Knowledge Management Enablers toward Knowledge Sharing and Research Collaboration at Research Universities in Malaysia

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ABSTRACT
The research universities have been recognised as knowledge-based organisations (Goddard, 1998), which revolve around several key knowledge processes: knowledge creation; knowledge dissemination and learning. Within this context, a university’s strategic approach in knowledge management (KM) to encourage knowledge sharing (KS), and subsequently research collaboration can lead its advancement and growth advantage. As collaboration has been viewed as the breeding ground for new knowledge, it is essential that a university understands its relationship to KS. This research aims to study the KM enablers’ influence on faculty members’ KS in supporting research collaboration within five research universities in Malaysia. The individual-organisational-technological constructs from this study offer universities with specific directions in strategising their KM initiatives to ensure greater KS and retention of valuable knowledge.

Keywords: Knowledge management, knowledge sharing, research collaboration, research universities, academic staff.

I. RESEARCH BACKGROUND AND PROBLEMS
Research universities are given the critical role of driving the knowledge production in the country, with a focus on developing quality graduates equipped with analytical, problem solving skills and interpersonal understanding, thereby, contributing to Malaysia’s goal of building a knowledge-based society. To achieve this goal, one of the critical steps that has been identified by the Malaysian government is the implementation of knowledge management (KM) to enhance the performance of public universities. This requires each faculty member to practice appropriate and effective management of knowledge (i.e. KM) by creating, obtaining, storing and distributing knowledge effectively in both teaching and research activities (Mohayidin, Azirawani, Kamaruddin, & Margono, 2007).

In line with this, the five research universities in Malaysia that include Universiti Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM), Universiti Sains Malaysia (USM), and Universiti Teknologi Malaysia (UTM) will need to be aware and provide necessary KM conditions to encourage faculty members to (1) trust each other, (2) work together (i.e. collaborate) as a team, (3) be motivated to share ideas and (4) engage in discussions through distinct communications methods, particularly on how to share information and knowledge in order to generate new knowledge (Brink, 2003). Brink (2003) explained that these conditions can be broken down and structured into separate KM enablers. In this study, the KM enablers are separated into (1) individual, (2) organisational, (3) technological and (4) communication constructs which are crucial for enabling KS to occur. These conditions have been proposed as prerequisite to allow knowledge to be shared to further support and strengthen collaboration among faculty members in the research universities (Suhaimee, Bakar, & Alias, 2006).

There are, however, several barriers, linked to each of the KM enablers. Some of the principle barriers dominating at individual level concern the lack of trust, insufficient motivation and commitment (Azudin, Ismail, & Taher Ali, 2009). At organisational level, researchers outlined main organisational barriers to KM which concern (1) lack of management and administrative directive in terms of the gains and values of KS practices, (2) lack of top management support and participation, (3) no rewards or rather lack of transparent rewards in monetary and non-monetary terms for encouraging the sharing of knowledge and (4) existing organisational culture that does not provide sufficient support for sharing practices (Chen, Chen, & Kinshuk, 2009). An additional significant discussion on issues pertaining to the barriers of technological findings include: (1) employees’ unrealistic expectation on KM system, (2) mismatch between employees’ needs with that of an integrated KM system and processes that restrict sharing practices, (3) lack of integration of KM system processes; lack of compatibility between diverse information technology systems and processes and (4) insufficient training in familiarising with the KM system and processes are among the principle setbacks concerning technology usage (Chen et al., 2009). More recently, published literature have emerged concerning poor and
restricted communication that discourage the sharing of knowledge (Chen et al., 2009).

