Building Knowledge Sharing Intention with Interpersonal Trust as a Mediating Variable

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Abstract. Knowledge sharing is a key aspect of knowledge management activities. The purpose of this study is to investigate the effect of personal competence on knowledge sharing intention which mediated by interpersonal trust. The data were collected from student’s Postgraduate Program Universitas Negeri Semarang as many 146 in numbers. Analysis path was proposed for measuring effect of cultural intelligence and self-efficacy on knowledge sharing intention. The role of interpersonal trust as mediation was being measured too. The results show that the cultural intelligence which is owned by an individual will lead to trust among individuals and then to share one’s knowledge, also the person who have self-efficacy will increase his desire to share knowledge with fellow students. All hypothesis supported except cultural intelligence, which was unsupported affect the willingness to share knowledge.

Keywords: cultural intelligence, self-efficacy, interpersonal trust, knowledge sharing intention.

Abstrak. Proses berbagi pengetahuan merupakan aspek kunci dalam manajemen pengetahuan. Penelitian ini bertujuan untuk mengetahui pengaruh kompetensi individu dan kepercayaan pada keinginan berbagi pengetahuan. Data dalam penelitian ini diambil dari mahasiswa Pascasarjana Unnes sebanyak 146 mahasiswa. Model analisis jalur diajukan guna melihat pengaruh kecerdasan budaya dan efikasi diri secara langsung pada keinginan berbagi pengetahuan. Peran mediasi kepercayaan antar individu dianalisis untuk menjadi perantara hubungan tidak langsung. Hasil menunjukkan bahwa kecerdasan budaya yang dimiliki oleh seorang individu akan menimbulkan kepercayaan antar individu untuk saling berbagi pengetahuan dan efikasi diri seseorang akan meningkatkan keinginannya untuk berbagi pengetahuan dengan sesama mahasiswa. Semua hipotesis terduga kecuali kecerdasan budaya yang tidak terduga mempengaruhi keinginan berbagi pengetahuan.

Kata Kunci: kecerdasan budaya, efikasi diri, kepercayaan antar individu, keinginan berbagi pengetahuan.
Introduction

In the era of economy which based on knowledge, organization does not only rely on natural and physical resources but also starts to focus on ideas, knowledge and creativity as well (Powell and Snellman, 2004). Thus, source of knowledge becomes one of the most important factors in organization. Organization which is already able to execute the sources of knowledge can score a lot of benefits for that particular organization. The activities to manage knowledge is called as knowledge management (Fitriasmii, 2010; Putranto and Ghazali, 2013). One of the most important aspects in management of knowledge is the process of sharing knowledge (Young, 2014). In academic department, process of sharing knowledge plays an important role in increasing the quality and the ability of conducting research and learning activity (Goh et al., 2013).

The process of sharing knowledge is classified as an exchange and spreading of information, ideas, and knowledge either tacit or explicit occurring in social interaction without any formal and systematic planning (Hsu, 2012). Tacit Knowledge is knowledge which taking root on somebody’s attitude, experience, and intuition. While explicit knowledge is knowledge in the form of words and numbers such as data, scientific formulae, subsections and books (Nonaka and Konno, 1998). The process or sharing knowledge can be seen from the aspect of intention or behavior. Both refer to the theory of planned behavior (Ajzen, 1991). Theory of planned behavior is the development of the theory of reasoned action (Ajzen, 1991).

Ajzen (1991; 2002), explains that an intention is the captor of motivational factors which effect on certain behaviors, degree of bravery towards trying something new, level of someone’s attempt to plan something, , and the closest aspect related to the next behaviors. The intention to share knowledge is the closest aspect toward the attitude of sharing knowledge which shown with how strong his intention to share it.

In the diverse environment, however, the intention of someone to share knowledge cannot be easily built, because there are a lot of factors which can hamper it. (Li, 2010; Vajjhala and Vucetic, 2013; Noh, 2013). Therefore, reviewing the factors which can encourage someone in the diverse environments becomes very paramount to be done. Issues to be answered in this research are: what are the factors to encourage the intention to share knowledge in the diverse environments, and how creating those factors.

