

The Role of Knowledge Sharing and Innovation on Employee Performance

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ABSTRACT

The impact of knowledge sharing on employee performance has attracted considerable research attention over the last decade. However, there is limited research done in Indonesia, especially in higher education under the auspices of the Muhammadiyah organization. Nowadays, there is an awareness of the importance of knowledge sharing in creating a competitive advantage. Moreover, supported by individual innovation capabilities, knowledge sharing can be more effective. This study analyzed the role of individual innovation capabilities as a mediation between knowledge sharing and employee performance. One hundred eighty-seven questionnaires were distributed to permanent lecturers at Muhammadiyah universities in Yogyakarta. The results showed that knowledge sharing positively and significantly affected individual innovation capabilities. Both individual innovation capabilities and knowledge sharing had a positive and significant impact on employee performance. This research has proven that individual innovation capabilities play an essential role in mediation between knowledge sharing and employee performance.

Keywords: *Knowledge Sharing, Individual Innovation Capabilities, Employee Performance, Muhammadiyah Universities.*

1. INTRODUCTION

Knowledge is an intangible asset in an organization that should maximize its utilization. Currently, knowledge management began to become the focus of attention among practitioners and academics. The organization has realized that in order to compete in the fast-evolving market, there is a need to include competence and knowledge offered to the customers [1]. In this "knowledge era," only organizations that can manage their knowledge optimally will survive in a competitive environment. Knowledge is the key for an organization to have a sustainable competitive advantage. Organizational learning also enables companies to build capabilities and intellectual capital, which can provide the firm with the ability to manage intangible resources for a sustainable competitive advantage [2].

One of the activities that play a role in knowledge management is knowledge sharing. Better knowledge sharing allows us to disseminate, implement, and develop existing knowledge. If knowledge is not shared systematically, it will be detrimental to the organization because knowledge is only inherent in the mind. Sharing knowledge can also stimulate an individual to think creatively, effectively, efficiently, and innovatively. The

company hopes that this ability can generate new knowledge that is useful for them.

The main focus of innovation is creating new ideas so that they can implement products or processes. The main goal of innovation is to provide effectiveness and efficiency levels that can improve employee performance and ultimately impact organizational performance.

This phenomenon does not only apply to profit-oriented organizations but also non-profit organizations, such as colleges. In this case, Yogyakarta is a student city based on data on the website of the Ministry of Research, Technology, and Higher Education. It has 137 colleges that are still actively operating. This high number makes each organization (college) compete healthily to survive in the increasingly fierce competition, including Muhammadiyah Universities in Yogyakarta. Muhammadiyah is a community organization with a vast network in education, health, and da'wah. The latest data uncovered that Muhammadiyah has 162 universities, consisting of 57 universities, 80 colleges, five academies, seven institutes, three polytechnics, and eight Aisyiyah Universities. To provide quality services for their students, these organizations must create value from innovation and superior employee performance.

However, there is limited research on knowledge sharing in Muhammadiyah organizations.

Based on the phenomena described above, it is necessary to research the effect of knowledge sharing and individuals' ability to innovate on employees' performance to be carried out at Muhammadiyah Colleges in Yogyakarta. This research is hoped to be useful as an input to develop knowledge for researchers, readers, and the organizations themselves.

2. LITERATURE REVIEW AND HYPOTHESES

Knowledge Sharing

Knowledge sharing is one of the methods in the knowledge management cycle where individuals share or exchange their knowledge to create a new one later [3]. Knowledge sharing is the primary process of the knowledge management section. It provides broad learning opportunities for all organization members to increase their abilities independently [4]. Therefore, effective knowledge sharing is needed so that knowledge management is carried out successfully in an organization or company. Knowledge sharing is a process to communicate explicit or tacit knowledge to other individuals [5].

Individual Innovation Capability

Innovation is the application of their new ideas into products, processes, and other aspects of the company's activities. Innovation focuses on the process of turning ideas into values [6]. The individual innovation capability is the ability of each individual to apply new ideas he/she has in a product or process [7]. Increased ability to innovate can help individuals overcome problems in the work so that the quality and quantity of work can be better. The high capacity to innovate can support the emergence of initiatives to produce more effective and efficient work methods.

Employee Performance

Performance is a general term employed for some or all actions or activities of an organization in a period. Employee performance indicates the employee's financial or non-financial outcome that directly links with the performance of the organization and its success [8].

According to Sedarmayanti [9], performance is the work result of each individual to achieve organizational goals. It allows the employee to demonstrate the work results concretely and measurable (compared with predetermined standards).

Knowledge Sharing and Individual Innovation Capabilities

By sharing knowledge with other individuals, the expertise will increase. These activities are closely related to improving individuals' ability to innovate through the knowledge they have. Capability or capacity in innovation is the ability to adapt and integrate all expertise, functional competencies, and available resources. Explicit knowledge sharing and tacit knowledge sharing affect innovation speed and quality significantly [10].

Therefore, the following hypothesis was proposed:

H1: Knowledge sharing is positively related to individual innovation capability.

