Investigating Individuals’ Intention to be Involved in Knowledge Management Process

M.J.M. Razi and N.S.A. Karim
Department of Information Systems, Kulliyah of Information and Communication Technology, International Islamic University Malaysia 53100, Jalan Gombak, Kuala Lumpur, Malaysia

Abstract: Problem statement: Implementation of Knowledge Management (KM) process in organizations is considered as essential to be competitive in the present competitive world. Though the modern KM practices highly depend on technology, individuals (‘organizational members’) intention to be involved in KM process plays a major role in the success. Hence, the evaluation of individuals’ intention is deemed as significant before the actual implementation of KM process in organizations. Nevertheless, inadequate information is presented in this regard; as a result, a wide research gap prevails in the literature. In this context, the present study focuses on developing a research frame work that can be used to measure the individual intention to be involved in KM process. Approach: Subsequent to a critical analysis of the research gaps, a basic research model has been developed based on knowledge creation theory, KM enablers, and individual acceptance model. Measurers and questionnaire items were identified for each variable from relevant literature. Consequently, the reliability of the instrument was tested among academic staff of a Malaysian university. Results: The Cronbach’s alpha for each variable is more than 0.800 that exhibits the reliability of the instruments. Conclusion: The presented research framework might be a doorstep for future study in this area of KM. Moreover, practitioners may use the proposed framework to measure the intention of individuals to be involved in KM process before actually embarking to it. However, the framework and the model should be tested in different socio cultural and organizational climate to make it robust.

Key words: Knowledge management process, knowledge creation theory, individual acceptance, Actual Implementation (AI), Theory of Reasoned Action (TRA), Diffusion Of Innovation (DOI), Theory of Planned Behavior (TPB), research framework, performance expectancy

INTRODUCTION

The business environment has changed over the past decades and the foundation of industrialized economics has shifted from natural resources to intellectual assets. Thus, Knowledge is increasingly becoming the main asset (Kumar and Chhokar, 2011) that contributes to the competitive advantage of many organizations (Christine, 2011). As a consequence, Knowledge Management (KM) processes implementation is wide spread across different sectors in the contemporary knowledge era, starting from IT sector (Nabiollahi et al., 2011) to agricultural sector (Malekmohammadi, 2009). The KM also has been discussed from religious perspective (Yaakub, 2011) and at primary school level (Chongdarakul et al., 2010).

