The Role of Middle Managers in Knowledge Management Implementation to Improve Organizational Performance

*Laith Ali Yousif AL-Hakim and **Shahizan Hassn

The purpose of this paper is to clarify the role of middle managers in knowledge management implementation toward improving organizational performance. Conceptually, this paper seeks to identify the direct relationship between middle managers role and knowledge management implementation. In addition, it seeks to identify the direct relationship between knowledge management implementation and organizational performance improvement. These relationships have been developed based on holistic of knowledge, resource based view and knowledge based view theories. The methodology used was the intensive review of previous studies in this area. In today's business environment, the knowledge management implementation has become as a lifeline of contemporary organizations. Therefore, the organizations must choose the best way to implement knowledge management. However, the complexity of knowledge management implementation has been increased due to lack of an integrated framework of KM implementation. The paper finds that middle managers role can be in place to pave the way to ensure the successful implementation of knowledge management, which is reflected in the organizational performance improvement. By taking an in-depth look at previously disconnected research, this paper offers a conceptual framework that explained how the new role of middle managers came to influence on successful knowledge management implementation. Furthermore, how the successful knowledge management implementation lead to improve organizational performance.

Field of Research: Middle managers role, knowledge management implementation, critical success factors of knowledge management, knowledge management strategies, knowledge management processes and organizational performance.

1. Introduction

In the knowledge-based economy era, superior organizations depend more on their knowledge-based resources to survive (Choi et al., 2008; Ho, 2008; Kim & Gong; 2009; Yang et al., 2009a) and to improve OP (Haas & Hansn, 2005; Liao & Wu, 2009; Safa et al., 2006). Therefore, the Knowledge Management (KM) implementation has become increasingly as a main power to improve Organizational Performance (OP) for various organizations (Haas & Hansn, 2005; Liao & Wu, 2009; Safa et al., 2006). However, Anderson (2009) revealed that although contemporary organizations have spent billions of dollars to implement KM, its implementation has yielded only marginal
results. The percentage of failure in the implementation ranges from 50 to 70%. Because there are risks of failure in KM implementation (Razi & Abdul Karim, 2010; Zack et al., 2009), many researchers seek to understand why this is so.

Although there are a large number of KM implementation frameworks, organizations still face difficulty with KM implementation due to a lack of an integrated framework of KM implementation (Daud & Hassan, 2008; Kim, 2009; Shahrokhi, 2010; Wong & Aspinwall, 2005). Current KM frameworks have neglected identifying the nature of the relationship between workers and successful KM implementation, which is reflected in the limited studies that have investigated the relationship between middle managers role and successful KM implementation (Gunther-McGrath, 2001; Huy, 2001; Janczak, 1999, 2004; Lee, 1999; Richards, 2004; Theriou & Chatzoglou, 2008; Yang et al., 2009b). On other hand, studies that look at the core requirements of successful KM implementation holistically in a single empirical endeavour are rather limited. As such, it has been recommended that more studies need to be carried out that consider the core requirements of successful KM implementation, which include CSFs of KM, KM processes and KM strategies (Abdullah et al., 2009; Darroch, 2005; Garavelli et al., 2004; Hwang, 2003; Maier & Remus, 2003; Razi & Abdul Karim, 2010; Tasmin & S., 2010; Wei et al., 2009). Examining the core requirements of successful KM implementation is important because success in KM implementation may lead to subsequently OP (Darroch, 2005; Rhodes et al., 2008; Sáenz et al., 2009; Yang et al., 2009a).

From the gaps listed above, the issue of the relationships among middle managers role, successful KM implementation and OP is still unclear, and there are very limited studies in this area. Therefore, this study contributes to the previous studies by investigating these relationships in two are two aspects (i) the direct relationship between middle managers role and successful KM implementation, and (ii) the direct relationship between KM implementation and OP.

