Benchmarking Process of Knowledge Management Best Practice Model for Higher Learning Institution

Halijah Ismail, Rusli Abdullah, and Yusmadi Yah Jusoh

Universiti Putra Malaysia (UPM), Malaysia, halijahismail78@gmail.com; rusli yusmadi@fsktm.upm.edu.my

ABSTRACT

This paper aims to propose the benchmarking process for KM Best Practice Model to suits Higher Learning Institution (HLI) environment. The need for Benchmarking of KM Best Practice Model is due to the lack of research made to confirm the Best KM Model for HLI. Benchmarking process will helps HLI to ensure continuous improvement and hopefully will uplift KM state in HLI by implementing benchmarked KM Best Practice Model due to the stagnant state of KM in HLI for the past 10 years. *Method:* Literature for Benchmarking were extracted to propose the right benchmarking process for HLI environment. Several KM models were extracted from the literature and reviewed. The KM Model were selected to suit the HLI environment in Malaysia, this is to ensure the KM Model selected served as the best KM model to be practice in the future or practically named internal benchmarking. *Conclusion:* The paper proposed Benchmarking process for KM Best Practice Model to suits HLI. The moderator for KM Best Practice Model were identified to proceed with the KM Best Practice Components effectiveness validation in the future study. This study also proposed a conceptual Model for KM Best Practice.

Keywords: Knowledge Management, Knowledge Management Best Practice, Higher Learning Institutions.

I   INTRODUCTION

Rahman (2016) recorded the low state of knowledge sharing behavior in HLI Malaysia, to support the research made previously by (Tasmin, 2012). To ensure the continuous improvement for KM in HLI, the need for KM Best Practice Benchmarking is a must in order to identify the KM Best Practice Components that proved to works effectively in KM process within the organization. This paper aims to propose the benchmarking process for KM Best Practice model to suits the HLI environment. However, most organization objectives of benchmarking is to achieve continuous improvement for development recorded at 68% while the remaining 32% as regulatory purpose said (Magutu et al., 2011). The literature for benchmarking mostly support the benchmarking process for business domain, however the process might be suitable to be implement in HLI. This is what will be discuss in this paper.

II   BENCHMARKING PROCESS OF KM BEST PRACTICE MODEL

KM process known as an innovative approach for performing certain task or function in the best possible way also both internally and externally (Lu et al., 2010) This process naturally drives collaboration of teamwork and brings consistency to some extent. Though the k-worker equipped with the ability to think and execute responsible for knowledge creation in the organization. Their value are measured by the terms of attitude, learning, ability, innovation, excellence, speed and quality. This process transform the information and intellectual assets into a value that connects people (L S, et.al, 2010) which enhance the learning process (Che Rusuli, et.al, 2012). The k-worker works based on k-process on a systematic approach to enable KM also known as technology and it must be well defined to ensure its functions to suits the organizational needs and requirements (Abdullah R, et. al, 2008) and they must also fits for measurement (Yusoff, et al, 2012) & (Okyere-kwakye, et al, 2012). The KM system must therefore be process-driven and easy to embrace. Maximizing the scalability and consistency will help k-worker embrace KM practice naturally which must be align with the organizational function and objectives. As result, KM Best practice effectiveness can be measured and validate by answering the question what is known, what is need to be known, why it is need to be known and how this known make the organization gain from the knowledge and value the known. This measurement of KM effectiveness can be explain thru the validating process of KM Best Practice model prototype development (Renato & Junior, 2008). However the first step towards the process might be benchmarking. Butnariu & Milosan (2012) added, best practice helps HLI to determine the KM growth which is the first steps towards the benchmarking process of an organization.

Benchmarking works as an ongoing management tools recognized for identifying and enhancing organizational capability which investigate and learning experience that ensure the coverage of best practice are analyzed, adopted and implemented said (Lu et al., 2010) this process are done by a systematic comparing of the best product process said (Scott, 2011) agreed by (Hoist et al., 1995) benchmarking also commonly called 'best practice' said (Elmuti & Kathawala, 1997). He also list the types of benchmarking into; internal, competitive, functional and generic. In this study the focus might be on the generic benchmarking due to the nature of defining the best practice for KM Process. (Lee & Lee, 2007) confirmed the relationship between KM capabilities, KM process and KM performance as related to each other however focus must be in two dimension which is the organizational knowledge process and the organizational capabilities, to ensure the benchmarking procedure is on the right direction.

