Inter-group Knowledge Sharing in Enhancing Group Learning

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Abstract. The purpose of this research was to explore and analyze intergroup knowledge sharing in SME's and its impact on group learning process. Knowledge asset has a major impact in creating organization competitive advantage. Knowledge is reside in individual and only can become an organizational knowledge through an effective knowledge sharing. Several researches have shown that doing a collaborative learning in group can speed the value creation process. Inter-group knowledge sharing is defined as a deliberate and systematic distribution of information and knowledge between group to solve problem, create new idea, and improve group processes. It will be measured by trust, leadership, formalization, rewards system, and group motivation. Learning will be measured by the new skill and new knowledge that is gained by the group. Data will be collected by giving questionnaires to SME's in Bandung, West Java and then will be analyzed using Structural Equation Modeling (SEM). The questionnaire was distributed to 27 groups of dairy farmer in Bandung, West Java. From the output, both inter-group knowledge sharing and engagement level has positive correlation on group learning.

Keywords: Intergroup knowledge sharing, Group learning, SME's

1. INTRODUCTION

Many research has shown the urgency in maintaining and increasing organization's intellectual assets, especially in this rapidly changing environment (Zhang and Jiang, 2015; Adams and Lamont, 2003). Organization can increase its intellectual assets through promoting continuous learning process. Intellectual assets or knowledge can be divided into tacit knowledge and explicit knowledge (Dalkir, 2013). Explicit knowledge in organization is usually can be easily documented as organization document and database. While tacit knowledge, which is generated through experience and have more significant value for organization, is more difficult to articulate and be stored (Holste and Fields, 2010; Dalkir, 2005).

Kumaraswamy and Chitale (2012) defined learning as a

process to create new knowledge and apply that knowledge to increase performance. New knowledge usually created in individual level. When this knowledge is shared to entire organization, individual knowledge will become organizational knowledge (Suveatwatanakul, 2013; Winkelen, 2010). In many organization, knowledge sharing activity is not effectively managed so those new knowledge still reside in the individual and could be lost when that individual left the organization. To maintain organization intellectual assets reside in organization, an effective knowledge sharing became critical.

Knowledge sharing can be viewed in individual level, group level, organizational level, or inter-organizational level. In many organizations, employee often divided into groups based on skill, job or location so there will be learning process both within group and intergroup. Group in this term is defined as a collection of individuals that perform an interdependent task as an entity and embedded in a larger social system (Kush et al, 2012). Individual in each group can interact with individual within group or from other group, trade information and knowledge that will facilitate group's learning process. Previous research has shown that interaction and collaboration with external group/entity in learning process has a positive direct impact on knowledge gained (Nix and Zacharia, 2014). Knowledge sharing is defined as a deliberate and systematic distribution of information and knowledge between individual to solve problem, create new idea, and improve processes (Eze et al, 2013; Wang and Noe, 2010).

This research will focus the study on dairy farmers cluster in Bandung, West Java, Indonesia. This cluster in 2014 consists of more than 7000 farmers and contributed almost 45% of total dairy product in Indonesia. Those farmer managed by KPSBU (Organization for dairy farmers in Bandung) and divided into 27 group based on their location. KPSBU have 7 trainers to facilitate training and group discussion to each group in monthly basis. From the interview and observation, there were only small number of farmer attend the training because they think that the training were not effective.

2. METHODOLOGY

2.1 Model Development

Many previous research has shown the importance of knowledge sharing in maintaining organization's intellectual assets (Yang, 2007; Khalid and Ahmed, 2015) and try to identify its antecedent (Eze et al, 2013; Wang and Noe, 2010; Schauer et al., 2015). Knowledge sharing can be viewed as an individual/group activity within organization (intra-organization knowledge sharing) or with other individual/group from outside organization (inter-organization knowledge sharing).

This research will used Yang (2007), Khalid and Ahmed (2015) and Tesavrita and Suryadi (2016) as basic model. Both studies found a significant correlation between knowledge sharing and organizational learning. Yang (2007) did an empirical study to describe the correlation between knowledge sharing, organizational learning, and organizational effectiveness. Khalid and Ahmed (2015) have found a significant correlation between knowledge sharing and organizational learning mediated by leadership role; it was done in banking sector and use employee as unit analysis. Tesavrita and Suryadi (2016) proposed a conceptual model of knowledge sharing and learning capability and its impact on organizational learning. This study will adopt Tesavrita and Suryadi (2016) model to be used in group level analysis.

SME's have unique characteristics in managing their business and can not be treated as a mini version of big scale organization (Darcy et al, 2014). SME's are commonly small, so they were dominated by their owner and have a high trust between their employees. SME's also have shared open workspace that facilitates knowledge sharing process (Wee and Chua, 2013). Based on these finding, careful consideration should be taken in using variables to explain knowledge sharing behavior. In this research, knowledge sharing will be measured by trust, leadership, formalization, rewards system, and group motivation.