Knowledge Sharing Intention

The desire to share knowledge indicates how likely someone will share knowledge. It is because desire is a main aspect that is closest to the behavior (Ajzen, 1991; 2002). Knowledge sharing is a form of perception intention related to the desire and willingness to share knowledge (Wang and Noe, 2010) Knowledge sharing intention in the diverse environments can be motivated through interpersonal trust and individual competition including cultural intelligence and self-efficacy (Chou, 2012; Messara et al. 2008; Hosseini et al. 2014).

Interpersonal Trust

In a diverse environment, trust between individuals is the level of someone’s belief in the truth, ability, and his good intentions, as well as the belief that the cultural differences between them will not interfere with each other's interests (Kramer, 2010). When someone possesses trust to her colleagues, thus increasing communication frequency and availability to share information and knowledge (Hauge, 2012; Wang et al., 2014; Park et al. 2015). As a result, the higher interpersonal trust of each side means availability to share information and knowledge. From this explanation, some hypotheses can be drawn:

H1: Interpersonal trust affects positively toward knowledge sharing intention.

Cultural Intelligence

Cultural Intelligence was first stated by Earley and Ang (2003). Cultural intelligence is a special form of intelligence that is focused on
the ability to understand and considers it appropriately in any situations characterized by cultural diversity (Ang and Dyne, 2008).

Someone who has intelligent culture will tend to feel comfortable in interacting and communicating in a new culture, which in turn these conditions push the intention to share knowledge (Messarra et al. 2008; Putranto and Ghazali 2013; Chen and Lin 2013). This statement shows that the higher the intelligence cultures of a person, the higher also his intention to share his knowledge with colleagues who come from other cultural backgrounds.

Cultural intelligence also helps someone to know and understand the similarities and differences between their cultures with other cultures. The smart one upon his culture will appraise someone else’s culture after knowing and understanding it, and ultimately overcoming negative reaction and misunderstanding toward it. The absence of negative reaction and misunderstanding between themselves will encourage interpersonal trust (Rockstuhl and Ng, 2008; Gregory et al., 2009; Li et al., 2012). The higher the intelligence culture of a person’s, thus increased his interpersonal trust.

High trust between individuals which are encouraged by cultural intelligence, will eventually affect the intention to share knowledge. This shows that the influence of cultural intelligence toward intention to share knowledge can be mediated by interpersonal trust (Chua et al., 2012). Thus, the higher the cultural intelligence of someone would increase the trust between individuals in diverse environments, which in turn it can increase intention to share his knowledge. From the above description, the hypotheses can be formulated as follows:
H2a: Cultural intelligence affects positively at intention to share knowledge.
H2b: Cultural intelligence affects positively at interpersonal trust.
H2b: Interpersonal trust mediates the effects of cultural intelligence to intention to share knowledge.

**Self-Efficacy**
Self-efficacy is an individual competence which refers to the belief a person to be able to organize and carry out an action that is required to reach a certain goal (Bandura, 1997). Someone who feels certain and confident to perform a specific activity, will tend to try harder (Susanto and Wulansari, 2015).

When someone has confidence in his ability and knowledge, he will tend to be more confident to interact and share knowledge with people from other cultural backgrounds. Researches done by Hosseini et al. (2014), Zawawi et al. (2011), Li (2012), and Chou (2012) show that, someone's self-efficacy influences positively on the availability of knowledge sharing. The higher his self-efficacy means the higher also his intention to share his knowledge. From the description, it can be formulated a hypothesis as follows:

**H3:** Self-efficacy affects positively at intention to share knowledge.

Based on the description above, the research model as follows:

![Research Model](image)