Among the proposed approaches to implement KM process in organizations, a combined approach of personalization and codification is considered appropriate for the success of any organization (Nonaka and Takeuchi, 1995) as KM is considered as a socio-technical issue (Fatt and Khin, 2010). Meanwhile, an evaluation of organizational readiness for KM process implementation is suggested before embarking to actual implementation (Holt et al., 2007; Siemieniuch and Sinclair, 2004) as KM process implementation demands some changes in the conduct of organizational activities (Mamaghanian et al., 2011) and attitudinal changes of organizational members (Siemieniuch and Sinclair, 2004). The availability of KM enablers such as KM oriented culture, structure and IT infrastructure is considered as an indication to some extent that the organization is ready to implement KM process (Holt et al., 2004). Similarly, receptive attitudes of organizational members towards KM process are also considered as the readiness for KM process (Holt et al., 2007). The present authors believe that the receptive attitudes of individuals in the organization play a major role in the success of KM process as they
are the people who initiate and implement it. However, in the light of literature of KM and individual acceptance models, there are many factors that might influence the intention of individuals. In this context, the receptive attitudes of organizational members to be involved in KM process through the availability of resources (KM enablers) can be considered as organizational readiness for KM process implementation. In other words, the readiness for KM process implementation can be defined as ‘the intention to be involved in the KM process by the organizational individuals within the prevailing organizational context’. KM enablers, (such as KM supportive organizational culture, structure and IT infrastructure) and the factors of individual acceptance, (denoted by performance expectancy of KM and effort expectancy of KM), are expected to be the influencing factors of individuals’ intention to be involved in KM process. An intensive review of KM literature shows some research gaps in this area of KM. Firstly, limited number of empirical works is available in the literatures which exhibit the limitedness of the literature in this area of KM. Holt et al. (2007) have done a survey study highly depending on change management literature rather than KM literature. Meanwhile, Wei et al. (2009) aimed to assess the organizational readiness for KM through the level of Perceived Importance (PI) and Actual Implementation (AI) of some KM success factors, KM strategies and KM process, but the study actually evaluates the influence of those factors on organizational performance. In addition to these empirical works, there are few conceptual write-ups such as, Siemieniuch and Sinclair (2004). Therefore, a necessity arises for further studies on this area of KM. Secondly, KM literature reveals some organizational factors which are considered as pre-conditions for a successful KM process implementation. Different kinds of terms have been used to symbolize these factors. For example; KM infrastructure (Becerra-Fernandez et al., 2004), organizational knowledge capabilities (Yang and Chen, 2007) and KM capabilities (Lee and Lee, 2007). In general, all these studies exhibit the socio-technical nature of KM and mainly focused on KM supportive organizational culture, organizational structure and IT infrastructure for KM process implementation. However, these factors have not been considered comprehensively in the previous studies, thus a need comes up to formulate a research framework involving these KM enablers as well. Thirdly, there are many theories in the Information Systems (IS) literature which stress the importance of individual acceptance for any organizational change. For example, Theory of Reasoned Action (TRA), Diffusion Of Innovation (DOI), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) and so on. Therefore, an all-inclusive research framework to measure individuals’ intention for KM should be proposed considering the factors of individual acceptance too. Finally, knowledge creation theory introduced by Nonaka and Takeuchi (1995), which consists of the processes of socialization, externalization, combination and internalization, is sighted as the basic process for knowledge creation and sharing in the KM literature (Becerra-Fernandez et al., 2004; Stevens et al., 2010). In addition, the importance of this basic process is acknowledged in the literature (Nonaka et al., 1994; Nonaka and Takeuchi, 1995). There are many empirical studies on KM process (such as, Nonaka et al., 1994; Choi and Lee, 2002) based on this process in the past. However, the previous researchers on organizational readiness for KM have not considered this process in their studies. Hence, a need arises to accommodate this process in the research framework. Considering the above mentioned gaps in the KM literature a comprehensive research model to evaluate individuals’ intention to be involved in KM process implementation is proposed as follow.

MATERIALS AND METHODS

The initiation for KM process implementation should come from the organizational members (Siemieniuch and Sinclair, 2004; Choi et al., 2008), thus their willingness (intention) to be involved in KM process should be investigated. The intention to be involved in KM process can be assessed based on KM sub process (socialization, externalization, combination and internalization) as those are the route process of knowledge creation and sharing (Becerra-Fernandez et al., 2004). The KM sub process is considered as the way to implement KM process in organizations. Meantime, the availability of KM enablers shows that the organization is ready for KM process implementation to some extent (Holt et al., 2004). Literature on KM enablers (Lee and Lee, 2007; Becerra-Fernandez et al., 2004; Yang and Chen, 2007) demonstrate that KM enablers provide a conducive environment for organizational members to implement KM process. Therefore, it can be expected that those KM enablers may influence the intention of organizational members to be involved in KM process. Similarly, literature on individual acceptance (TAM,
UTAUT) substantiates that performance expectancy and effort expectancy influence the behavioral intention of individuals. In this perspective, it can be assumed that the factors of individual acceptance also may influence the intention of organizational members to be involved in KM process. Based on the above discussion, a basic research model has been proposed in Fig. 1.

The model is developed based on the theories of TRA and TPB which explain that an intention leads to behavior. The model was conceptualized based on the studies of Choi et al. (2008), Lee and Lee (2007), Wei et al. (2009), Lin (2007), Venkatesh and Morris (2003) and Choi and Lee (2002). Most of these frameworks were developed based on the theory of knowledge creation and the KM enablers.

Three factors of KM enablers were found worth exploring namely, organizational culture (Choi et al., 2008; Lee and Lee, 2007; Wei et al., 2009; Lin, 2007), organizational structure (Lee and Lee, 2007; Lin, 2007) and IT infrastructure (Lee and Lee, 2003; Lin, 2007). In addition, based on the theories of TRA, TPB, TAM, and UTAUT the factors of individual acceptance, namely performance expectancy of KM (Venkatesh and Morris, 2003) and effort expectancy of KM (Venkatesh and Morris, 2003) were established. Furthermore, the factors of intention to be involved (Choi and Lee, 2002) were recognized based on knowledge creation theory (Nonaka et al., 1994).