The idea of KS itself is not without its challenges. Despite the very nature that faculty members need to conduct extensive research and development activities to facilitate research, it is surprising that faculty members still look at knowledge gained to be a source of power that should not be shared generously. It is in the mind-set of members that sharing means to “potentially give away a source of power and expertise to others” (Hislop, 2009, p. 149). Faculty members are cautious in sharing their knowledge as they are still attached to the adage that ‘knowledge is power’ instead of rationalising that ‘KS is power’ (Patel & Ragsdell, 2011). Based on the mistaken notion that ‘knowledge is power’, a faculty member tends to hoard knowledge due to personal scholarly achievement rather than sharing of common visions, with the perception that if knowledge becomes public, it could jeopardise and threaten the faculty member’s status, recognition and power (Lee & Al-Hawamdeh, 2002). Besides, members are unwilling to share knowledge because they perceive knowledge as a valuable commodity that cannot be distributed freely. Some researchers noticed a widespread problem in universities such as low enthusiasm towards knowledge sharing among academic staff compared to profit-oriented organisations (Kong, 1999).

Kim and Ju (2008) expressed their concern that faculty members lack the sharing of mutual visions in accomplishing their university’s goals and objectives by somehow placing a greater importance on their individual scholarly achievement. They have a penchant for emphasising their own individual academic goals and visions instead of achieving common goals. Similarly, they have a preference for obtaining and finding knowledge through their own personal human networks or via the Internet. The mantra of ‘knowledge is power’ is reflected in the practice of hiding and protecting what they know by spurning the importance of KS. The tendency for the academic staff in the research universities to limit their KS is especially more prevalent when these members have specialised, unique and relevant knowledge that others do not possess. In the end, it is the human tendency to be suspicious of the knowledge whenever acquiring knowledge from others (Davenport & Prusak, 2000). This concern is in agreement with Koppi, Chaloupka, Llewellyn, Cheney, Clark, and Fenton-Kerr’s (1998) observations which revealed a tendency for academic staff to be independent, individualistic and autonomous by maintaining a distance as opposed to sharing knowledge with their colleagues. Superfluous characteristics such as ‘exclusivity’ and ‘individualism’ in the research universities precipitated the unsystematic and inefficient KS which further diminished the willingness of faculty members to share knowledge in achieving institutional goals and objectives set by the university (Kim & Ju, 2008).

There are many faculty members who failed to realise that effective research collaboration among members would increase their effectiveness and contribute to the generation of institutional capabilities that are vital to the university’s performance (Kogut & Zander, 1992). As observed by Patel and Ragsdell (2011), it will be fascinating to see whether faculty members will continue to hold on to their knowledge without sharing it despite the fact that others are generously sharing theirs.

A survey conducted by Cheng (2002) stated that among research universities, the primary implementation obstacles in KM stem from the absence of KS, which include academic staff’s in-depth understanding of KS and the benefits that it offers. It seems that the ability of the research university to use knowledge depends on the level of enthusiasm that its faculty members harbour about sharing it. Apparently, a study conducted by Stenmark (2000) argued that it is not possible for members to share knowledge without having strong personal motivations coming from the members themselves. Therefore, Cormican and Dooley (2007) identified motivation to share knowledge as an imminent challenge within the research universities. Other challenges of KS include: (1) sharing of knowledge that is not recognised or rewarded, (2) lack of stimulating context-specific KS principles, (3) insufficient planning in managing and preparing the university for KM, (4) faculty members’ anxiety of losing their influence once they share their knowledge with others and (5) lack of understanding concerning the purpose of KS. Motivation in sharing valuable knowledge is vital so that the intellectual capital of the research universities can be leveraged. In doing so, a good incentive system is one method of optimising faculty members’ performance and institution results in motivating its members to share (Riege, 2005). With this, the research universities would value the building of faculty members’ ideas and sharing of decisive insights. Therefore, the adoption and leveraging of knowledge would be made possible through the collective means via collaborative research teamwork among academic staff.

Besides the proverbial ‘knowledge is power’ mantra, scholars such as Kluge, Stein, and Licht (2001); Hutchings and Michailova (2004); Yaacob and Hassan (2005) identified an additional condition known as the ‘not-invented-here’ syndrome which is a general behavioural problem in KS. The fostering of
this syndrome discouraged the sharing of knowledge among faculty members as organisational rewards are tied to creating knowledge and not necessarily to sharing and applying existing knowledge. This symptom results in justified passivity which discourages action, brought on by strong emotional group affiliations among faculty members thereby causing a high level of suspicion towards others. This led to neglecting, ignoring or belittling knowledge created within a certain faculty/school (Hutchings & Michailova, 2004). This happens when faculty members have pride or ego issues and avoid seeking advice from others, buoyed by the belief that they can discover new ways in solving problems for themselves (Skyrme, 2002). This syndrome could have a harmful impact as it is associated to knowledge hoarding rather than promoting KS in the research universities.

