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The Effect of Knowledge Sharing and Enrichment on Lecturer Innovation Performance in General Achmad Yani University

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Abstract

The annual evaluation carried out by LLDIKTI looked at the performance of lecturers in their regions, and it was revealed that some lecturers, especially lecturers at Jenderal Ahmad Yani University (UNJANI), still had difficulty fulfilling the tridharma duties of teaching, research and community service, which are important aspects of higher education. To consistently fulfill these obligations, lecturers are required to innovate. A study aimed at exploring how knowledge exchange and enrichment impact the innovative performance of UNJANI lecturers, collecting data through an online survey distributed to them. This research aims to understand the influence of knowledge sharing and enrichment on lecturer innovation, and its success is assessed through questionnaire analysis. These findings underscore the important positive correlation between knowledge sharing, enrichment, and increased innovative performance among UNJANI lecturers, indicating that encouraging these practices can increase the fulfillment of tri dharma obligations.

Keywords: Innovative performance, Knowledge sharing, Knowledge enrichment

1. Introduction

The performance assessment of lecturers at Region IV Higher Education Service Institutions in 2019, as stated in Letter Number 3779/L4/KP/2019, shows that many lecturers have difficulty meeting the essential performance criteria required to carry out their duties. The report noted that within UNJANI there were 7 lecturers who did not fulfill their BKD obligations, and 22 lecturers had their BKD not approved, resulting in the tri dharma not being completed in the odd semester 2018/2019. Likewise, in the even semester of the 2018/2019 academic year, 12 UNJANI lecturers were unable to fulfill their BKD obligations, and 21 people had not completed the tri dharma. To fulfill the performance requirements, lecturers must complete a minimum of 12 semester credit units distributed to the tri dharma of higher education which includes teaching, community service and research.

Furthermore, universities have the responsibility to provide education and teaching based on Indonesian national culture using a scientific approach. Lecturers play an important role in this educational process and are expected to be able to fulfill their tri dharma obligations. This obligation becomes a benchmark for evaluating lecturer performance, the unit of measurement of which is the semester credit unit. Each credit represents 50 minutes of classroom teaching, and lecturers are usually given a workload ranging from a minimum of 12 to a maximum of 16 credits per semester.

To find out more about the performance, creativity and innovation of lecturers, it is necessary to conduct a study that examines innovative performance among UNJANI lecturers, especially with a focus on the use of the concept of sharing knowledge and enrichment. This research aims to determine the extent of the influence of knowledge sharing and enrichment on performance innovation in meeting minimum credit unit requirements. It is hoped that the use of the Knowledge Management concept can explain the impact of knowledge sharing and enrichment on lecturer performance innovation.

1.1. Knowledge Management

New knowledge in an organization will always exist and develop. In order for changes in knowledge in the organization to be maintained and provide benefits, a system is needed that can manage them. The system is named K*nowledge management system* (KMS). Knowledge management or knowledge management is a set

of tools, methods, and strategies used to analyze, maintain, share, improve, and organize information owned by a company.(Abubakar 2019)

1.2. Knowledge sharing dan Enrichment

Knowledge sharing can be carried by the organization to its employees manually (memos and instructions) or electronically (websites, e-books) and knowledge sharing can occur between organizational employees (for example, through group discussions and internal meetings) as well as with people outside the organization (eg through attending seminars and workshops). (Abdullah, 2023). In addition, knowledge can also be taken from online media which is distributed freely. During the process of sharing knowledge is usually refined and enriched.

According to (Oranga, 2023) successful sharing of explicit knowledge is determined by the following criteria:

1) Articulation: The ability of the user to define what he or she needs.
2) Awareness: Awareness of available knowledge. Providers are encouraged to use company directories, maps, yellow pages, etc.
3) Access: Access to knowledge.
4) Guidance: Knowledge managers are often considered important in building sharing systems (Davenport and Prusak, 1998). They should help define the areas of expertise of company members, guide their contributions, assist users, and be responsible for the language used in publications and other communication materials. This is to avoid information/knowledge overload.
5) Completeness: Access to centrally managed and self-published knowledge. The former is often more researched but takes longer to publish and is indirect (and potentially relevant). On the other hand, self-published information runs the risk of being unreliable.