Individual Innovation Capability and Employee Performance

The increased ability to innovate will help individuals overcome problems in work so that the quality and quantity of work can be better than before. The well-innovated ability will help individuals take the initiative to produce ideas so the work process more effective and efficient. The ability to innovate is indicated by always trying new ideas, trying new operating methods, and product innovation. All will improve employee performance [11].

Thus, the second hypothesis was proposed:

H2: Individual innovation capability is positively related to employee performance.

Knowledge Sharing and Employee Performance

Knowledge sharing activities that include sharing experiences and knowledge possessed will help individuals solve problems encountered in work based on real experience. Likewise, individuals will get more knowledge to improve their work processes' effectiveness and efficiency from sharing this knowledge. It can directly enhance individual performance. That way, increased knowledge sharing activities will affect individual performance improvement [12].

Therefore, the following hypothesis was proposed:

H3: Knowledge sharing is positively related to employee performance.

Knowledge Sharing on Employee Performance through Individual Innovation Capabilities

Knowledge sharing carried out by individuals one to another can increase their knowledge, which can bring up new ideas in the work process. It means the better implementation of knowledge sharing, the higher the improvement and innovation capability. The high individual innovation will later affect employees'

performance, which will indirectly affect the company's performance improvement [13].

Thus, the fourth hypothesis was proposed:

H4: Knowledge sharing is positively related to employee performance through individual innovation capability.

3. RESEARCH MODEL

Figure 1 describes the research model.

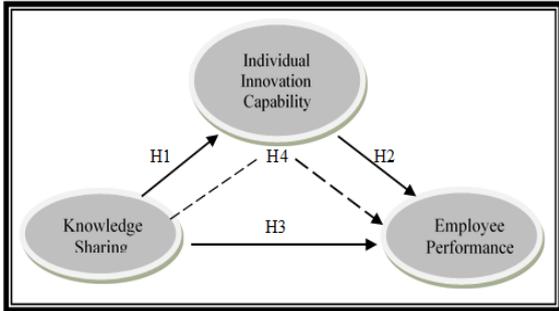


Figure 1 The Research Model

4. METHODOLOGY

Sampling and Data Collection

A quantitative research method was adopted to achieve the research aims. The population included employees (lectures) of Muhammadiyah and Aisyiyah Universities in Yogyakarta: Universitas Muhammadiyah Yogyakarta, Universitas Ahmad Dahlan, and Universitas Aisyiyah Yogyakarta. A sample of 15% was taken from the total number of lecturers in the three universities. A total of 187 questionnaires was collected and suitable for analysis. This study used a purposive sampling technique, with the criteria: (1) Lecturers, who were permanent employees at the universities; (2) The minimum working period was one year.

Table 1. Reliability

Variables	Construct Reliability	Variance Extracted
Knowledge Sharing	0.91	0.56
Individual Innovation Capability	0.93	0.63
Employee Performance	0.94	0.62
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Employee Performance	0.94	0.62

Source: Data processed, 2019

Measurement

Knowledge sharing was measured with eight items based on two indicators: tacit knowledge and explicit knowledge, adopted from Hoof and Ridder [3]. Eight items from three indicators were employed to measure individual innovation capability, adopted from Aulawi, et al. [14], including personal character, behavior, and innovation results. Meanwhile, employee performance used five indicators adopted from Bangun [15], comprising the number of jobs, quality of work, timeliness, attendance, and ability to work together. It consisted of nine items.

Besides, Structural Equation Modeling (SEM) was utilized to analyze data. It is a good tool to analyze behavioral research.

5. RESULTS AND ANALYSIS

Validity and Reliability

A validity test is a test conducted to determine the extent to which the measuring instrument used in the study is appropriate and related to the variable. The valid items are indicated by the Factor Loading > 0.5 and declared invalid if the Factor Loading value < 0.5 [16]. In this study, the research instrument consisted of 25 lists of statements, representing each of the three variables with total respondents of 187. The Factor Loading value of all question items showed a number > 0.5, so the validity test results indicated that all question indicators were declared valid.

Further, the reliability test was used to determine the instrument's consistency from time to time. The reliable items are indicated by the value of Construct Reliability (CR). CR equal to or higher than 0.7 means that the instrument is reliable [17]. Variance Extracted (VE) was also employed, with criteria > 0.5.

The following are the reliability test results:

In this study, CR values indicated the number > 0.7 and VE > 0.5 so that all the instruments were reliable and could be used for the next step.

The Evaluation of SEM Assumptions

The SEM assumption test was conducted, consisting of the data normality test and outlier test. The normality test used the z-value of the skewness and kurtosis of data distribution. It was found that the data distribution was normal so that it met the normality assumption. Likewise,

the evaluation of multivariate outliers was seen through the output of Mahalanobis Distance, and the results revealed no outlier data discovered.

The Goodness of Fit Model

Assessing the goodness of fit is the main goal in SEM to find out how far the hypothesized model is "Fit" or according to the existing data sample.