Benchmarking are obviously to validate the KM Best Practice Model as the best Model. This KM Best Practice Model then can be used as a guideline or benchmarked model for HLI. The benchmarking of KM Model will help HLI to leverage KM and to discover the potential area for improvement, providing an incentive to change, and insist in setting targets and formulating plans and strategies (Scott, 2011), this is due to the nature of KM process as the factors for knowledge assets maximization (Marr, 2003), he also added the need for consideration of the culture issues in benchmarking the KM Process due to the dynamic knowledge creation process. He also added the reminder for benchmarking issue regarding the theories of benchmarking which computer science domain on cognitivist and auto-poetics, while technology science would prefer the connectionist, this scenario will not help the benchmarking process between the two domains. However this research will focus on the connectionist by connecting human and technology not only being cognitivist which identify and collect and disseminating the explicit knowledge and auto-poetically transfer the knowledge internally.

III RESULTS

This paper reviewed several literature of benchmarking process (Okoli & Schabram, 2010) and summarized the proposed Benchmarking Process of KM Best Practice Model (Goldman et al, 2014). Selected KM models are summarized from the previous study will be used as reference model

(Tasmin & Woods, 2008b). A proposed Benchmarking Process for KM Best Practice Model to suits the HLI are being concluded later (Hoist et al., 1995).

Figure 1. Benchmarking Process for KM Best Practice Model.

Based from the first phase of the Benchmarking process, the study cluster the KM Best Practice Components into 1] Organizational Culture, 2] Organizational Structure, 3] Human Psychology, 4] Infrastructure, 5]Technology, 6] Knowledge Process and 7] Knowledge Audit. These components are identified as the component to be benchmark.

A. Organizational Culture

Knowledge culture in the organizations defined as the combination of common expectations, tacit rules, shared experience and social norms that later shape the attitude and behaviour of the members in the organization to support and encourage the knowledge sharing activities through the interaction and relationship building to overcome CKM barriers said (Tasmin & Woods, 2008b) &(Tasmin & Woods, 2007). While (Ramachandran & Chong, 2009) suggested the culture in the organization must include; clan culture, adhocracy culture, hierarchy culture and market culture . The leadership was most agreeable components as KM Best Practice components by previous researcher, followed by motivation. Experience was recognize as the moderator (K. J. Lee & Jeon, 2004) while mutual trust were proved to be effective by (Aulawi & Govindaraju, 2008; Guan, et al., 2006; Okyere-kwakye, et al., 2012; Panahi, et al., 2012; Ratnasingam, 2008; Tasmin & Woods, 2008b). Truth and learning followed to be effective KM Components as agreed by (Chayanukro, et al., 2012; Davernport, et al., 2000; Nasir, 2010; Wai, et al., 2012). The moderate effective KM Components for organizational culture are; collaboration, believe, strategy and mutual-reciprocity. The newly introduced KM Components are, altruism, enjoyment, self-efficiency and complexity by (Okyere-kwakye, et al., 2012) and kiasu-ism (Guan et al., 2006) while the other culture components includes psychology, incentives, rewards, and awareness.

B. Organizational Structure

Organizational Structure defines how the activities in the organization will help towards the achievement of organizational aim. A robust and well defined organizational hierarchy is the essential to all organization said (Mohsennasab et al., 2008). The organizational structure must contain organizational strategy said (Aulawi & Govindaraju, 2008) and agreed by (Raja Kasim, 2008). The organization must also be headed by smart leader said (Adli & Hassan, 2003; Guan, et al., 2006; Jahani, et al., 2010; Salleh, 2012; Tasmin & Woods, 2007).

C. Human Psychology

The psychology of human related to emotional intelligence which powering the tacit knowledge sharing through team affiliation in the organization said Othman & Abdullah (2008) if added with positive attitude knowledge sharing among the member in the organization can be a success claimed Ainiarifah & Norizan (2008). The KM Best Practice components might includes; Motivation, Incentive (Ta, et al., 2012), Rewards (Abdullah, et al., 2008b; Adli & Hassan, 2003; Guan et al., 2006) and Awareness. Literature supported rewards as the favorite proposed components followed by awareness. While motivation and Incentive were not literally supported well as reviewed in the study. However this might not be the indicator for non-effective KM Best Practice components before validating it.

D. Infrastructure

Aulawi & Govindaraju (2008) referred infrastructure as the apparatus of the organization aims to facilitate the creation of an environment which enables members of the organization to share their knowledge with one another intensively, infrastructure linked to the technology, structure and organizational culture claimed (Adli & Hassan, 2003).