H1: *Inter-group knowledge sharing positively affects group learning*.

Knowledge is the key factor in organization performance. New knowledge is resided in individual and only through sharing those knowledge, organizational learning is facilitated (Suveatwatanakul, 2013). Group learning is defined as an increase in group's knowledge, through new knowledge creation, both tacit and explicit, that occurs from interaction and experience (Kush et al, 2012).

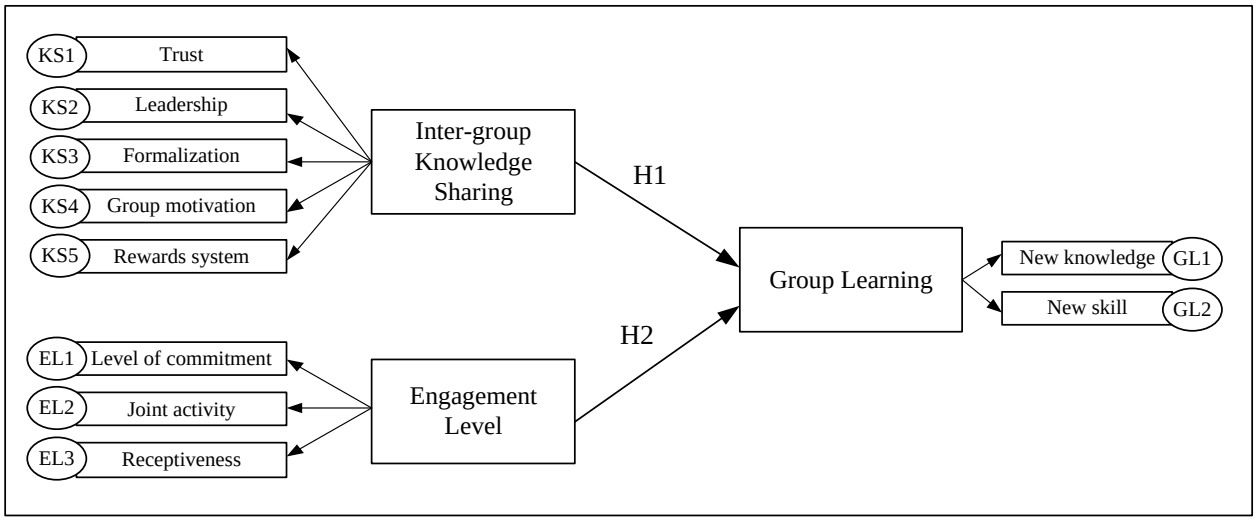

Figure 1. Research Model

Learning process usually triggers by any changes from external environment (Moustaghfir and Schiuma, 2013). In this research, learning process will be measured by group perception on their new knowledge and skill.

Frequency of interaction and relationship between groups will also affect learning process. Nix and Zacharia (2014) analyzed the effect of collaborative engagement on knowledge gained in organizational level. This research will focus on the collaborative learning process, so engagement will be defined as an indicator that show level activity of a group involved in collaboration. Engagement level will be measured by levels of commitment, joint activities, and receptiveness to information from other party.

H2: *Engagement level positively affect group learning*

2.2. Questionnaire

Research model will have two independent (inter-group knowledge sharing and engagement level) variables and one dependent variable (group learning). Each variable will be measured by manifest variable that can be seen in research model in Figure 1. Questionnaire will be develop based on the model. Each variable will be represented by one question using five likert scales. Pre-test for the questionnaire will done and then the questionnaire were distributed to 27 groups of SME's. Data that were collected then analyzed using structural equation modeling. There are several indicators that can be used to measure model fit that can be seen in Table 1. Those output then compared to standard value and can be concluded that the model is already fit. After that, the next step is check the p-value for hypothesis test. This research used significance level 0.05 so if p-value less than 0.05 H_0 will be rejected, meaning that the independent variables have affect to dependent variables. From Table 2, it can be seen that both inter-group knowledge sharing and engagement level have positive impact on group learning.

The final step is to check factor loading for each manifest variable that can be seen in Table 3. Variable with factor loading more that 0,5 indicate that this variable is a good estimator for its construct. KS4 and EL3 have factor loading less than 0,5 and will be deleted from the model. Final model for this study can be seen in Figure 2.

