Knowledge Sharing Behavior Model of Polytechnic Lecturer

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***Abstract**.*
Knowledge sharing is very important for lecturers in implementing the tri dharma of higher education. By sharing knowledge, it will create creative ideas and innovations for lecturers. This study aims to find out how the behavior of sharing knowledge of polytechnic lecturers. Research on the knowledge sharing behavior of polytechnic lecturers has never been carried out. The research sample was 200 lecturers at the first six polytechnics in Indonesia. The behavior of sharing knowledge is seen from three factors: knowledge donating, knowledge collecting, and technology. The data was processed using LISREL 8.80. The results of the research are the dominant dimension in supporting the sharing of lecturers' knowledge. Polytechnics lecturer also tend to collecting more knowledge than share knowledge. This can be due to the lack of motivation of lecturers to share and competition. For this reason, polytechnic university management needs efforts to improve the culture of knowledge sharing among lecturers.

***Keywords:** Knowledge sharing, knowledge donating, knowledge collecting and technology.*

I.   INTRODUCTION

Today, many organizations and communities see knowledge as a potential source of excellence that addresses all of today's organizational challenges. One of them is the development of knowledge that is the solution for each individual in facing new challenges. With the development of knowledge they will get results that can later be used for their own needs or even the organization. Individual knowledge is the raw material that organizations need to create new knowledge and innovations (Agistiawati et al., 2020). Everyone certainly has different knowledge and this can be a solution to face the development of this knowledge in the future. The challenge of organizations today is how the knowledge of the members of the organization can be attached even if one day the members of the organization leave the organization. For this it is necessary knowledge sharing (Bulan & Sensuse, 2012).It is undeniable that knowledge sharing is very important for an organization (Son & Phong, 2020), especially for knowledge-based organizations, such as universities (Bibib & Al, 2017), (Cheng et al., 2009). Communication between members of an organization is a source of knowledge sharing (Razzaque, 2020). Knowledge sharing is seen as an integral aspect of knowledge management, consistent with the belief that the effectiveness of knowledge management systems depends on knowledge sharing behavior (Mustika & Eliyana, 2022). Organizations that are successful in managing knowledge management can be seen from the successful behavior of knowledge sharing between members of the organization (Heisig et al., 2016), (Inkinen & Inkinen, 2016).Currently, the knowledge sharing process in universities has a great impact on the progress and development of the higher education institution itself.

For universities, the process of sharing knowledge is crucial and absolutely necessary in the development and progress of the university (Sonata, 2017). The decline in the competitiveness of universities is a threat to the superiority of the position and sustainability of the universities concerned. Realizing the increasingly fierce competition in the era of globalization, there is a need for a paradigm shift in higher education. In this context, knowledge sharing is the right process to be able to share knowledge between academics and the existing higher education system. The implementation of knowledge sharing in higher education will help improve university performance and competitive advantage. Jakarta State Polytechnic, Sriwijaya State Polytechnic, Bandung State Polytechnic, Semarang State Polytechnic, Medan State Polytechnic, and Malang State Polytechnic are the first 6 Polytechnics established in Indonesia. As the oldest Polytechnic university, of course, it has certain advantages both in terms of human resources and in terms of infrastructure. But in reality in the ranking of universities, these 6 Polytechnics are still unable to compete with other universities. One of the benchmark factors in determining the ranking of universities is lecturer

research which boils down to the publication of scientific papers.Creative and innovative scientific works are certainly obtained from the implementation of various lecturer skills. For this reason, it is necessary to share knowledge among lecturers.Sharing knowledge in higher education is the embodiment of the tri dharma of lecturer higher education.

Interactions and relationships greatly influence the process of sharing knowledge. Knowledge sharing that can be done includes interaction between students and lecturers in the teaching and learning process, academic guidance with guardian lecturers and final project guidance, as well as interaction between students and students, lecturers with lecturers, lecturers with students and staff is also a kind of knowledge sharing process.The focus of this research is the behavior of sharing knowledge in lecturers of 6 of Indonesia's first state polytechnic universities. Research on knowledge sharing with polytechnic lecturers has never been carried out. This is the urgency of this study. One of the measures of success of higher education is the creation of new knowledge, referring to the implementation of the Tridharma of Higher Education which includes teaching and education, research and community service. The Tridharma of Higher Education is an illustration of the implementation of knowledge sharing in universities.This study aims to find out how the behavior of sharing knowledge of the first 6 Polytechnic lecturers in Indonesia. For this reason, based on what is stated above, it is necessary to examine the behavior of sharing knowledge in the lecturers of the first 6 polytechnics in Indonesia. Knowledge sharing in this study is seen from the factors of knowledge donating, knowledge collecting, and technology.