2. The Role of Middle Managers in Knowledge Management Implementation

In order to achieve successful KM implementation, organizations need to determine the crew members responsible for it. Therefore, this section discusses the responsible crew members for KM implementation and how they are identified. In this regard, Nonaka and Takeuchi (1995) are among the first to coin the term “Knowledge Crew”. This concept refers to the crew members responsible for the identification, promotion and creation of knowledge within the organization. The knowledge crew consists of three key people in the organization: the knowledge officers (top management), the knowledge engineers (middle managers), and the knowledge practitioners (front-line employees). Table 1 briefly describes the roles of the knowledge crew.
According to Nonaka and Takeuchi (1995), knowledge creation generally starts from middle managers who are considered the true “knowledge engineers” of creating new knowledge in the organization. They are responsible for synthesizing tacit knowledge of top management and front-line employees, and transfer it into explicit knowledge. They are also able to create a spiral of knowledge across different functional areas in the organization structure. Accordingly, middle managers play a central role in KM implementation. The middle managers are defined as “managers occupying positions that fall within a range of two levels below the head of the organization and one level above supervisory staff or professional employees” (Richards, 2004, p. 67).

In recent years, several studies have been conducted to measure the effective role of middle managers in creating new various knowledge perspectives. All of these studies have agreed that the role of middle managers has shifted from just being a link between top management and operational supervisors to a new role that seeks to create knowledge and utilize knowledge through the provision of innovative work, which is reflected in the OP (Gunther-McGrath, 2001; Huy, 2001; Janczak, 1999, 2004; Lee, 1999; Richards, 2004). Meanwhile, Janczak (2004) explored the dynamics and new roles of middle managers in the creation and integration of knowledge. The author noted that the middle managers used three behavioral roles i.e. analytic, intuitive and pragmatic, which are integrated with knowledge modes to create new knowledge. Table 2 below summarizes the relationship between middle managers roles and knowledge modes.
Table 2 The Relationship between Middle Managers Roles and Knowledge Modes

<table>
<thead>
<tr>
<th></th>
<th>Analyst</th>
<th>Intuitive</th>
<th>Pragmatic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development time</td>
<td>Short term</td>
<td>Medium/long term</td>
<td>Long term</td>
</tr>
<tr>
<td>How people are influenced</td>
<td>Authoritarian logic</td>
<td>Emotional logic</td>
<td>Conciliatory logic</td>
</tr>
<tr>
<td>Result</td>
<td>Delivering a solution</td>
<td>New work method</td>
<td>Repositioning</td>
</tr>
<tr>
<td>Change orientation</td>
<td>Reactive</td>
<td>Renewal</td>
<td>Adaptation/incremental</td>
</tr>
<tr>
<td>Action process</td>
<td>Stability/planned</td>
<td>Proactive</td>
<td>Interactive</td>
</tr>
<tr>
<td>Nature of knowledge</td>
<td>Explicit</td>
<td>Tacit and explicit</td>
<td>Tacit and explicit</td>
</tr>
<tr>
<td>Knowledge initiative</td>
<td>Implementing imported solution</td>
<td>Experimenting new options</td>
<td>Adaptation</td>
</tr>
<tr>
<td>Knowledge approach</td>
<td>Collecting external knowledge</td>
<td>Creating and pursuing new opportunities; supporting employees’ initiatives</td>
<td>Linking dispersed knowledge, skills, and best practices internal to or across departments.</td>
</tr>
<tr>
<td>Nature of results</td>
<td>Technical conformity/standardization</td>
<td>Satisfaction and professional creativity</td>
<td>Satisfying</td>
</tr>
<tr>
<td>Feedback/evaluation</td>
<td>No feedback</td>
<td>At the end</td>
<td>Continuous</td>
</tr>
<tr>
<td>Knowledge goal</td>
<td>Truth</td>
<td>Pleasure</td>
<td>Utility</td>
</tr>
<tr>
<td>Preferred knowledge roles</td>
<td>Problematic searcher, passive filter</td>
<td>Radar, catalyst, active filter</td>
<td>Opportunistic searcher, connector, missionary</td>
</tr>
</tbody>
</table>

Source: Janczak (2004: pp. 221)

Table 2 shows that middle managers have become a source of knowledge and leaders of knowledge employee (Nonaka & Takeuchi, 1995; Richards, 2004). Hence, the aim of middle managers is not merely creating new knowledge and transferring it between top management and the front line employees, but to achieve successful KM implementation. Furthermore, Takeuchi (2001) believes that the middle managers play a critical role in resolving any conflicts that may occur between top managers and front-line employees when KM is implemented. Besides that, Rainer and Turban (2009) further described knowledge employees as “advisors to middle managers”. The authors pointed out that knowledge employees are the professionals and experts of work such as financial analysts, marketing analysts, engineers, accountants and lawyers who are able to create and disseminate knowledge towards achieving the main objectives of the organization.