Tabel 1. Fit model indicator

	Default model	**Recommendation**
CMIN	495,117	0.000 – 1137,748
RMR	0,098	< 0,1
CFI	0,630	≥ 0,9
RMSEA	0,067	< 0,08

Table 2. P-value from final model

	Estimate	**S.E.**	**C.R.**	**P**
GL←KS	0,422	0,144	3,277	0,001
GL←EL	0,364	0,078	2,109	0,015

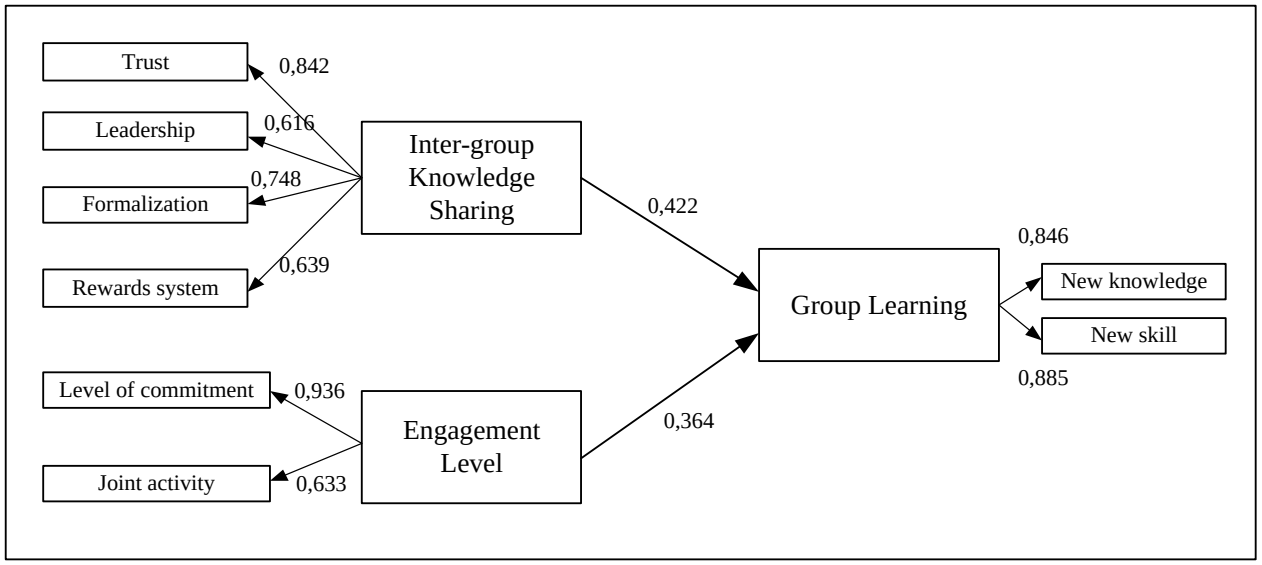

Figure 2. Final Model

3. CONCLUSION

H1 that presume a positive correlation between inter-group knowledge sharing and group learning is proven based on p-value that less than 0,05. This finding concludes that an effective inter-group knowledge sharing will promote group learning outcome. It is similar with other researches that suggest individual knowledge sharing will promote learning. Inter-group knowledge sharing was measured by trust between group, group leadership, formalization in knowledge sharing activity, and rewards system.

Table 3. Factor loading for each variable

	Estimate
KS1 ← KS	0,842
KS2 ← KS	0,616
KS3 ← KS	0,748
KS4 ← KS	0,248
KS5 ← KS	0,639
EL1 ← EL	0,936
EL2 ← EL	0,633
EL3 ← EL	0,408
GL1 ← GL	0,846
GL2 ← GL	0,885

Trust between groups has the biggest factor loading compare to other manifest variable. It show that when a group believe that other group will not misused shared information and knowledge, that group will has higher probability to share their knowledge. Knowledge sharing will also be promoted when a group has a leader that can facilitate knowledge sharing activity. This finding is align with Wee and Chua (2013) that suggest that the dominance of the leader is one of many unique characteristics of SME's. Leader as a role model should give example and encouragement to others to participate in knowledge sharing activity. Knowledge sharing can also be facilitated when there were formalization (procedure, schedule, etc.) and a suitable rewards system. Group motivation has factor loading less than 0,5 and then deleted from the model. This finding is contradictive with other knowledge sharing research that was done in individual level.

H2 that presume a positive correlation between engagement level and group learning is proven. This finding concludes that when a group has high participation in inter-group activity, group learning will be facilitated. Engagement level was measured by level of commitment and joint activity. Group's receptiveness on new knowledge/information has factor loading less than 0,5 and then deleted from the model.

5. LIMITATION AND FURTHER RESEARCH

This research only analyzes 27 groups in a SME cluster. Further research should be done in larger respondent from several SME cluster. This research also only considered inter-group knowledge sharing and engagement level as factors that affect group learning. Further research should consider other factor such as learning capability.

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