Table 1 shows the operational definition, the source of measurement and questionnaire items for each variable in the model.

![Fig. I: Basic research model](image)

| Variables                  | Operational definition                                                                 | Source of measurement | Items                                                                                                         |
|----------------------------|----------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------|
| Collaboration             | Degree of active support and helps among colleagues with in the organization.          |                       | Colleagues in my organization are supportive. I am satisfied by the degree of collaboration among colleagues in my organization. I wish to collaborate across organizational units within my organization. I wish to accept responsibility for failure. |
| Trust                     | Degree of reciprocal faith among the colleagues in terms of intention and behavior within the organization. Choi et al. (2008) |                       | I believe colleagues in my organization are honest and reliable. I believe colleagues in my organization treat others reciprocally. I believe colleagues in my organization are knowledgeable and competent in their area. I believe colleagues in my organization will act towards the best interest of the organizational goals. |
| Learning                  | Degree of opportunity, variety, satisfaction and encouragement for learning and development within the organization. Lee and Lee (2007) |                       | My organization provides various formal training My organization provides opportunities for informal individual development other than formal training. |
Table 1: Continue

| Table 1: Continue | My organization encourages people to attend seminars, symposia and so on. |
|-------------------|------------------------------------------------------------------------|
| Business strategy | My organization provides various programs such as clubs and community gatherings. |
| Degree of link between organizational strategy and KM strategy | I am satisfied with the contents of job training or self-development programs. |
| Wei et al. (2009) | I understand the importance of knowledge. |
| Top management support | My organization formulates strategic plans for knowledge creation and sharing. |
| Degree of support from top managers for KM through providing guidance and necessary resources | My organization has specific objectives for knowledge creation and sharing. |
| Lin (2007) | My organization’s mission statement reflects the importance of knowledge creation and sharing. |
| Decentralization | I can make decisions without approval. |
| Degree of the distribution of authority and control over decisions. | I am encouraged to make my own decisions. |
| Lee and Lee (2007) | I do not need to refer to someone else. |
| Informal | I can take action without a supervisor. |
| Degree of flexibility in formal rules, Procedures and standard policies. | There are many activities in my organization that are not covered by formal procedures. |
| | I can ignore the rules and handle some situation informally in my organization. |
| | Rules and procedures are not that emphasized in my organization. |
| Reward | I can make my own rules on my job. |
| Degree of relevancy between the rewarding system and the involvement in KM process. | My organization provides higher bonus in return for my contribution to knowledge creation and sharing. |
| Lin (2007) | My organization provides promotions in return for my contribution to knowledge creation and sharing. |
| IT Support | My organization provides IT support for collaborative works regardless of time and place. |
| Degree of availability of IT support for KM process initiatives within the organization. | My organization provides IT support for communication among colleagues in my organization. |
| Lee and Lee (2007) | My organization provides IT support for simulation and prediction. |
| ICT use | My organization provides IT support for systematic storing of valuable records. |
| Degree of extensive use of information and communication technology by the individuals in the organization for KM initiatives. | My organization provides IT support for searching necessary information and sharing it with others. |
| Lin (2007) | My organization provides IT support for searching necessary information and sharing it with others. |
| Performance expectancy of KM | I would find creation and sharing of knowledge useful in my job. |
| Degree to which an individual believes that involving in KM processes will help him/her to attain gains in job performance. | Creation and sharing of knowledge would enable me to accomplish task more quickly. |
| Al-Gahtani et al. (2007) | If I involve with knowledge creation and sharing initiatives, it will increase my chances of getting a better pay. |
| Effort | Creation and sharing of knowledge would enhance my productivity. |
| Degree of ease associated with the expectancy of KM involvement in KM process. | My role in knowledge creation and sharing process would be clear and understandable. |
| Al-Gahtani et al. (2007) | It would be easy for me to become skillful in knowledge creation. |
Table 1: Continue