3. Knowledge Management Concept

In the literature, the main aim of KM is improving OP, so there are many researchers who have given definition of KM as a systematic methodology to improve OP. According to Hu and Deng (2008: p. 465), KM is referred to “the management discipline concerned with the systematic acquisition, dissemination and responsiveness of knowledge in organizations, aiming to improve an organization’s performance”. In addition, it is referred to “a systematic effort for sharing and using the organizational knowledge within the firm in order to increase organizational performance” (Shahrokhi, 2010: p. 356).
4. The Core Requirements of KM Implementation

Numerous studies have shown that KM implementation is able to help achieve or maintain success of contemporary organizations. KM implementation is said to be the best way to improve organization's ability in various aspects such as innovation (Brachos et al., 2007; Chen & Huang, 2009; Chang & Lee, 2008; Jiang & Li, 2009; Liao & Wu, 2010; Sáenz et al., 2009) and OP (Asoh et al., 2007; Bierly & Daly, 2007; Choi et al., 2008; Ho, 2008; Kim & Gong, 2009; Liao & Wu, 2009; Yang et al., 2009b; Zack et al., 2009). Therefore, researchers have resorted to the development of several frameworks to achieve successful KM implementation. But these frameworks differ in their orientation depending on the different viewpoints of the researchers (Shahrokhi, 2010). The KM framework is defined as a guide to implement knowledge management in an organized way (Elashaheb, 2005; Kim, 2009).

There are a many KM implementation frameworks in the literature. Despite this, many organizations are still not able to implement KM successfully. This may be due to the limited comprehensive framework in this area (Daud & Hassan, 2008; Kim, 2009; Mehta, 2008; Shahrokhi, 2010; Wong & Aspinwall, 2005).

Review of literatures identifies 23 frameworks of KM implementation that involves three main elements i.e. Critical Success Factors (CSFs) of KM, KM strategies and KM processes. These three elements have been widely acknowledged in the literature as core requirements of successful KM implementation (Ajmal, et al., 2008; Anantatmula & Kanungo, 2010; Jafari et al., 2010; Kucza, 2001; McElroy, 2002; McLaughlin & Paton, 2008). Table 3 provides a summary of the core requirements of KM implementation frameworks.
Table 3: Core requirements of KM implementation frameworks

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSFs of KM</td>
<td>A basic discipline underlying knowledge management and its enabling factors (Stankosky &amp; Baldanza, 2001)</td>
</tr>
<tr>
<td></td>
<td>A factor model of knowledge management system implementation (Butler et al. 2007).</td>
</tr>
<tr>
<td></td>
<td>A framework of factors influencing KM initiatives in a project-based context (Ajmal et al., 2008).</td>
</tr>
<tr>
<td></td>
<td>A success model of KM implementation (Gai &amp; Xu, 2009).</td>
</tr>
<tr>
<td></td>
<td>A generic knowledge management framework (Abdullah et al., 2009).</td>
</tr>
<tr>
<td></td>
<td>A framework of KM enablers (Anantatmula &amp; Kanungo, 2010).</td>
</tr>
<tr>
<td>KM strategies</td>
<td>A strategic framework for mapping knowledge (Zack, 1999).</td>
</tr>
<tr>
<td></td>
<td>A process oriented KM approach (Maier &amp; Remus, 2002).</td>
</tr>
<tr>
<td></td>
<td>A knowledge management system dependency model (KMSDM) with defined relationships (McLaughlin &amp; Paton, 2008).</td>
</tr>
<tr>
<td></td>
<td>A practical framework for knowledge (Casselman &amp; Samson, 2007).</td>
</tr>
<tr>
<td></td>
<td>A strategic knowledge management framework (Jafari et al., 2010).</td>
</tr>
<tr>
<td></td>
<td>The knowledge value proposition strategy (KVSP) framework (Helmi, 2010).</td>
</tr>
<tr>
<td>KM processes</td>
<td>A knowledge creating company (Nonaka &amp; Takeuchi, 1995).</td>
</tr>
<tr>
<td></td>
<td>Building blocks of knowledge management (Probst et al., 1997).</td>
</tr>
<tr>
<td></td>
<td>A KPMG knowledge management framework (Alavi, 1997).</td>
</tr>
<tr>
<td></td>
<td>The tasks of knowledge management (Allweyer, 1998).</td>
</tr>
<tr>
<td></td>
<td>A knowledge management event chain (Despres &amp; Chauvel, 1999).</td>
</tr>
<tr>
<td></td>
<td>A knowledge management process framework (Bukowitz &amp; William, 2000).</td>
</tr>
<tr>
<td></td>
<td>A process model (Rastogi, 2000).</td>
</tr>
<tr>
<td></td>
<td>A process model (Tannenbaum &amp; Alliger, 2000).</td>
</tr>
<tr>
<td></td>
<td>A knowledge chain model (Holsapple &amp; Singh, 2001).</td>
</tr>
<tr>
<td></td>
<td>A knowledge management process model (Kucza, 2001).</td>
</tr>
<tr>
<td></td>
<td>A knowledge life cycle (McElroy, 2002).</td>
</tr>
</tbody>
</table>