E. Technology

Internet Technology (IT) become a link that connects people via KMS (Manuri & Raja, 2011; Mohamad,et., 2008), then the era of mobile technology took over the KMS which allow cloud technology (Alzaza & Yaakub, 2012), however, an appropriate technology matches to KM process will make knowledge being able to flow among the member of the organization must ensure the user update themselves with the latest technology (Zakaria, 2008). Care must be on the KM application such as data were housing, data mining, business intelligence management information system, decision support system, customer

relationship management and also competitive intelligence. The latest technology might be consider is the cloud (Abdullah, et al., 2011).

F. Knowledge Process

The main KM Process focus on three main activities namely knowledge creation, knowledge storage and knowledge distribution which gives impact on the knowledge performance said (Zaim, 2006). This study expend the knowledge process activities to eight activates to complete the cycle of knowledge process. The KM process includes the activity of knowledge creation in the organization, the activity started from the knowledge generation said (Che Rusuli et al., 2012), followed by knowledge acquisition added (Abdullah et al., 2008b; Zakaria, 2008), knowledge capture was clearly defined in the study by (Che Rusuli et al., 2012). Knowledge storage play an important activity in knowledge process where the storage of the knowledge are crucial due two form of the knowledge itself which is explicit and tacit knowledge that mingled among the organizational members. The used and sharing of knowledge must be provided with correct platform to ensure the effectiveness of the knowledge being shared and used (Dhillon, et al., 2010; L S et al., 2010). The knowledge process activities that always been abandon by most organization is knowledge preserved, the issue of knowledge preserve where preferable mostly at the library but being neglected in the HLI (Ayobami & Rabi, 2012; Che Rusuli et al., 2012).

G. Knowledge Audit

The knowledge audit refer to the measurement of the effectiveness of KMS, the measurement might involved the tools for measuring KM readiness of the organization suggested (Renato & Junior, 2008; Tasmin & Woods, 2007) to ensure KM are competent enough to be implemented (Zakaria, 2008). While knowledge audit is to ensure the organization maintain its performance via productivity and quality assurance.

Figure 2. KM Best Practice Components Summary

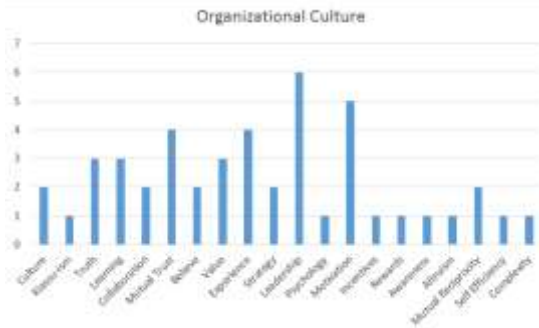**Figure 3. Knowledge Process Components Benchmarking Result**

Figure 4. Organizational Components Benchmarking Result

IV DISCUSSION

Literature on KM Best Practice model has put forwards few models to be set as benchmarking model in this study. This KM Model widely known and applied for the past 10 year's duration. Namely ; 1: The Sand Cone Model, 2: Socio-technical Model , 3: KM at HLI Model, 4: Knowledge Model for Universities Implementation. It is to be acknowledge that few KM Model are also included in this study due to prospect of effectiveness.

A. The Sand Cone Model

(Che Rusuli et al., 2012) proposed a new KM process namely K- Records and K-Preserved. This process has been left with little attention, however it is a positive influence to provide appropriate KM practice in the HLI environment.
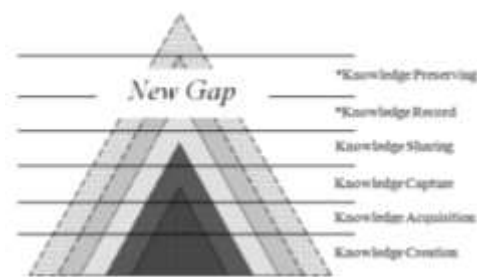

Fig. 5: The Sand Cone Model

Knowledge Creation - (Che Rusuli et al., 2012) reported that HLI have excelled at creating scholarly information and intelligence from data, but they have tended not to create knowledge from

intelligence in addition HLI have done little to use organizational information to create knowledge that can be used to improve the functionality of HLI process not only becoming the collection in the house but must be able to produce the right amount of information at the right time.

Knowledge Acquisition - (Che Rusuli et al., 2012) documented that HLI have a restricted limited funding, technology, staff and space towards presenting the corporate acquisition in order to provide continuous education and staff training to all staff members. The organization must identify the relevant and none relevant or essential knowledge to the organization (Abdullah et al., 2008b) and (Che Rusuli et al., 2012) added that HLI can make used of the producer of the literature published and perhaps externally (Abdullah et al., 2008b) defined knowledge codification or coordination as the steps required to place the organizational knowledge into a form that makes it accessible to others who may need it.