| Socialization | Choi and Lee (2002) |
|---------------|---------------------|
| Degree to which the individuals in the organization intend to be involved in socialization process | I intend to be involved in gathering information and experiences from others within my organization. I intend to be involved in sharing information and experiences with others within my organization. I intend to be engaged in dialogue with competitors. I intend to be involved in finding new strategies and opportunities inside the organization. I intend to be involved in creating a study environment that allows colleagues to understand the craftsmanship and expertise. I intend to be involved in creative dialogues with colleagues. I intend to use deductive (top down) and inductive (bottom up) thinking for strategy formulation. I intend to use metaphors (images/description) in dialogue for concept creation. I intend to exchange various ideas with colleagues. I intend to provide subjective opinions in dialogues. I intend to be involved in liaisoning activities with other departments by developing cross functional teams. I intend to be involved in setting teams as a model for conducting experiments and sharing results with entire departments. I intend to share and try to understand management vision through communications with colleagues. |

| Externalization | Choi and Lee (2002) |
|-----------------|---------------------|
| Degree to which the individuals in the organization intend to be involved in externalization process | |

| Combination | Choi and Lee (2002) |
|-------------|---------------------|
| Degree to which the individuals in the organization intend to be involved in combination process | |

| Internalization | Choi and Lee (2002) |
|-----------------|---------------------|
| Degree to which the individuals in the organization intend to be involved in internalization process | |

Table 2: Reliability of instruments

| Measures                  | Cronbach’s Alpha | Measures                  | Cronbach’s Alpha |
|---------------------------|------------------|---------------------------|------------------|
| Rewards                   | 0.965            | Business strategy         | 0.885            |
| Effort expectancy         | 0.947            | Learning                  | 0.881            |
| IT Support                | 0.930            | Collaboration             | 0.878            |
| Performance expectancy    | 0.913            | Trust                     | 0.875            |
| Decentralization          | 0.912            | ICT Use                   | 0.868            |
| Management Support        | 0.902            | Socialization             | 0.829            |
| Externalization           | 0.888            | Internalization           | 0.820            |
| Informal                  | 0.887            | Combination               | 0.800            |

RESULTS

A questionnaire was prepared using seven levels of Likert scale ranking from strongly disagree to strongly agree to measure the reliability of the instruments. 120 questionnaires were distributed among academic staff of a Malaysian university, out of which 46 were returned in a useable condition, making the response rate 38%. Cronbach’s alpha was calculated using SPSS. The results are shown in Table 2. The Cronbach’s alpha value is more than 0.800 for each variable which demonstrate the high reliability of the instruments.

DISCUSSION

The framework can be a starting point for future works in this area of KM. In addition, the proposed research instrument can be used by practitioners who plan to implement KM process, to measure the organizational members’ intentions to be involved in KM process. Based on the findings, they can formulate implementation strategies.

CONCLUSION

The research framework presented might be one of the prime attempts in this area of research. As limited writings are available on KM readiness any effort with empirical component that would enrich the literature might be considered as a valuable contribution. However, the research framework should be applied in different socio cultural environment and at different organizational context to make it robust model.
REFERENCES

Al-Gahtani, S., G. Hubona, and J. Wang, 2007. Information Technology (IT) in Saudi Arabia: Culture and the acceptance and use of IT. Inform. Manage., 44: 681-691. DOI: 10.1016/J.IM.2007.09.002

Becerra-Fernandez, I. A. Gonzalez and R. Sabherwal, 2004. Knowledge Management: Challenge, Solutions and Technologies. 1st Edn., Upper Saddle River, Prentice Hall, New Jersey, ISBN: 0-13-101606-7, pp: 386.

