Knowledge Transfer Model for Private Higher Education Knowledge Management System

Yulistia
Informatic Techniques
Sriwijaya University, Doctoral
Program Student (Lecturer at STMIK MDP)
Palembang, Indonesia
yulistia@mdp.ac.id

Ermatita*
Information System
Sriwijaya University
Palembang, Indonesia
ermatitaz@yahoo.com

Reza Firsandaya Malik
Computer Science Faculty
Sriwijaya University
Palembang, Indonesia
rezafm@unsri.ac.id

Abstract— **Knowledge management System (KMS) as one of the management system to reach effective and competitive advantage, has been applied in many company or institution. One of KMS phase is knowledge discovery systems with specific activity called knowledge transfer. SECI model is one of knowledge transfer which used by many researcher in KMS journal. SECI model developed into inukshuk model which complete the component that is not available in SECI. The problem is, both SECI and inukshuk models are generally used for common institution or company, and not specialized for educational institution such as higher education. This paper will discused and formulate model for knowledge transfer activity based on SECI and Inukshuk model, based on research about higher education knowledge transfer and knowledge management concept for private higher education, which is already made by some researchers. The method in this paper using review journal method with observation and analysis approach. Result of this paper is an additional factor for transfer knowledge suggested for Private Higher education, it is People and Policy, added in the knowledge transfer phase in order to emphasis the Socialization and Externalization in SECI Model.**

Keywords— *Knowledge management, Knowledge transfer, Private higher education, People, Policy.*

I. INTRODUCTION

Higher education institution always linked to knowledge. A higher education institution must be able to use knowledge in order to achieve better quality and process. Universities inherit knowledge, transfer knowledge, innovation and diffusion, therefore knowledge management can promote knowledge sharing, enhance knowledge innovation, foster talent, and provide knowledge and intellectual support for development in society.[1][2]. The keys for improving reputation is Knowledge Management (KM), it can increase student's academic quality for any institution. [3]. KM needed to be applied in higher education institution. Every academic institution contributes to knowledge [4].

KM tremendous growth an its importance for higher education institutions is unavoidable. It has numerous problems it can solve; and hence the scope for improved research is abundan. The benefit of knowledge management used in many fields. Knowledge derived from information, and information comes from raw data that has been converted. [5][6]. Therefore many research this day talk about Knowledge Management System (KMS) to be applied in higher education. [7].

Knowledge management system (KMS) is a system used to facilitate KM processes. KMS divided into each KM process, namely knowledge discovery, knowledge capture, knowledge sharing, and knowledge application systems [8]. In knowledge discovery, there is a specific activity called knowledge transfer or other called it knowledge convertion.

SECI model is one of knowledge transfer model that used by many research in KMS journal. SECI model developed into inukshuk model which complete the component that is not available in SECI. Unfortunately, both the SECI model and inukshuk model is aimly used for company and institution, and not specialized for higher education institution such as university and other higher education level. This condition create a problem for higher education institution, when they use SECI or Inunkshuk they have to do some adjustment that makes higher education institution do the specific phase that fit their needs regarding their institutional characteristic.

In indonesia higher education institution divided in two types, there is state university and private university. In this paper will focused on private university, because the challenge to build KMS that will affect to commercialization agenda regarding to student acceptance and recruitment, is higher in private university than the state university. Therefore this paper will discused paper from existing research and formulate model for knowledge transfer based on SECI and Inukshuk model, based on research about higher education institution knowledge transfer and knowledge management concept in higher education universities, and try to combine and analyze what kind of aspec of knowledge transfer suitable for higher education institution.

II. THEORETICAL FOUNDATION

A. Knowledge

An institution usually represents the ultimate knowledge in the organization. Rapid growth of data and technologies trigger the transformation of data into useful information known as 'Knowledge'.[9]

Knowledge starts as data, in form of raw facts and numbers, for example, the market value of an institution's endowment. Information is data put into context—in the same example, the endowment per student at a particular institution. Information is readily captured in documents or in databases, even large amounts are fairly easy to retrieve with modern information technology systems [10] Knowledge divided into two types, tacit knowledge and explicit knowledge [11][12][13].

1. *Tacit Knowledge*
   Basically tacit knowledge is personal, developed through experiences that are difficult to formulate and communicate
2. *Explicit knowledge*
   Explicit knowledge is formal and systematic that is easy to communicate and share
   Application of explicit knowledge is easier than tacit knoelwgde because it obtained in the form of written or documented statements.