**Figure 1. Research Model**

**Research Methodology**
The population in this study was students of post graduate Program of Unnes with samples of 146 respondents. Sample was selected from the post graduate program's students because they come from different regions and cultures in Indonesia. Thus, they need ability and knowledge to adapt in the new environment (Putranto and Ghazali, 2013; Khanifah and Palupiningdyah, 2015).
The sampling technique used in this research is purposive sampling. Criteria selection of respondents is derived from the different areas. Research variables used in this study include variable of cultural intelligence, self-efficacy as an independent variable, interpersonal trust as a mediating variable, while the intention to share knowledge as the dependent variable. The variable of knowledge sharing intention is measured by five-item questions from Knowledge Sharing Intention Scale developed by Bock et al. (2005). Knowledge sharing intention scale of Bock et al (2008), based on implicit knowledge and explicit knowledge (Nonaka and Konno, 1998).

Variable of interpersonal trust is measured by eleven items from Interpersonal Trust Measures questions developed by McAllister (1995). While cultural intelligence is measured using nine items questions from efficacy variable was measured with eight items of questions in New General Self Efficacy Scale developed Chen et al. (2001). New General Self Efficacy Scale views someone’s confidence in general in handling various tasks and demands (Chen et al., 2001).

Data analysis using path analysis with help from SPSS is employed to see the role of mediation of interpersonal trust. Data instrumental test is completely needed before doing data analysis, instrumental test using Cronbach Alpha’s and Confirmatory Factor Analysis. Besides, parametric test also requires the assumption of normality, multicollinearity, and heteroscedasticity data so the normality tests are done with the Kolmogorov-Smirnov, multicollinearity with the value of Tolerance and Variance Inflation Model (VIF), and heteroscedasticity with Glejser.

Results and Discussions

Validity Test Results
This test was done with Confirmatory Factor Analysis (CFA). The first step that must be done is to test the KMO and Bartlett’s Test. Value of KMO Measure of Sampling Adequacy (MSA) should be more than 0.5, or KMO and Bartlett’s Test indicated by the significance (sig) < 0.05. Here are the values of KMO and Bartlett’s Test each variable:

Table 1. KMO and Bartlett’s Test

| No | Variables                          | MSA  | Sig   |
|----|------------------------------------|------|-------|
| 1  | Self Efficacy                      | 0.829| 0.000 |
| 2  | Cultural Intelligence              | 0.725| 0.000 |
| 3  | Interpersonal Trust                | 0.875| 0.000 |
| 4  | Knowledge Sharing Intention        | 0.796| 0.000 |

From the table above it can be concluded that the value of KMO and Bartlett’s Test meets the criteria expected value so that it can be done the next step which is the analysis of factors:

Table 2. The Analysis of Factors

| Number | Indicators | Loading Factors | Notes |
|--------|------------|-----------------|-------|
| 1      | SE1        | 0.588           | valid |
| 2      | SE2        | 0.659           | valid |
| 3      | SE3        | 0.465           | invalid |
| 4      | SE4        | 0.610           | valid |
| 5      | SE5        | 0.738           | valid |
| 6      | SE6        | 0.567           | valid |
| 7      | SE7        | 0.738           | valid |
| 8      | SE8        | 0.751           | valid |
| 9      | CI1        | 0.650           | valid |
| 10     | CI2        | 0.768           | valid |
| 11     | CI3        | 0.668           | valid |
| 12     | CI4        | 0.698           | valid |
| 13     | CI5        | 0.622           | valid |
| 14     | CI6        | 0.696           | valid |
| 15     | CI7        | 0.681           | valid |
| 16     | CI8        | 0.760           | valid |
| 17     | CI9        | 0.785           | valid |
| 18     | IT1        | 0.563           | valid |
| 19     | IT2        | 0.775           | valid |
| 20     | IT3        | 0.525           | valid |
| 21     | IT4        | 0.541           | valid |
| 22     | IT5        | 0.464           | invalid |
| 23     | IT6        | 0.521           | valid |
| 24     | IT7        | 0.631           | valid |
| 25     | IT8        | 0.765           | valid |
| 26     | IT9        | 0.790           | valid |
| 27     | IT10       | 0.573           | valid |
| 28     | IT11       | 0.368           | invalid |
| 29     | KSI1       | 0.426           | invalid |
| 30     | KSI2       | 0.607           | valid |
| 31     | KSI3       | 0.689           | valid |
| 32     | KSI4       | 0.559           | valid |
| 33     | KSI5       | 0.765           | valid |
There are four invalid indicators; therefore it is not included in the subsequent processing. Here are the results of the factor analysis test after throwing such invalid indicators:

Based on the table above, cronbach's alpha value of each variable is > 0.70 therefore the entire instrument is declared a reliable research.

**Normality Test Results**

Normality test aims to test whether the regression model or residual confounding variables have normal distribution, as it is well known that the t test and F assuming that the value of the residuals follows a normal distribution. If this assumption is violated, the statistical test is not valid for small sample quantities. The test results of normality with the Kolmogorov-Smirnov Test are as follow:

**Test Results of Multicollinearity**

Multicollinearity test is using Tolerance value and variance inflation factor (VIF). If the value of Tolerance is > 0.1 and VIF is < 10 it can be said that Multicollinearity does not occur. Multicollinearity test results are as follows:

| No | Variable               | Cronbach's | > | Criteria |
|----|------------------------|------------|---|----------|
| 1  | Knowledge Sharing      | 0.785      | 0.7| reliable |
| 2  | Cultural Intelligence  | 0.822      | 0.7| reliable |
| 3  | Self-Efficacy          | 0.868      | 0.7| reliable |
| 4  | Interpersonal Trust    | 0.915      | 0.7| reliable |
From Table 6, it is known that all variables have tolerance values > 0.1 and FIV value <10. So it can be said that the multicollinearity does not occur.

**Test Results of Heteroscedasticity**

Heteroscedasticity test can be seen on the table of Glejser test. Test results of glejser are as follow:

Table 7. Test Results of Glejser

| Coefficients | t  | sig |
|--------------|----|-----|
| (Constant)   | -0.402 | 0.688 |
| Cultural Intelligence | 0.046 | 0.964 |
| Self-efficacy | 1.607 | 0.11 |
| Interpersonal Trust | 0.468 | 0.641 |

From the output on SPSS shows that all of variables have score of ≥ 0, 05, therefore, regression model does not carry Heteroscedasticity.

Table 8. Test Results of Regression 1

| Coefficients a | Model | Std. Error | Beta | t    | sig |
|----------------|-------|------------|------|------|-----|
| (Constant)     | 2.027 | 1.628      | .106 |      |     |
| Cultural Intelligence | .053 | .091 | 1.291 | .199 |
| Interpersonal Trust | .038 | .569 | 8.094 | .000 |

Table 9. Test Results of Regression 2

| Coefficients a | Model | Std. Error | Beta | t    | sig |
|----------------|-------|------------|------|------|-----|
| (Constant)     | 3.819 | 7.346      | .000 |      |     |
| Cultural Intelligence | .110 | .317 | 4.010 | .000 |

**Path Analysis**

Path analysis is an extension of multiple regression analysis, which is used to measure the causal relationships between variables that have been previously defined. Path analysis can be used to determine the influence of indirect (mediation). The influence of cultural intelligence to knowledge sharing intention can be determined by multiplying the path coefficient of cultural intelligence on trust between individuals and interpersonal trust at knowledge sharing intention which is 0.317 x 0.569 = 0.180

**Sobel Test**

To see the influence of mediation of path analysis is shown by multiplying coefficient by 0.180 whether significant or not in the formulae of sobel test. In addition, sobel test calculation is as below (Preacher and Hayes, 2004):

\[
S_{ab} = \sqrt{b^2 * s_a^2 + a^2 * s_b^2 + s_a^2 * s_b^2}
\]