At the individual level, KS is scarcely present in higher learning institutions these days (Ridzuan, Hong, & Adanan, 2008) due to the relatively weak desire or willingness to share that appeared to be more visible among academic staff in universities as compared to profit-oriented organisations (Kong, 1999). The research universities must create a research environment that allows members to be enthusiastic in sharing their knowledge by inculcating a culture that emphasises KS. Faculty members, therefore, need to be reassured that their ideas or concepts created will be recognised in the university itself. For that reason, the research universities should emphasise long-term commitment among faculty members in an effort to promote a work force that embraces knowledge (Riege, 2005). As a matter of fact, Riege (2005) added that the lack of managerial and leadership (i.e. organisational) support in terms of on-going support, training and clear guidelines can compromise KS practices in universities. He cautioned that research universities must ensure that the most concise and accurate knowledge is transmitted as most members are unlikely to share without trust. Thus, the creation of new or more effective learning methods is crucial in the research universities. As emphasised by Fong and Chu (2006), the lack of trust among academic staff at research universities is a barrier for KS and the greatest KM obstacle to overcome. However, trust must be ‘normed and formed’ in order to encourage research collaboration (Cormican & Dooley, 2007).

In addition, fear among faculty members concerning their job security has resulted in a strong resistance to share knowledge (Chow, Deng, & Ho, 2000). Since academic staff view knowledge (i.e. expertise) as a symbol of supremacy (Grumbley, 1998), the dissemination and revelation of this source of power to others is viewed as erosion of individual power, which explains their reluctance to share knowledge (Bartol & Srivastava, 2002). Faculty members may not want to share what they know, fearing that once they shared their specialised knowledge/expertise, they may not be needed anymore. Hence there are unnecessary potential individual risks involved. In fact, when academic staff leave or resign they take with them the knowledge that is of immense value to the university. This is because knowledge is stored within the minds of faculty members who develop them and as such, others may not have access. The loss rate is high when the members move from one university to another. Martinez (1998) argued that the research universities lack a high degree of KS, which cause numerous work-related inadequacies such as recurring errors, lack of sharing good ideas, dependency on certain members for advice and guidance, repetition of work, sluggish creation of new knowledge or research results. With this, the need to support KS can be accomplished through the building and maintaining of trust across the university (Michailova & Husted, 2002). However, establishing trust is potentially the greatest barrier to overcome in KS in the research universities, on the path towards research collaboration (Cormican & Dooley, 2007). The university sees the lack of trust in terms of KS among faculty members (in both knowledge receivers and givers) as detrimental towards KS. A related analysis done by Lee and Hawamdeh (2002) found that acquired knowledge gained over the working years lead to a vast amount of knowledge and skills. These will be lost if not properly cultivated. Other barriers to trust is the fear among staff towards knowledge sharing and their resistance to change (Cormican & Dooley, 2007).

Furthermore, there had been research studies which showed that faculty members were hesitant to share knowledge due to reasons that include fear of criticism and fear of uncertainty on whether their contributions were significantly accurate or relevant to a discussion that had been carried out (Ardichvili, Page, & Wentling, 2003). In fact, resistance towards change accompanied by the lack of awareness in sharing knowledge also deny others of the chance to acquire knowledge. Egbu, Hari, and Renukappa (2005) show that lack of (contact) time, lack of communication (i.e verbal) skills, lack of interaction between knowledge sources and recipients, and rapid change in technology as other main concerns in the barrier towards KS at research universities.