Knowledge Capture - (Che Rusuli et al., 2012) stated that HLI could play a major part in the knowledge capture processes, whereby the staff have the capabilities to organize and manage the knowledge which is to become the knowledge central to initiate knowledge capture and storage from lost. However many HLI settings, have not yet develop a systematic approach to organize the knowledge of the enterprise and making it available to other HLI and the staff in order to improve the operational of the organization. Therefore, the need to understand the customer and their requirements and the ability to provide appropriate and timely services are a must have component to avoid unattended knowledge this will lead to the waste of knowledge.

Knowledge Sharing - According to (Tasmin & Woods, 2007), a structured approach to knowledge dissemination through their theory of a knowledge spiral four modes knowledge conversation namely; socialization, externalization, combination and internalization. Despite that Malaysian HLI are still not yet being hormonally adapted with the knowledge sharing culture that might create the barrier to knowledge sharing in the organization may be due to fear of losing the exclusiveness of the knowledge (Guan Gan et al., 2006). The need to create knowledge sharing culture in the organization is a must in order to make sure the new skills and knowledge in the organization to remain relevant yet the establishment of the means for knowledge sharing must not be neglected.

Knowledge Record - (Saufi et al., 2012) suggest the importance of being able to develop and design the knowledge of how to records due to the lack of recording ability among the staff of an organization in order to create the environment of continuous learning that so far hasn't being achieved by HLI.

Knowledge Preserving - (Che Rusuli et al., 2012) suggested that knowledge preservation for the key material of the organization is a must for future used of the valuable knowledge in the organization. These all will lead to the contribution of the organization to invest in hardware purchasing and software to preserve the recorded and codified knowledge in the organization so that it can be used in the future and not become obsolete. This process should be considered as organizational innovation and evolving process in HLI. (Rusuli, 2012) also added with the indication by Ismail (2006) that HLI preservation programs take into consideration factors such as the physical environment in which information resources are housed; disaster control; conservation; reformatting; routine maintenance; security and reader education and all this responsibility goes to the professional and top management.

B. Socio-technical Model

(Tasmin & Woods, 2008a) proposed 5 major domain of KM namely knowledge leadership, knowledge culture, knowledge technology, knowledge process, and knowledge measurement (Che Rusuli et al., 2012) as the components for the Socio-technical model.

Knowledge culture in the organizations that combined the common expectations, tacit rules, shared experience and social norms that later shape the attitude and behaviour of the member in the organization support and encourage the knowledge-sharing activities through the interaction and relationship building to overcome CKM barriers (Tasmin & Woods, 2007). He said that managing knowledge are based on sharing culture that fully depend on trust and good relationships among people within an organization. While (Guan Gan et al., 2006) added that mutual trust only exist in an organization when its members believe in the integrity, character and ability of each other

KM infra-structure acted as a basic foundation for other knowledge enabling components to work as a whole. The networked computers in the organization helps people in the organization shares

ideas, information, and knowledge that speed up the communication and reduce cost of knowledge sharing (Tasmin & Woods, 2008a).

Technology in the organization means the used of IT-Based KM System. (Tasmin & Woods, 2007) grouped the CKM technology channel into four types namely; database, decision support systems, groupware- includes e-mail and video conferencing and intranet webs.

(Tasmin & Woods, 2007) claimed that measurement is the critical aspect of any knowledge management effort to strike the right balance between organizational and technological changes in the organization. This was performed by tools for measuring knowledge readiness in the organization. The issue in measurement comes from the fearful of measuring the knowledge outcomes or the return-on-investment of their efforts, the obstacle to measure the knowledge delivery effectiveness by having the right system of measurement.
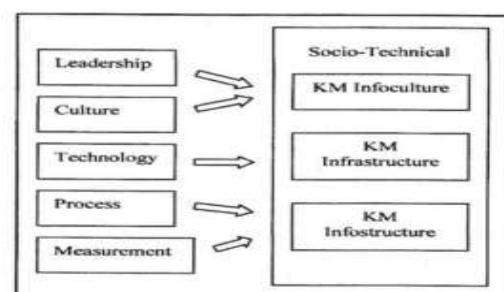

Figure 6. The Socio-Technical Model

C. KM at HLI Model

(Abdullah et al., 2005) recorder that KM Tools consist of knowledge use, knowledge finding, knowledge creation and knowledge packaging, normally called KM technologies such as mailing, search and retrieval system that are used to accomplish certain mission and objectives in the organization.