Communities are an excellent vehicle for sharing knowledge among people who have a common interest. Communities are usually made up of groups of people who share knowledge, concerns, or interests in a particular area. The result of their continuous interaction with each other and generally through the media of information and communication technology. Communities usually consist of community members who enrich their knowledge and expertise in certain fields (Abdullah, 2023). The principle of sharing and enrichment of knowledge must occur throughout the organization. This can be facilitated by providing certain incentives to those who actively share useful knowledge and those who frequently reuse the knowledge that has been shared.

1.3. Performance

The definition of performance in general is the result of work in quality and quantity of a person in carrying out duties as an employee in accordance with the responsibilities assigned to him. Another definition says a person's performance is a combination of ability, effort and opportunity that can be assessed from the results of his work. (Abubakar 2019). Studying teacher knowledge management is also an entry point to studying knowledge management in education. To ensure the healthy and sustainable development of teachers' knowledge management abilities, it is essential to evaluate their management level in a scientific, objective and comprehensive manner.(Wang et al. 2018)

1.4. Innovative performance

(Woodman 2014) in his book reveals that innovation performance is a work result that is measured from three dimensions, namely product innovation, process innovation and managerial innovation, these three things have implications for improving quality and efficiency. Innovative performance when viewed from the results will be different from ordinary performance. Innovation consists of generating new ideas and implementing them into new products, processes or services. Innovation is never a one-time phenomenon, but a long and cumulative process of a large number of decision-making processes, from the generation of a new idea to its implementation phase.

New ideas refer to perceptions of new customer needs or new ways of producing. This is generated in a cumulative process of gathering information, coupled with an ever-challenging entrepreneurial vision. Through the implementation process, new ideas are developed and commercialized into new marketable products or new processes with reduced costs and increased productivity. (Popadiuk and Choo 2006)

2. Research Method

The purpose of this research is to:

1. Find out how much the concepts of knowledge sharing and enrichment affect the performance innovations carried out by lecturers,
2. After the results are obtained, it is hoped that they can provide a good overview so that they can be used as a basis for improving and developing the overall performance of UNJANI lecturers.

2.1. Research Objects and Subjects

The research object in this research is to know the use of knowledge management used by lecturers in fulfilling the lecturer performance load (BKD) requested by LLDIKTI IV, especially the use

of knowledge sharing and enrichment in the implementation process. The research subjects in this study were lecturers at UNJANI. The number of lecturers involved was 390 people with a demographic distribution of 265 men and 129 women with an age range between 26 to 58 years, of which 156 had doctoral degrees and 234 masters.

2.2. Design and Type of Research

The research design used is the process of collecting, measuring and analyzing data. This research uses a quantitative approach and explanatory survey. Quantitative method research begins by developing propositions which are then proven by testing the truth of the propositions conveyed. Then submit the hypothesis, then the data is tested quantitatively. Explanatory survey research is research where the data is taken from the sample domain in question, in this case the lecturers at LLdikti IV. This research is a causality research type. Causality research aims to get an explanation of the causal relationship between several variables. The data collected in this study is the result of sampling the population, using questionnaires and interviews at one time.

2.3. Measurement Models

The measurement model used is a multivariate quantitative test which serves to describe the relationship between the observed variables. This technique helps researchers to test or validate theoretical models for theory testing and extensions.

2.4. Varable Operational

The relationship between variables can be grouped into 2 types.

1. The independent variable, the variable that is the cause or theoretically has the possibility of having an impact on other variables
2. Dependent variable is a variable that is structurally scientifically thought to be a variable caused by changes in other variables (Ahyar et al. 2020)

The name of the independent variable in this study is the Knowledge Management Sharing variable (X1), as the dependent variable is Innovative Performance (Y).

For more details can be seen in table 1.

2.5. Unit of Analysis

Social interaction within a particular set of people studied in a study is called the unit of analysis. Based on this explanation, the community group in this study is the lecturer, while the social interaction that is studied is the performance of the lecturer. From the explanation above, the unit of analysis in this study is the performance of lecturers at UNJANI.

2.5.1. Research Participan

Participants are subjects who are involved as participants in responding to the activities carried out or in other words are people who participate in an activity. Participants in this study were lecturers from UNJANI. In this case, the object of the lecturers who filled out the survey were 393 lecturers.

2.5.2. Data Types and Sources

Data is divided into two, namely primary data and secondary data.

a. Primary data
   Primary data is data obtained or collected directly in the field by researchers from the person concerned.
b. Secondary Data
   Secondary data is data obtained from other existing sources. The author does not collect data directly from the object under study.