Choi, B. and H. Lee, 2002. Knowledge management strategy and its link to knowledge creation process. Exp. Syst. Appl., 23: 173-187. DOI: 10.1016/S0957-4174(02)00038-6

Choi, S.Y., Y.S. Kang and H. Lee, 2008. The effects of socio-technical enablers on knowledge sharing: An exploratory examination. J. Inform. Sci., 34: 741-754. DOI: 10.1177/0165551507087710

Chongdarakul, S., S. Chankajon and R. Supapongpichait, 2010. Thai local entertainment of local community in Mae-Klong river Basin: Knowledge Management for inheriting local culture of primary school. J. Soc. Sci., 6: 439-442. DOI: 10.3844/jssp.2010.439.442

Christine, N.L.T., 2011. Knowledge management acceptance: Success factors amongst small and medium-size enterprises. Am. J. Econ. Bus. Admin., 3: 73-80. DOI: 10.3844/ajebasp.2011.73.80

Fatt, C.K. and E.W.S. Khin, 2010. The social-technical view of knowledge management in services industries. J. Soc. Sci., 6: 256-264. DOI: 10.3844/jssp.2010.256.264

Holt, D.T., S.E. Bartczak, S.W. Clark and M.R. Trent, 2004. The development of an instrument to measure readiness for knowledge management. Proceeding of the 37th Hawaii International Conference on System Science, Jan. 5-8, IEEE Computer Society, Big Island, Hawaii, USA, pp: 1-6. DOI: 10.1109/HICSS.2004.1265575

Holt, D.T., S.E. Bartczak, S.W. Clark and M.R. Trent, 2007. The development of an instrument to measure readiness for knowledge management. Knowl. Manage. Res. Pract., 5: 75-92. DOI: 10.1057/PALGRAVE.KMRP.8500132

Kumar, P. and S. Chhokar, 2011. An approach from knowledge dust to gems (knowledge management). J. Comput. Sci., 7: 298-303. DOI: 10.3844/jcssp.2011.298.303

Lee, Y.C. and S.K. Lee, 2007. Capabilities, processes and performance of knowledge management: A structural approach. Hum. Factors Ergon. Manufact., 17: 21-41. DOI: 10.1002/HFM.20065

Lin, H.F., 2007. Knowledge sharing and firm innovation capability: An empirical study. Int. J. Manpower, 28: 315-332. DOI: 10.1108/0143772070755272

Malekmohammadi, I. 2009. Interpretive perspective of knowledge management stance in agricultural knowledge information system to fostering research/extension linkage. Am. J. Agric. Biol. Sci., 4: 230-241. DOI: 10.3844/ajabssp.2009.230.241

Mamaghani, N.D, R. Samizadeh and F. Saghaifi, 2011. Evaluating the readiness of iranian research centers in knowledge management. Am. J. Econ. Bus. Admin., 3: 203-212. DOI: 10.3844/ajebasp.2011.203.212

Nabiollahi, A., R. A. Alias and S. Sahibuddin, 2011. Involvement of service knowledge management system in integration of ITIL V3 and enterprise architecture. Am. J. Econ. Bus. Admin., 3: 165-170. DOI: 10.3844/ajebasp.2011.165.170

Nonaka, I. and H. Takeuchi, 1995. The Knowledge Creating Company. 1st Edn., University Press, Oxford, ISBN: 0-19-509269-4, pp: 10-20.

Nonaka, I., P. Byosiere, C.C. Borucki and N. Konno, 1994. Organizational knowledge creation theory: A first comprehensive test. Int. Bus. Rev., 3: 337-351. DOI: 10.1016/0969-5931(94)90027-2

Siemieniuch, C.E. and Sinclair, 2004. A framework for organizational readiness for knowledge management. Int. J. Operat. Produc. Manage., 24: 79-98. DOI: 10.1108/01443570410511004

Stevens, R.H., J. Millage and S. Clark, 2010. Waves of knowledge management: The flow between explicit and tacit knowledge. Am. J. Econ. Bus. Admin., 2: 129-135. DOI: 10.3844/ajebasp.2010.129.135

Wei, C.C., C.S. Choy and W.K. Yew, 2009. Is the malaysian telecommunication industry ready for knowledge management implementation. J. Knowl. Manage., 13: 69-87. DOI: 10.1108/13673270910931170

Yaakub, M.B.H. 2011. Islamic conceptualisation of knowledge management. Am. J. Econ. Bus. Admin., 3: 363-369. DOI: 10.3844/ajebasp.2011.363.369

Yang, C. and L.C. Chen, 2007. Can organizational knowledge capabilities affect knowledge sharing behavior? J. Inform. Sci., 33: 95-109. DOI: 10.1177/0165551506068135