The additional of audit component was suggested in order to maintain and to ensure performance of the KMS according to its specification. It is also can be used as a benchmark of the KMS to maintain its quality and productivity as well as to increase its ROI. While the soft aspect explain the soft issues on the component namely; motivation, Incentives, Rewards and Awareness, that play the role to support the development and the implementation of KMS in the organization. This is totally involved the human factors.
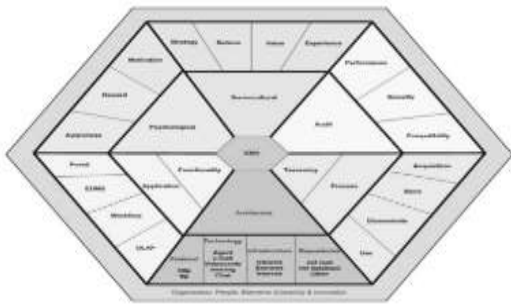
Figure 7. The KM at HLI Model

D. Knowledge Model for Universities Implementation

The model summarized that info-structure support; infrastructure capacity; info-culture; and knowledge acquisition, generation, storage and dissemination; are important factors in shaping the KM initiatives. Info- structure is found to be the most significant variable. This is consistent with other studies, which confirm that people and cultural issues are the most difficult problems to resolve, but tend to produce the greatest benefits (Mohayidin, et al., 2007).
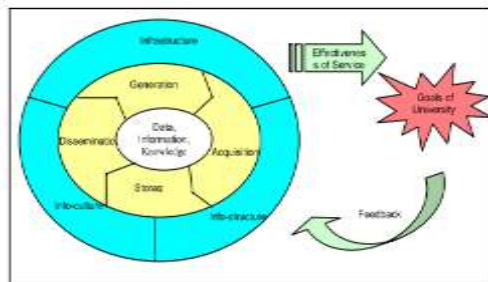

Figure 8. Knowledge Model for Universities Implementation

V CONCLUSION

The study limits to the Malaysia HLI environment literature. The literature provided in the paper might also include km innovation and business due to profit orientation environment created lately in HLI. Distinguish environment for Asian culture are being considered due the focus on local environment (Niedderer & Imani, 2009).

The need for measurement of KM model in the HLI are essential because the measurement of knowledge contribution in organizational marks the correct execution of every activity, its frequent evaluation, the monitoring of any variations occurred throughout its development and finally the accomplishment of eventual corrective actions that intends the correction of routes and agility in

attainment of its goals claimed (Renato & Junior, 2008). However, external benchmarking may not always be the best way to solve problems and maintain competitive advantage said (Lu et al., 2010).

The study concluded, experience, awareness & knowledge need seems to be the moderator for KM Best Practice despite of components required for KM Best Practice implementation, the key activities that measure KM in the organization to be validate the effectiveness are the Knowledge Process. This process are being supported by the Organizational Culture, well organized Organizational Structure, properly deal Human Psychology, supported by strong and robust Infrastructure and well equipped with Technology and lastly maintain the quality by Knowledge Audit. The KM Best Practice Components will proof to be effective if only it is validate as answering the knowledge of Know-Who, Know-How, and Know-Why. This will continue in the future study.
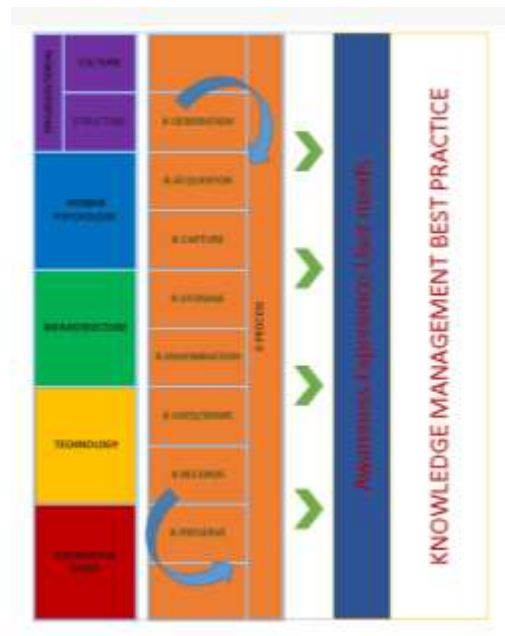

Figure 11 : KM Best Practice Model for HLI

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