2.5.3. Data Collection Technique

Field data collection was carried out by means of a questionnaire. The questionnaire contains several questions related to the research object. Questionnaires were distributed and then filled out by respondents who met the criteria specified in this study. The purpose of distributing this questionnaire is to obtain field data which is then tested for validity and reliability for further processing. The measurement scale used in this study is a semantic differential scale arranged in a continuum line where very positive answers are located on the right side of the line, and very negative answers are located on the left side of the line, or vice versa. The answers obtained from each question are given the smallest score, namely 1 to the largest value of 5.

The use of a semantic differential scale as shown in table 2.

2.5.4. Population, Sample and Sampling Technique

The samples taken are adjusted to the number of lecturers in each tertiary institution, with these adjustments it is hoped that they will represent lecturers from each study program in each of these tertiary institutions.

The sampling technique used is Strata Random Sample (SRS).

Table 1. Operational Variables

Concept	Variable	Dimention	Indicator	Scale
Knowledge Management is the process of managing knowledge by creating and capturing knowledge, knowledge sharing and enrichment, storage and retrieval of information, and dissemination of knowledge (Abdullah, 2023).	Knowledge management components	Sharing and Enrichment is the process of disseminating and enriching knowledge by the organization. The process is manual (memos and instructions) or electronic (websites, e-books) and knowledge sharing can occur between organizational employees (eg, through group discussions and internal meetings) as well as with people outside the organization (eg through attending seminars and workshops). (Abdullah, 2023)	I share the knowledge I understand by attending scientific seminars	Ordinal
			I share knowledge using technology (internet)	Ordinal
			I share knowledge through the community (scientific group)	Ordinal
			I enrich the knowledge that I understand by attending scientific seminar	Ordinal
(Mardani *et al.*, 2018) 1. Speed 2. Quality 3. Quantity	Innovative Performance Criteria	Classification according (Mardani *et al.*, 2018) are three aspects of innovation: 1) Speed of innovation; Increasing levels of competition, technological developments in the market, and shorter product life cycles are forcing companies to accelerate innovation according to specificati-on. 2) Quality of innovation; The quality of innovation can be viewed from different perspectives by each person who uses it. Therefore, in determining the variable, it must be agreed upon beforehand. 3) Quantity of Innovation. Quantity innovation is defined as the number of new or better products and services launched into the market that are superior to the industry average.	1. Speed (Fast innovation)	Ordinal
			2. Quality (Quality innovation)	Ordinal
			3. Quantity (Many innovations)	Ordinal

Table 2. Semantic defferential scale

Very Negative	Score	Very Positive
Very low	1 2 3 4 5	Very High
Very Bad	1 2 3 4 5	Very Good

3. Results and Discussion

In research with a qualitative approach, the focus of research problems requires researchers to carry out systematic, in-depth, and meaningful assessments as emphasized by Burgess below.
"In qualitative research, all investigators or researchers focus on the problems studied, guided by conceptual or theoretical frameworks" (Sudarwan and Darwis 2003). Data analysis is a process intended to examine, clean, change, and model data with the aim of finding useful information so that it can provide guidance for researchers to make decisions on research questions. (Anwar 2017).

3.1. Measurement models and results

The measurement model is a series of conformatory factor analysis testing processes in the structural equation model, where conformatory factor analysis is carried out on exogenous or endogenous variables which are tests to find out the indicators in the research variables. Furthermore, if the evaluation of the model and the results of the goodness of fit are not fit, the steps that must be taken are to modify the model so that it becomes fit with a sample size ranging from 200-400 or <800.
The model formed in this study consists of the independent variable Knowledge Management (KM) as measured by 2 dimensions, namely Knowledge Sharing and Enrichment (KS) with 4 indicators (X1-X4), for the next independent variable is innovative performance as the dependent variable measured by 3 indicators, namely speed, quality and quantity (Y1 - Y3).

3.2. Structural Equation Model (SEM) on Amos

The structural equation model (SEM) is a model which states that there is a causal relationship between the dimensions or variables being analyzed. The structural model of influence between research variables is shown in the figure 1.