The following table is the goodness of fit results in this study:

Table 2. The Goodness of Fit Test Results

The goodness of fit index	Cut-off value	This Model	Results
Chi-square	Less than 311,467	343,461	Marginal
Significant probability	(df = 272, p =0.05)	0,002	Marginal
RMSEA	≥ 0.05	0,038	Fit
GFI	≤ 0.08	0,874	Marginal
AGFI	≥ 0.90	0,849	Fit
CMIN/DF	≥ 0.80	1,263	Fit
TLI	≤ 2.00	0,976	Fit
CFI	≥ 0.90	0,978	Fit

Source: Data processed, 2019

Table 2 shows that five of the eight criteria were eligible. Regarding the parsimony principle proposed by Arbuckle and Wothke [18], if one or two criteria have been met (fit), the overall model can be accepted. Thus, this study's model was accepted.

Hypothesis Test Results

One way to see the hypothesis testing results is the output of standardized regression weight. Regression weight is a tool to test a relationship between exogenous variables and endogenous variables. Ghazali [19] states that the hypothesis can be accepted if the result of the probability value is smaller than 0.05, and the CR is higher than 2.00. Here are the results of the H1, H2, and H3 tests:

Table 3. Hypotheses Testing Results

			Standardized Estimate	SE	CR	P
Individual Innovation Capability	←	Knowledge Sharing	0.632	0.085	7.418	0,000
Employee Performance	←	Individual Innovation Capability	0.762	0.075	10.097	0,000
Employee Performance	←	Knowledge Sharing	0.142	0.052	2.722	0,006

Source: Data processed, 2019

The table presents that all three hypotheses were supported according to the criteria used. Meanwhile, to test hypothesis 4, the values of standardized direct and indirect effects were compared. Table IV displays the standardized direct and indirect effect outputs.

The results revealed the direct effect value of 0.146 < the indirect effect value of 0.495. It denoted that the

indirect effect's value was higher than the direct effect value so that the individual innovation capability could mediate the effect of knowledge sharing on employee performance. In other words, better knowledge sharing will create good individual innovation capabilities and impact improving employee performance. This result supported hypothesis 4.

Table 4. Standardized Direct and Indirect Effect

	Standardized Direct Effect		Standardized Indirect Effect	
Individual Innovation Capability	0.598	0.000	0.000	0.000
Employee Performance	0.146	0.828	0.495	0.000

Source: Data processed, 2019

6. DISCUSSION

The better sharing of knowledge between employees will encourage the creation of good cooperation between them. The knowledge sharing activities carried out among these employees will produce creative ideas to enhance innovation, process, and product innovation. Examples of knowledge sharing activities carried out among lecturers are sharing expertise, new information, and new references owned by individuals. This study's results are similar to the research by Zoohori et al. [10], [20], [14], [21], [22], [11].

Sharing good knowledge is one of the significant factors in increasing individual innovation capability possessed by lecturers at the Muhammadiyah Universities at Yogyakarta. Individuals who have an excellent ability to innovate will have better performance. The better the individuals' innovation capability, the better the individuals will do their work, improving their performance as employees. The employees who manage their resources by developing new ideas can achieve their performance. In practice, lecturers at Muhammadiyah Higher Education can innovate, indicated by their ability to create useful new ideas for the university. These results support previous research by Azadehdel et al. [3], [11], [22].

Sharing knowledge between individuals in an organization will produce new ideas that are more creative and innovative to complete their tasks. The better the knowledge shared by each individual, the more effective and efficient individual will be in completing work to improve the individual performance as an employee. The results align with previous studies conducted by Wening et al. [12], [23], [24], [22], which states that there is a positive and significant influence between knowledge sharing on employee performance.

Knowledge sharing between individuals can increase their knowledge. Furthermore, this knowledge can be used to generate new ideas and innovations in the work process. Increasing this individual innovation capability can also affect employee performance, directly affecting the company's performance improvement.

Therefore, it could be concluded that there was an indirect effect between knowledge sharing variables on employee performance through innovation capabilities.

These results are in agreement with the previous research carried out by Azadehdel et al. [13], [23], [25], [22].

7. CONCLUSION

Sharing good knowledge is one of the significant factors in increasing individual innovation capability possessed by lecturers at the Muhammadiyah Universities at Yogyakarta. Knowledge sharing between individuals can increase their knowledge. This knowledge can be used to generate new ideas and innovations in the work process. Increasing this individual innovation capability can also affect employee performance, directly affecting the company's performance improvement. Therefore, it could be concluded that there was an indirect effect between knowledge sharing variables on employee performance through innovation capabilities.

8. RESEARCH LIMITATION

In conducting this research, several limitations were encountered, as follows:

1. Self-report was employed for employee performance variables. It allows for bias.
2. This study also only used the perspective of several theories that explain the influence between related variables. Many other theories can provide different views on this research topic.

9. RECOMMENDATION AND FUTURE RESEARCH

Based on the discussion and conclusions above, the suggestions are as follows:

1. For universities, these results can be an input to assist its employees, which in this case are lecturers, to increase the knowledge sharing activities.
2. For lecturers, these results are expected to encourage the enthusiasm to increase knowledge sharing activities to improve individual innovation capabilities and individual employee performance. Furthermore, it can directly improve higher education performance.

3. For further research, it needs to use interviewing techniques to get more prosperous and more in-depth results.

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