Cohen and Levithal (1990) stated that KS involved constant verbal interaction and communication between faculty members in order to achieve improved performance. Cormican and Dooley (2007) and Riege (2005) argued that the lack of effective communication fundamental to the effectiveness of KS will hinder the transfer of both tacit knowledge (TK) that is difficult to transfer to others by means of...
writing it down and verbalising it; and explicit knowledge (EK) that is readily transmitted to others. The lack of extensive, continuous and rich communication (Beck, 1999) will in turn lead to the lack of or ineffective communication climate in the research universities. That has a direct influence on faculty members’ confidence and devotion towards KS. Based on this, barriers to communication must be isolated in allowing KS and research collaboration to exist (Reid, Bardziki, & McNamee, 2004).

Based on these issues, this study is therefore significant since KM is commended as a practical solution to address the barriers and challenges that arise in ensuring that the influence of KM enablers: (1) individual, (2) organisational, (3) technological and (4) communication constructs support research collaboration within the research universities (Fong & Chu, 2006). If resistance to sharing knowledge exists, the research universities must contemplate taking necessary steps to encourage their academic staff to share their knowledge. When it comes to Malaysia’s knowledge economy, it is essential to have a working environment that provides knowledge to boost the sense of urgency and need so that faculty members can work together more efficiently to share and eventually turn their knowledge into something beneficial.

This study includes the study’s goal to satisfy the unexplored research gap by targeting on the impact of KM enablers (i.e. individual-organisational-technological-communication constructs) that influence faculty members’ KS in supporting research collaboration within the research universities in Malaysia. In addition, this study further determines the different roles of communication (i.e., openness to communication and face-to-face interactive communication) since in the past, researchers had viewed communication as a factor on its own in encouraging KS. Thus far, no prior research had been carried out in this area with focus on the impact of KM enablers that influence faculty members towards sharing knowledge in higher learning institutions, especially in the context of the research universities. Similarly, there were no prior studies undertaken in finding the effect of KS in supporting research collaboration within the research universities in Malaysia.

II RESEARCH OBJECTIVE
The objective of this research is to identify and evaluate the KM enablers that influence KS among faculty members. Furthermore, this study will examine the effects of KS among faculty members in the context of its support towards research collaborations at research universities based in Malaysia. The KM enablers included in this thesis are the: (1) individual KM enablers (i.e. trust, knowledge self-efficacy and reciprocal benefits), (2) organisational KM enablers (i.e. top management support, organisational rewards and organisational culture), (3) technological KM enablers (i.e. KM system infrastructure and KM system quality); and (4) communication KM enablers (i.e. openness in communication and face-to-face interactive)

III CONTRIBUTIONS OF STUDY
This research is expected to provide significant theoretical and managerial contributions:

1. This study focuses on the implications of assisting the research universities establish successful KS practices by recognising the existence of multiple impacts of KM enablers i.e. on whether the individual-organisational-technological constructs are appropriate contextual factors that influence the KS practices and its impact on research collaboration within the research universities.

2. The findings of this study enlighten the understanding and confirm past research that recognises KM as an essential driver within the individual, organisational and technological dimensions that attempt to create an effective KM environment in the context of a university (Lee & Choi, 2003). Thus, this research analyses the effect of individual constructs (Lin, 2011), organisational constructs (Eid & Nuhu, 2009), and technological constructs (Alam, Abdullah, Ishak, & Zain, 2009) as KM enablers in facilitating KS within the research universities with regard to supporting collaborative research.

3. Even with a wide range of literature coverage on the individual-organisational-technological constructs that influence KS, there is, however, a potential approach based on theoretical studies that focuses on communication constructs (Matin, Alvani, Jandaghi, & Pashazadeh, 2010), which may be a significant KM enabler that influences KS among academic staff. Therefore, this study extends previous research work by investigating the influence of KM enablers in influencing KS among faculty members in the research universities towards research collaboration in Malaysia. Hence, this research will examine the influence of KM enablers that consist of individual constructs (i.e., trust, knowledge self-efficacy and reciprocal benefits), organisational constructs (i.e., top management support, organisational rewards and organisational culture), technological constructs (KM system infrastructure and KM system quality) and communication constructs (openness in communication and face-to-face interactive communication) on KS and observing the establishment of KS with regard to supporting research collaborations among academic staff.
4. Unified concepts from KM enablers i.e. individual-organisational-technical constructs and communication constructs that consist of current supported constructs from various studies including KM are further delineated in order to develop theoretical justification in this study of KS among faculty members with regard to supporting research collaborations within research universities based in Malaysia.

