (KMB_Y).

5 DISCUSSION

The above result indicates that Knowledge-Based Learning (X2) is the most decisive indicator in determining the employees' knowledge management behaviors. Knowledge-Based Learning are (14) practicing the knowledge, (21) learning continuously to develop personal knowledge, (22) working together to develop present knowledge, (24) increasing the ability to work more optimally, and (25) working together to renew the present work processes. Those results can support the statement that knowledge is created through social interactions between individuals and organizations, so that knowledge is dynamic and humanistic. It is possible to say that knowledge is gained through social interaction in knowledge-based learning.

The most decisive indicator means that a person who doing the knowledge-based learning can be described as a person who has knowledge management behavior. The research result showed that knowledge sharing behavior is not the only indicator of knowledge management behavior. Knowledge-based learning can be a starting point of building knowledge culture. The eagerness and willingness of improving oneself can be a trigger in developing and enhancing one's capabilities.

The research also shows that knowledge management behavior is a possible way to support self-directed learning through social interaction among organization members. Knowledge-Based Learning like practicing the knowledge, learning continuously to develop personal knowledge, working together to develop present knowledge, increasing the ability to work more optimally, working together to renew the present work processes can also be stated as knowledge-based activities in learning and develop-

ment.

The research explain that social interaction can facilitate the learning. It would be more beneficial for the individual and the organization if there is an knowledge-based interaction between individual. One's knowledge repository can enrich another person's knowledge repository. If there is a continuous knowledge exchange between individual, the knowledge culture could be created.

Knowledge-Based Learning as the most decisive indicator may accommodate the acquisition of knowledge, skills and experience, through individuals and groups, both structured and individually. It also involves facilitating the acquisition of knowledge and skills through experience, learning events and programs provided by organization or self-directed learning.

The analysis also pinpoints that Knowledge-Based Learning can be used as the knowledge-based activities in developing intellectual capital, social capital and organizational capital. Moreover Knowledge-Based Learning could be prepared as knowledge-based organizational routines that will effectively tap into, organize and utilize people's competencies, experiences, expertise, skills, talents, thoughts, ideas, intuitions, commitments, innovations, practices, imaginations and the integration. Those activities may change the personal knowledge into the organization's knowledge-based resources in order to achieve goals, to have a distinctive capability and to create a learning organization. Eventually, it will gain a sustainable competitive advantage. Practicing knowledge-based learning may support the organization to create knowledge as intangible firm-specific resources that is believed to add up the organizational sustainable values since it is unique and inimitable. As a result, a lasting competitive advantage will be obtained with rarity and inimitability.

Having a rare and inimitability resources may be started by simple activities during the informal activities such as in coffee morning setting or in lunch break setting to facilitate the exchange of knowledge. Furthermore, routine daily journal activities can also support the knowledge based activities. The habit of writing daily working results can help collecting work best practices that may have benefits for others and the organization.

6 CONCLUSION

The research shows that the most decisive indicator of knowledge management behavior is knowledge-based learning like practicing the knowledge, learning

continuously to develop personal knowledge, working together to develop present knowledge, increasing the ability to work more optimally, and working together to renew the present work processes. Those indicators are known as knowledge-based activities. Additionally, those knowledge-based activities could be created as organizational routines to get knowledge as intangible firm-specific resources. As mentioned previously, social interaction is needed in gaining knowledge since knowledge is a dynamic and humanistic processes. Therefore creating and improving knowledge need a social interaction. Knowledge-based learning could be considered as a part of learning and development to create organizational learning to achieve rarity, inimitability, and sustainability.

Another suggestion to offer is the development of knowledge-based awareness since knowledge has unique characteristics. Developing knowledge-based awareness will make people realize when knowledge is disseminated. Moreover, the knowledge itself will not diminish since it will be getting richer and broader in the content shared. Another way to motivate knowledge sharing is making a periodic group activities such as making a learning history methods based on the applied knowledge management behavior. Finally, the behavior of those who manage the knowledge within the organization is critically important to the successful implementation of knowledge-based initiative.

This research still have limitations in terms of its variables. Therefore it might be more beneficial to examine other influential variables such as social behavior and leadership since those might have influence on knowledge management behavior to create organizational learning. It will also be better if the research is applied in may kind of industries to examine the knowledge management behavior of many professions.

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APPENDIX

see in Table 3.

The results of the linearity test of the relationship between each exogenous variable (X) to No) truly endogenous variable

Linearity Test	Statistics	Decision from Linearity Test	Linearity from Raw Data Test			
(X) and (K2M) Y1	2.700	0.004	Non-Linear	207.44	0.000	Linear
(X) and (K2M) Y2	2.196	0.016	Non-Linear	453.07	0.000	Linear
(X) and (K2M) Y3	1.879	0.064	Linear	233.62	0.000	Linear
(X) and (K2M) Y4	2.861	0.004	Non-Linear	169.97	0.000	Linear
(X) and (K2M) Y5	2.885	0.000	Non-Linear	-	-	-
(X) and (K2M) Y6	0.916	0.500	Linear	-	-	-
(X) and (K2M) Y7	1.493	0.205	Linear	-	-	-
(X) and (K2M) Y8	1.543	0.207	Linear	-	-	-
(X) and (K2M) Y9	2.887	0.000	Non-Linear	23.45	0.000	Linear

The statistic measure of the effect of each exogenous variable (X) to No) on endogenous variables (K2M) Y1) to determine the strongest influence bearing (K2M) Y1)

	X1	X2	X3	X4	X5	X6	X7	X8	X9
line	0.721	0.794	0.697	0.976	0.624	0.711	0.531	0.433	0.285
F	81.53	84.28	84.84	84.91	81.04	81.84	81.82	80.52	80.78
(p>F)	51.8	42.8	40.4	45.5	38.8	50.4	34.0	29.2	7.8
Sig	16.954	23.276	15.872	14.954	13.897	16.499	11.769	8.288	3.842
Sig out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
T>95%CL	3.870	3.889	4.161	3.319	3.823	3.314	4.091	4.434	3.366
F	217.44	482.87	219.19	225.62	169.97	223.02	118.52	68.56	23.45
Sig out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
line	-	-	-	0.212	0.027	-	0.242	0.019	0.002
F	-	-	-	0.501	0.521	0.406	0.440	0.219	0.108
(p>F)	-	-	-	50.1	52.1	40.6	44.8	21.9	10.8