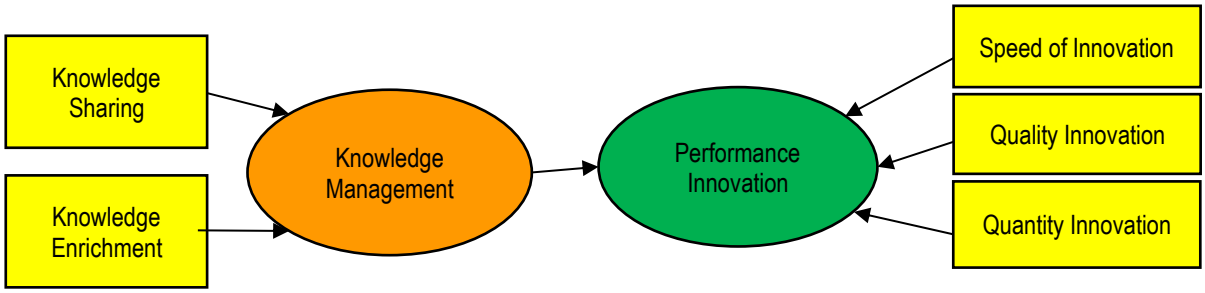

Figure 1. The Effect of Knowledge Management (Knowledge Sharing and Enrichment) on Performance Innovation (Speed Innovation , Quality Innovation and Quantity Innovation)

3.3. Descriptive Analysis of Respondents' Perceptions and Question-naire Results

Descriptive analysis includes data related to respondents' perceptions of research variables, in this case the variables in this study are knowledge management and lecturer innovative performance. The description of the respon-dent's response data can be used to enrich the discussion, through the description of the respondent's response data it can be seen how the condition of each variable indicator being studied. In order to make it easier to interpret the variables being studied, a categorization of the respondent's score was carried out. The principle of categorization is based on the weight of the score by finding the interval distance from each category based on the number of highest and lowest scales, resulting in the following classification:

Table 3. Respondents' Perception Interpretation Categories

No	Rentang Persentase	Kategori
1	20.0% - 36.0%	Very Poor/Very Low
2	>36.0% - 52.0%	Not Good/Low
3	>52.0% - 68.0%	Fair/Moderate
4	>68.0% - 84.0%	Good/High
5	>84.0% - 100.0%	Very Good/Very High

Table 4 is the result of calculating the questionnaire.

Table 4. Respondents' Responses Regarding the Knowledge Management Dimension of Sharing & Enrichment

No	Indicator	Total Score	Percent	Category
1	I disseminate the knowledge I understand through scientific seminars	1398	71.7%	Good
2	I disseminate knowledge by using technology (internet)	1468	75.3%	Good
3	I disseminate knowledge through communities (groups/associations/scientific societies)	1326	68.0%	Fair
4	I enrich the knowledge that I understand by reading books	1580	81.0%	Good
5	I enrich my knowledge by using technology (internet)	1742	89.3%	Very Good
6	I enrich my knowledge through communities (groups/associations/scientific societies)	1486	76.2%	Good
	Sharing & Enrichment	9000	76.9%	Good

Source: Research Data, 2023

Table 5. Recapitulation of Respondents' Responses Regarding the Innovative Performance of Lecturers

No	Dimensions	Indicator	Total Score	Percentage	Category
1	Speed of Innovation	I am able to produce innovation performance quickly	1507	77.3%	Good
2	Quality of Innovation	I am able to produce quality innovation performance	1502	77.0%	Good
3	Quantity of Innovation	I am able to produce more than one Innovation Performance	1484	76.1%	Good
	Lecturer Innovative Performance		4493	76.8%	Good

Source: Research Data, 2023

Based on the recapitulation table 5, it can be seen that the total score of knowledge management in the sharing and enrichment dimension has a total value of 9,000 with a percentage of 76.8% and this value is in the good category range based on the provisions in table 4. This means that respondents have a good perception of Sharing & Enrichment in the UNJANI environment.

3.4. Measurement Model Testing

Testing the measurement model in this study uses a one-level test called the one-level confirmatory factor analysis (CFA) approach (first order). The first level (first order) shows the relationship between the dimensions and the variables. The results of the intended CFA test are explained as follows:

3.5. CFA Knowledge Management

Knowledge management is operationalized into 4 (four) dimensions. Knowledge management testing the validity and reliability of each indicator is presented in Table 6. The data in Table 6 shows that all values of standardized factor loading (λ) ≥ 0.50 mean that all indicators are stated to have good validity. Likewise, the reliability of the measurement model is indicated by the value CR ≥ 0,70 and VE ≥ 0,50 so it says good.