II.   LITERATURE REVIEW

One of the important components in the knowledge management process is knowledge sharing. (Nguyen, 2020) in his article states knowledge sharing is a fundamental knowledge management (KM) process that involves the transfer of knowledge, experience, and skills. Meanwhile, the behavior of sharing knowledge according to (Clercq & Pereira, 2020) is to share suggestions, ideas, opinions, and information. Knowledge sharing behavior is the process of transforming knowledge from an individual to another employee (Javaid & Abdullah, 2020). (Kumar & Rose, 2012) describes knowledge sharing as an employee's behavior that facilitates to share his knowledge with others. Knowledge sharing behavior is also defined as a group behavior activity that involves sharing knowledge, skills, and expertise among employees across departments and organizations (Rohman et al., 2020). (Van Den Hooff & Ridder, 2004) states knowledge sharing is a process by which the knowledge possessed by individuals and groups can be transferred to the organizational level, so that it can be applied to the development of new products, services, and processes. Furthermore (Van Den Hooff & Ridder, 2004) states the knowledge sharing process consists of knowledge donating and knowledge collecting.

Knowledge donating is spreading knowledge with intellectual capital owned by other individuals and knowledge collecting is collecting knowledge from other individuals with their intellectual capital. What these two processes have in common is that they are both active with different traits and are influenced by different factors as well such as technology and motivation. Effective knowledge and technology management is an important key in improving the competitiveness of the organization. Knowledge sharing activities go smoothly with the support of technology, because technology is readily available to everyone today. The use of technology and the sharing of knowledge are closely related. The existence of technology will facilitate access in searching, retrieving information and communication in knowledge sharing activities (Meylasari & Qamari, 2017) Dosen has a positive perception of the importance of knowledge sharing, but lecturers will be reluctant to share knowledge if the knowledge is misused and commercialized. In addition, knowledge sharing must also be supported by easy and structured knowledge storage which of course is supported by adequate media / facilities that must be developed by the organization (Mulyanto, 2012).Professional lecturers take advantage of new and unique experiences gained from interactions with students and fellow lecturers in the workplace based on the knowledge gained from their experience. From this culture of sharing experiences and knowledge (knowledge sharing) this will have an impact on improving the overall performance of universities.

Knowledge sharing in the context of higher education is knowledge sharing between lecturers and lecturers, lecturers with students, and lecturers with other educational stakeholders, so it is very important to create a good knowledge sharing culture (Asbari et al., 2021),Several studies examine the importance of knowledge sharing among academics. (Saraswati, 2017) examine how knowledge sharing is carried out by lecturers at Telkom University and what factors affect the knowledge sharing of lecturers at Telkom University. The results of the study found that knowledge sharing with Telkom University lecturers was good. Factors that influence the knowledge sharing of Telkom University lecturers are attitudes towards knowledge sharing, university structure, and autonomy. (Akosile & Olatokun, 2020) researching the factors influencing knowledge sharing among academics at the university of Bowen, Nigeria in terms of organizational factors, individual factors, and technology. Thi s research recommends that universities support knowledge sharing by providing awards as motivation for academics to share their knowledge.Many factors influence knowledge sharing among lecturers. (Sonata, 2017) in his research, 100% of lecturers stated that technology is the most influential factor in the process of sharing knowledge. The self-efficacy of lecturers is also one of the factors that influence the formation of knowledge sharing (Laksono & Seniati, 2018). In addition, other factors that influence knowledge sharing are trust, organizational commitment (Badar et al., 2017) and transformational leadership styles (Chen, 2016).