5. Results of this study will extend the growing body of literature by identifying the KM enablers i.e. individual-organisational-technical-communication constructs as the meaningful antecedents that encourage KS among academic staff with regard to supporting research collaborations within research universities based in Malaysia.

6. The contribution of this research to the body of knowledge includes the extension of knowledge in terms of the impact of the KM enablers as independent variables used in the current framework whereby recent research in individual constructs, organisational constructs and technological constructs in enabling KS in support of research collaborations within research universities are further determined and studied by taking the academic staff into consideration distinguished by their positions, such as professor, associate professor and senior lecturer.

7. The communication constructs as a KM enabler will be studied and measured based on two separate constructs i.e. openness in communication and face-to-face interactive communication with detailed description of each construct whereas previous studies had only focussed on communication as a single construct.

8. The study’s findings corroborate the relationship between KM enablers and KS among academic staff with regard to supporting research collaborations within research universities based in Malaysia.

9. The present study’s contribution involved the extension of knowledge in terms of the dependent variable i.e. research collaboration within the research universities in Malaysia used in the present framework.

10. An essential aspect of KM is that it allows the research universities to foster KS in capturing and enhancing the knowledge of their human assets. Since the key objective of KM is to enable the practice and use of knowledge by embracing KS among academic staff, therefore none of the research universities can afford to underestimate the ability of KM in creating and disseminating new knowledge in order to facilitate collaborative research.

11. The impending successes of universities hinge on KS as it provides advantages for knowledge generation (Clarke & Rollo, 2001). Consequently, the university environment where sharing of knowledge is encouraged has positive outcomes specifically for its faculty members and the research universities. The significance of this current research anticipates the creation and retention of faculty members as a university’s crucial assets when it comes to intellectual human capital. Furthermore, with the success of collaborative research in the research universities, it will further spearhead the efforts among academic institutions in Malaysia towards achieving global recognition.

12. The identification of the KM enablers (i.e. the individual-organisational-technological-communication constructs) that influence research collaborations aid research universities towards discovering ways to attract members interested in sharing their own knowledge. Furthermore, KS is influenced by individual constructs (i.e., trust, knowledge self-efficacy and reciprocal benefits), organisational constructs (top management support, organisational rewards and organisational culture), technological constructs (KM system infrastructure and KM system quality) and communication constructs (openness in communication and face-to-face interactive communication) that lead towards the implementation of KS as part of institutional KM initiatives in higher learning institutions, particularly at research universities.

13. The greater understanding and insights of the communication constructs (i.e. openness in communication and face-to-face interactive communication) and its role in influencing KS among academic staff towards research collaborations enable communications of significant value which in turn facilitates the creation, sharing and utilisation of knowledge within research universities based in Malaysia.

14. Finally, it provides policy-makers and practitioners based at research universities a better understanding of the KM enablers that encourage KS among academic staff in addition to offering valuable guidelines in implementing KM and accelerating the pace of research universities towards collaborative research in Malaysia. Furthermore, conducting a thorough study of these enablers and potential mechanisms among research universities in Malaysia would shed further on how academic institutions especially research universities are to survive in a competitive environment while striving concurrently to retain and improve their university rankings.

IV CONCLUSION
A number of KM enablers that impact how it is shared and if it is shared effectively have been identified through theoretical foundation of the research. This research aims to provide further insight
into the KM enablers, categorised into the individual-organisational-technological-communication constructs that elicit a positive and significant influence on KS. These results will be highlighted to the management of the research universities on how they should implement KM in order to optimise KS in their institutions so as to achieve research collaboration among their academic staff.

REFERENCES