Table 6. Knowledge Management CFA

Latent Variable	Indicator	λ	λ^2	e	VE	CR
Knowledge Management	MP2	0.882	0.778	0.180	0.649	0.879

The data in Table 6 shows that all values of standardized factor loading (λ) ≥ 0.50 mean that all indicators are stated to have good validity. Likewise, the reliability of the measurement model is indicated by the value CR ≥ 0,70 and VE ≥ 0,50 so it says good.

3.6. CFA Innovatif Performance of Lecturers

Innovative performance of lecturers is grouped into 5 (five) dimensions. the results of testing the validity and reliability of each innovative performance indicator of lecturers are presented in Table 7.

Table 7 CFA Lecturer Innovative Performance

Latent Variable	Indicator	λ	λ^2	e	VE	CR
Innovative performance of lecturers	SS1	0.92	0.846	0.16		
	SS2	0.92	0.846	0.16		
	SS3	0.92	0.846	0.16	0.789	0.949
	SS4	0.88	0.774	0.22		
	SS5	0.80	0.640	0.36		

The data in Table 7 shows that all values of standardized factor loading (λ) ≥ 0.50, meaning that all indicators are stated to have good validity. Likewise with the reliability of the measurement model, the results are shown from the value of CR ≥ 0.70 and VE ≥ 0.50, so that it is declared good.

3.7. Statistical Hypothesis Testing

Knowledge management has a positive effect on Lecturer Innovative Performance

Furthermore, the statistical hypothesis is formulated as follows:

H0 : ρ ≤ 0 Knowledge management does not have a positive and significant effect on the Innovative Performance of Lecturers

H5: ρ > 0 Knowledge management has a po-sitive and significant effect on the Innovative Performance of Lecturers

Test criteria:

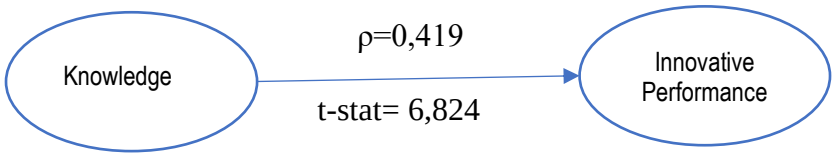

Figure 2. Hypothesis testing

Based on the figure 2 it can be seen that the t-count value for the Knowledge management variable is 6.824 which is greater than the t-crisis of 1.96. Because the t-count value is greater than the t-crisis, at the 5% error rate it is decided to accept H5 and reject H0. So it can be concluded that knowledge management has a positive and significant effect on the Innovative Performance of Lecturers. The direction of the relationship between knowledge management and innovative performance of lecturers is positive, which means that when there is an increase in knowledge management, the innovative performance of lecturers will increase and vice versa.

4. Conclusion

This study investigated the impact of knowledge sharing and enrichment on lecturer performance through a survey conducted at Jendral Achmad Yani University. Analysis of questionnaire data revealed a significant positive relationship between knowledge sharing and lecturer innovation, aligning with prior research emphasizing the importance of collaboration in enhancing teaching and research quality. The study underscores the crucial role of knowledge sharing and enrichment in fostering innovative performance among lecturers in higher education institutions.

Echoing existing research, collaborative knowledge sharing among lecturers has been shown to spur innovation in teaching methodologies, research techniques, and curriculum development. Despite its contributions, this study acknowledges limitations, such as its focus solely on Jendral Achmad Yani University, cautioning against broad generalizations. Future research endeavors could enhance external validity by expanding sample coverage and employing longitudinal designs to track lecturer performance changes over time.

Further support for the role of knowledge sharing in lecturer innovation is drawn from related studies. For instance, Ha-Vikström & Takala (2016) observed that collaborative activities among lecturers improved research and teaching quality. Boediprasetya & Setiadi (2014) and Izadi et al. (2020) corroborated that knowledge exchange among lecturers facilitates innovative curriculum development. Additionally, Afenya (2022) highlighted the positive impact of inter-lecturer collaboration on satisfaction and innovative performance, while Al-Kurdi, El-Haddadeh, & Eldabi (2020) found that increased collaboration led to innovation in teaching.

In conclusion, this study emphasizes the significance of knowledge sharing and enrichment in enhancing lecturer innovation in tertiary

education. Recommendations for institutions include promoting collaboration and knowledge sharing among lecturers, alongside developing supportive programs and activities. Future research avenues should delve deeper into the influencing factors and mechanisms connecting knowledge sharing with lecturer innovation to offer comprehensive insights.

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