III.   METHODS

This research is a quantitative research with the research unit being lecturers at the first 6 polytechnics in Indonesia, namely the Jakarta State Polytechnic, Sriwijaya State Polytechnic, Bandung State Polytechnic, Semarang State Polytechnic, Medan State Polytechnic, and Malang State Polytechnic. Respondents in the study were 200 lecturers. Testing was conducted with SEM using Lisrel 8.80. The knowledge sharing variable was measured using 12 indicators. The research model looks like the following image:
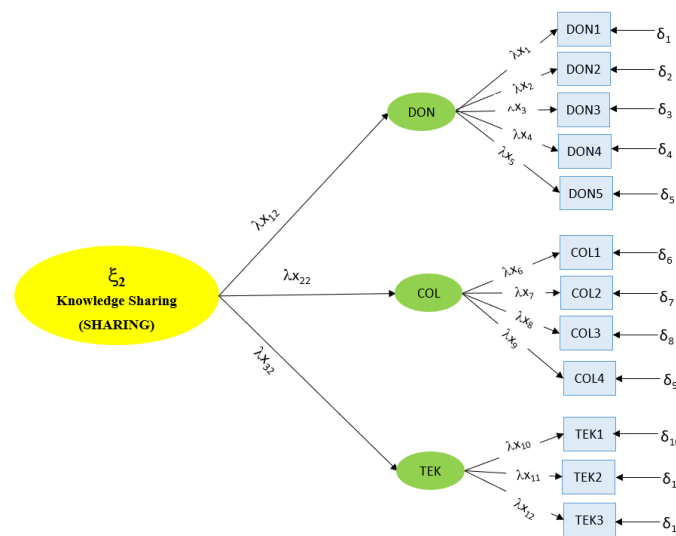

Fig 1. Measurement Model

This analysis test is carried out through a second order confirmatory factor measurement model where each research variable is measured in two stages, namely the first measurement of dimensions and each dimension measured by a predetermined number of indicators. Therefore, the initial stage of Confirmatory Factor Analysis (CFA) analysis is carried out by simplifying each measurement model by determining the latent variable score for each of its dimensions. CFA testing includes an evaluation of the measurement model, judging from the standardized loading factor (SLF) size with a minimum value of 0.50 and a t–value above 1.96 (Hair et al., 2019). The standardized loading factor (SLF) value in the 8.80 list can be seen in the output of the completely standardized solution while the t-value is seen from the output measurement equation.

I V.   DISCUSION

The results of the measurement model test, the knowledge sharing variable is measured by 3 dimensions. out of 12 indicators, 9 are valid. Criteria validation construct seen from the value of standardize loading factor through 1st order CFA to measure the causal relationship between dimensions and their indicators and the second order factor   stage to measure causal relationships between dimensions with latent knowledge sharing variables that can be seen in figure 2 and figure 3.
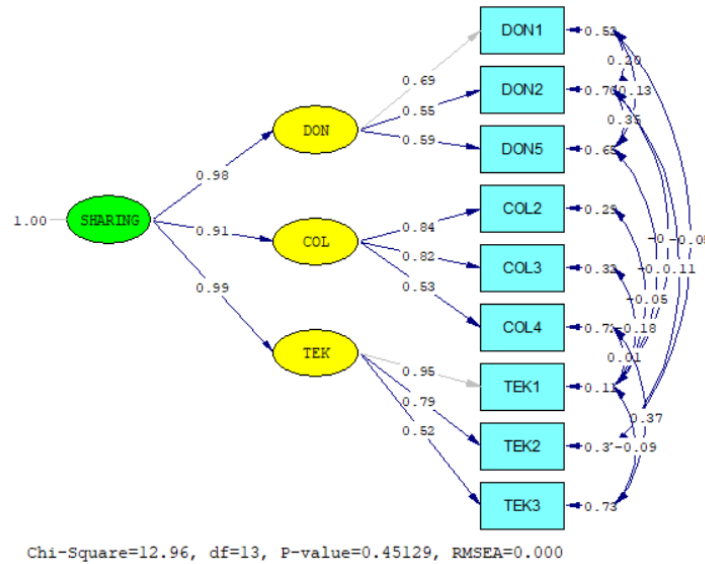

Chi-Square=12.96, df=13, P-value=0.45129, RMSEA=0.000

Fig 2. SLF Test Results

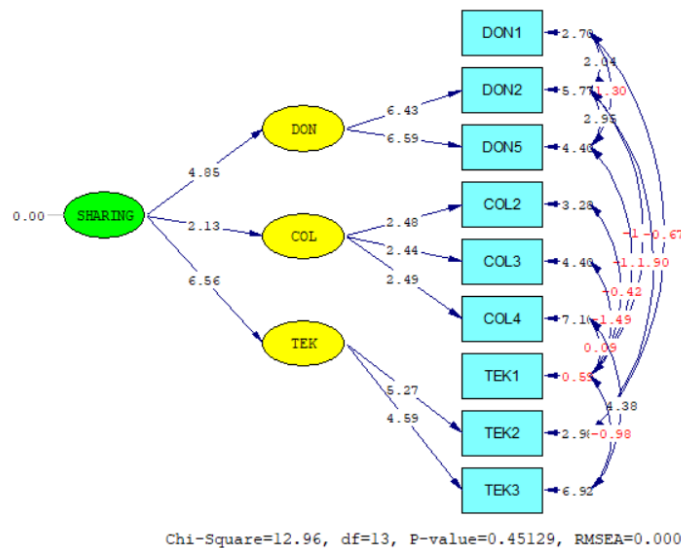Chi-Square=12.96, df=13, P-value=0.45129, RMSEA=0.000