Thus can be calculated as below:

\[
S_{ab} = \sqrt{(0.317)^2 * (0.038)^2 + (0.110)^2 * (0.056)^2 + (0.038)^2 * (0.056)^2}
\]

\[
S_{ab} = \sqrt{(0.32)^2 * (0.01) + (0.100)^2 * (0.001) + (0.01) * (0.001)}
\]

\[
S_{ab} = \sqrt{0.0003 + 0.0001 - 0.00001}
\]

\[
S_{ab} = 0.056
\]

Under the influence of the standard error of mediation, it is known that the value of the t statistic indirect effect (mediation) = 0.180 / 0.056 = 3.214.
behavioral intelligences, it will increase trust between them both affective based and cognitive trust. This study supports the research conducted by Rocksthul and Ng (2008), Gregory et al. (2009), Li et al. (2012), and Salmon et al. (2013).

Based on the path analysis and calculation, Sobel test, it can be seen that the indirect effect (3.214) > t table (1.960). This indicates that interpersonal trust proved. It means that the cultural intelligence of Graduate student make them trust each other because both affective and cognitive aspects. The trust in turn encourages Graduate students intentions to share lecture notes, course knowledge, completing the task, or sharing the experience and expertise they acquire during lectures. This study complements the research conducted Chou (2012), which states the role of trust between individuals as a mediating variable only based on a brief interview. Furthermore, this study provide quantitative evidence to support Chou (2012).

The results also show that self-efficacy gives positive effect on the intention to share knowledge as indicated by the t value (4.052) > (1.97). That means self-efficacy of students in facing demands during school can increase their willingness to share knowledge both implicitly and explicitly. The results of this study are consistent with researches conducted by Chou (2012), Li (2012), and Hosseini et al. (2014) which show that self-efficacy has positive influence on the intention to share knowledge.

Students’ self-efficacy is reflected in the confidence of their competence and knowledge, which generally can be shown in a variety of situations and cultural lectures. Self-efficacy in various situations in school for instance: demands to share the task, challenges on a variety of social and cultural conditions, or the demands of success in achieving a variety of objectives, encourages the intention of students to interact and share knowledge with friends in college.

| Hypothesis | coefficients | t calculation | t table | Results |
|------------|--------------|---------------|---------|---------|
| Hypothesis 1 | 0.569 | 8.094 | 1.97 | Supported |
| Hypothesis 2a | 0.091 | 1.291 | 1.97 | Unsupported |
| Hypothesis 2b | 0.317 | 4.010 | 1.97 | Supported |
| Hypothesis 2c | 0.180 | 3.214 | 1.97 | Supported |
| Hypothesis 3 | 0.213 | 4.052 | 1.97 | Supported |
Conclusions

The conclusion of this study is, self-efficacy and interpersonal trust belong to very important factors to increase the intention to share someone's knowledge in the diverse environments. Although in this study the cultural intelligence is not proven to improve the knowledge sharing intention, but cultural intelligence is still an important factor that needs to be held to foster trust between individuals in diverse environments.

Based on the results of research and interview, post graduate students should further enhance the potential of such cultural intelligence, and self-efficacy by conducting language training and communication with other cultures, as well as training courses of various expertise of institutions that can be taken. It is intended to further enhance trust and knowledge sharing intention in diverse environments. The institutions of post graduate Program in general need to provide a forum for cultural training (training culture forum), to improve the knowledge and cross-cultural communication skills of its members.

In addition, the institution need to provide training to develop the talent and personal skills of students, thus expected to increase the confidence and the desire to share knowledge between them (Widodo, 2012). This study is still far from the word perfect as the limitation done in some issues especially in the retrieval of respondents in the academic environment. Further research needs to be taken to the respondent in the organizational environment such as employees to generalize the results of this study. This study is also being limited to the sharing of knowledge viewed from the aspect of "intention". The next research is hoped to connect aspects of "knowledge sharing intention" to "knowledge sharing behavior".

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