Davenport dan Prusak (1998) interpret knowledge as a mix of framed experience, values, contextual information, and expert insight that provides a framework to evaluate and incorporate new experiences and information. It originates and applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms.

Nonaka and Takeuchi (1995) define knowledge as justified true belief, focused on the definition of knowledge on personal beliefs and emphasized the importance of justification.[14]

B. C. Knowledge Management

KM is a systematic process which knowledge is needed for an organization to succeed it is created, captured, shared and leveraged.[15]

Knowledge is an asset of organization, and must be managed wisely. New information, circumstances, and technology must be added to the knowledge base, even as some of the existing knowledge obsolesces or leaves the organization. Since knowledge resides with individuals, transmitting knowledge between individuals is a critical phase of knowledge management (KM) and the subject of this research.[16]
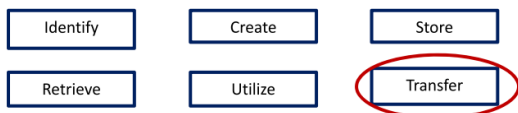
Source : Perkins, P.E. Dr. Robert A. , Bennett, P.E. Dr. F. Lawrence, "Knowledge Transfer Needs and Methods", 2012

Fig. 1. Main Component of Knowledge Management

C. Knowledge Transfer

Knowledge transfer is the first step in KM to gather all the knowledge in a organization or institution. Organizational characteristics such as structure and culture contributed in the way individuals act. Therefore, research on exploring how organization characteristics contributed to tacit knowledge construction and manifestations are recommended to provide understandings on tacit knowledge from the organizational perspectives. Individual personalities and cognitive styles are associated with individuals reactions to a problem. [17]

In order to get a conclution about type of existing knowledge transfer in Knowledge management system, this research will use SECI and Inukshuk model as basic foundation to the conclusion.

1) SECI Model

SECI is a spiral model of knowledge that forms the basis of knowledge creation and theory transfer. This model distinguishes two dimensions of knowledge as tacit and explicit knowledge, and proposes a process of knowledge creation through social interaction to convert knowledge between two dimensions [5]. There are four stages in the SECI model, namely socialitazions, externalization, combination, internalization.

Source : Meher, D. P., & Mahajan, N. (2018). An Analytical Study of Use of Knowledge Sharing Methods in Education. 2018

Fig.2. SECI Model

There are four types of knowledge transfer, hat is : [14]

a. Socialization

Conversion of tacit knowledge to other tacit knowledge. Tacit Knowledge is conveyed to others through the process of socialization in organization, through social interaction and sharing experiences between members of the organization.

b. Externalization

Conversion from tacit knowledge to explicit knowledge.

c. Combination

Conversion from explicit knowledge to explicit knowledge.

d. Externalization

Conversion from explicit knowledge to tacit knowledge.

SECI model does not include the students performance factor, which is an indicator to measure effectiveness of teaching and learning processes. [15]

2) Inukshuk Model

The Inukshuk KM Model is a refined framework of the SECI model, it is an extension of the SECI method, namely by adding several components such as, Leadership, Culture and Technology.[18]
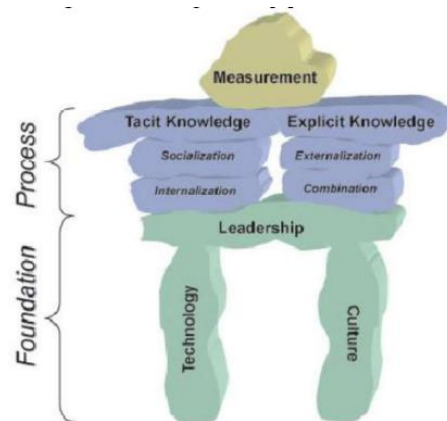
Source : Dalkir, Kimiz. (2011): Knowledge Management in Thery and Practice. Massachusetts Institute of Technology

Fig.3. Inukshuk Model

Inukshuk model part is :

a. Measurement

Measurements are made to what stage this model will be made in a study. Is it only in the modeling stage or until the implementation phase.

b. SECI Model

Socialization, externalization, combination and internalization.

c. Leadership
Explicit knowledge is needed so that the decisions and leadership style of the top manager can be shared with other employees through the Knowledge Management container.

d. Culture
Create a culture of sharing between employees, the company management can provide intensive or reward systems. System reward can be in the form of an award to motivate employees to want to do knowledge sharing with other employees, or can use a punishment system for employees who do not want to share.

e. Technology
At this stage is an explanation of what computing technology is used. Can be discussed through software and hardware used.