Fig 3. t-value Test Results

The description of the test results of measuring 1st order CFA on this *knowledge sharing* variable is as detailed in the following table:

Table 1. Construct Test Results Indicator 1st Order

Dimensi	Indikator	SLF	Error	R^2	t-value $\geq$1.96
Knowledge donating (DON)	DON1	0.69	0.52	0.48	-
	DON2	0.55	0.70	0.30	6.43
	DON5	0.59	0.65	0.35	6.59
Knowledge collecting (COL)	COL2	0.84	0.29	0.71	2.48
	COL3	0.82	0.32	0.68	2.44
	COL4	0.53	0.72	0.28	2.49
Teknologi (TEK)	TEK1	0.95	0.11	0.89	-
	TEK2	0.79	0.37	0.63	5.27
	TEK3	0.52	0.73	0.27	4.59

Based on the results of calculations and analysis in Table 1 on the knowledge donating dimension, the DON1 indicator has a higher R^2 value of 0.48 which means that DON1 has a higher variance in the knowledge donating dimension   compared to other indicators. The COL2 indicator has an R^2 value (0.71) higher than other indicators in measuring the knowledge collecting dimension, which means that COL2 has a higher variance in the knowledge collecting dimension compared to other indicators. The TEK1 indicator has an R^2 value (0.89) higher than other indicators in measuring technological dimensions, which means that TEK1 has a higher variance in technological dimensions compared to other indicators.

Table 2. GoFI Test Results

GoFI indicators	Standard value	Calculated results	Conclusion
RMSEA	≤ 0.08	0.00	Good Fit
NFI	≥ 0.90	0.99	Good Fit
NNFI	≥ 0.90	1.00	Good Fit
CFI	≥ 0.90	1.00	Good Fit
IFI	≥ 0.90	1.00	Good Fit
RFI	≥ 0.90	0.98	Good Fit
Std. RMR	≤ 0.05	0.028	Good Fit
GFI	≥ 0.90	0.98	Good Fit
AGFI	≥ 0.90	0.95	Good Fit

Based on Table 2, the results of the evaluation of the suitability of the CFA measurement model of the second order knowledge sharing model above are acceptable. Absolute GoF measures such as GFI, RMSEA, and Std. RMR are in the good fit area. Likewise, incremental GoF measures such as NFI, NNFI, CFI, RFI, IFI show an acceptable degree of match with a GoF value of ≥ 0.90. Thus, the measurement results of the 2nd order CFA model can be stated to have met the accuracy of the model. Which means the examination and testing of data relating to the construct dimensions of the knowledge sharing variables is stated to be all strong meets the criteria and subsequent data analysis can be continued.

Table 3. Construct Test Results Dimensions 2nd Order

Var	Dimension	SLF	Error	t-value
Knowledge sharing	Knowledge donating (DON)	0.98	0.04	4.85
	Knowledge collecting (COL)	0.91	0.18	2.13
	Teknologi (TEK)	0.99	0.02	6.56

From table 3 of the resulting standardize loading factor (SLF) values, it is noted that the technology dimension   has the highest standardize loading factor (SLF) value of 0.99 compared to other dimensions. Thus it can be stated that these dimensions have the highest variance and the strongest contribution to the knowledge sharing variable.

V.   CONCLUSION

Of the three dimensions of knowledge sharing, the most dominant dimension affecting knowledge sharing is technology. Technology is a very important factor in supporting the deployment sharing process. With the support of technology, knowledge sharing can be done anywhere without being hindered by place and time. The technology here includes information technology and the application of technology. In fact, the use of technology and the sharing of knowledge are interrelated. Because it can support communication and sharing activities. Information technology and technology applications are the basic needs of everyone in today's modern world. Technology has many positive effects for everyone, such as saving time, simplifying and speeding up work, and making communication easier.

Anyone can quickly access the information they need through various applications. The existence of technology has allowed people around the world to exchange information quickly and efficiently over long distances.This research also shows that polytechnic lecturers tend to collect more knowledge than share knowledge. This can be due to the lack of motivation of lecturers to share and competition. For this reason, polytechnic university management needs efforts to improve the culture of knowledge sharing among lecturers. For further research, it can be further developed in lecturers of other universities besides polytechnics. In addition, it can also be done by developing other variables that can influence the knowledge sharing behavior of lecturers.

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