Inukshuk's relationship with KM is that it can provide information about tacit and explicit knowledge within the organization, clearer information about technology in the organization, then how a leader leads an organization, and knows the culture that exists in the organization.[18]

III. HIGHER EDUCATION INSTITUTION KNOWLEDGE TRANSFER

. Knowledge management in a higher education especially university is absolutely necessary. Although work ethic, competence, motivation and professionalism of people (lecturer and staff) has impact of the on performance [19]. To implement KM in any organization, the right culture needs to be cultivated. [20] Distinct cultures, an academic culture and an administrative culture, the problem that often arises in the implementation of knowledge management in universities is knowledge sharing has not yet become a behavior and habit. Knowledge sharing in addition to the interests of institutions is also for the benefit of individuals. Most universities do not manage their knowledge well, so the transfer of knowledge does not occur. When a professor or researcher leaves the university then his knowledge goes with him. Knowledge is the only key to competitive advantage. [21] [22]. There for, a spesific knowledge transfer model is needed to be develop in order to complete the existing model.

A successful KM strategy must basic key in order to implement knowledge strategies. And the three keys are People, policy, and technology. Hereby analysis focused is about people and Policy ::

a. People here define as employees, experts, knowledge workers, sponsors, and customers. To build a knowledge workers team, it is important that members are given responsibility to start knowledge management projects. People is the main factor that will determine every decision in knowledge management projects, along with two other factors.

b. Policies fostering the right culture to apply knowledge management successfully. Technology facilitate knowledge management work activities in in knowledge management project.[23]

Based on previous research, which states that the lack of willingnes and behaviour from people in higher education especially lecturers and other experts in transfer and sharing tacit information, to tacit knowledge called socialization, and from tacit knowledge to Explicit knowledge called Externalization inukshuk model, it can be improve with the addition of People and Policy in the foundation for inukshuk model. In another research, Chen argue that Citizenship behaviour has an Interactive Effect of Knowledge Management Performance in Taiwan Semiconductor Industries [24] .By adding, hopefully the addition able to pursue transfer knowledge activity especially in Inukshuk and SECI Socialization dan Externalization Phase without any culture distortion by using too much reward or punishment for knowledge transfer.

IV. PROPOSED ADDITIONAL TRANSFER KNOWLEDGE FOUNDATION COMPONENT

Additional foundation factor People and Policy as two from three factor for implementing knowledge management strategies added in the knowledge transfer phaseThe model suggested in this paper is drawn in figure 3:
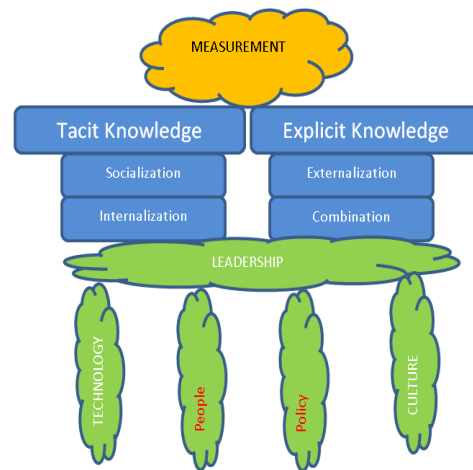

Fig.4. Model Proposed

In order to emphasis the Socialization and Externalization in Private Higher education. Private Higher education as a commercial educational institution has more challenge to make sure that knwledge transfer is a continuity process.

A Additional People Component

Means that on socialization transfer knowledge from tacit to tacit knowledge , the people involved especially the one who will transfer it to other have to be brainstormed that knowledge transfer is a important step to be able to elevate their knowledge even more and more. By transfering knowledge especially tacit, a person will gain even more knowledge because by transfering tacit knowledge to other, there will be a unpredictable information shared even more from the person they transfer the knowledge to.

B. Additional Policy Componen

Means private higher education have the specific to-do list they are going to do by making making policies such as awareness of knowledge transfer by providing continuous and facilities of knowledge sharing. Not just

rewards and punishment as Culture, but policy means to be more specific sharing action shcedule that make socialization phase is reasonable to do.

V. Conclusion

Knowledge management transfer knowledge existing model has already given the framework for knowledge transfer in a company or institution in general. Higher education as a educational institution based on services with different characteristic from other sale and manufacture company, shoul have differentiation in knowledge transfer so Knowledge Management System could implemented with precise knowledge to be share.

Modified model from SECI and Inukshuk Expected to enrich the knowledge transfer in higher university ie private university because it emphasize on socialization phase from tacit to tacit knowledge can always applied as expected by the private higher education.

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