Accordingly, Table 4 provides a summary of definitions and dimensions of the core requirements of KM implementation.
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Definition</th>
<th>Dimension</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSFs of KM</td>
<td>Are managerial and organizational factors that need to be effectively addressed in order to further the likelihood of successful knowledge management implementation (Carneiro, 2000).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KM strategies</td>
<td>Are many processes of collecting, codifying and dissemination of knowledge to get the right information in the right place and at the right time. (Xie, 2009).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human resource management</td>
<td>Choi, 2000; Chourides et al., 2003; Chuang, 2004; Hung, 2005; Wong &amp; Aspinwall, 2005; Chong, 2006; Al-Mabrouk, 2006; Lin &amp; Kuo, 2007; Akhavan et al., 2009; Ling &amp; Shan, 2010.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information technology</td>
<td>Choi, 2000; Skyrme, 2000; Grover &amp; Davenport, 2001; Stankosky &amp; Baldanza, 2001; Gold et al., 2001; Nemati, 2002; Lee &amp; Choi, 2003; Chourides et al., 2003; Chuang, 2004; Hung, 2005; Wong &amp; Aspinwall, 2005; Chong, 2006; Al-Mabrouk, 2006; Yeh et al., 2006; Asoh et al., 2007; Rhodes et al., 2008; Ling &amp; Shan, 2010.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership</td>
<td>Choi, 2000; Skyrme, 2000; Stankosky &amp; Baldanza, 2001; Hung, 2005; Wong &amp; Aspinwall, 2005; Yeh et al., 2006; Slagter, 2007; Asoh et al., 2007.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational learning</td>
<td>Skyrme, 2000; Stankosky &amp; Baldanza, 2001; Lee &amp; Choi, 2003; Lin &amp; Kuo, 2007; Slagter, 2007; Rhodes et al., 2008.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational strategy</td>
<td>Skyrme, 2000; Grover &amp; Davenport, 2001; Chourides et al., 2003; Wong &amp; Aspinwall, 2005; Al-Mabrouk, 2006; Yeh et al., 2006; Wei et al., 2006, 2009; Zheng et al., 2010.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational structure</td>
<td>Grover &amp; Davenport, 2001; Stankosky &amp; Baldanza, 2001; Gold et al., 2001; Nemati, 2002; Chuang, 2004; Hung, 2005; Chong, 2006; Slagter, 2007; Rhodes et al., 2008; Wei et al., 2006, 2009; Akhavan et al., 2009; Zheng et al., 2010.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational culture</td>
<td>Chait, 2000; Skyrme, 2000; Grover &amp; Davenport, 2001; Gold et al., 2001; Nemati, 2002; Hung et al., 2003; Chuang, 2004; Hung, 2005; Wong &amp; Aspinwall, 2005; Chong, 2006; Al-Mabrouk, 2006; Yeh et al., 2006; Slagter, 2007; Asoh et al., 2007; Rhodes et al., 2008; Zheng et al., 2010; Ling &amp; Shan, 2010.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Codification</td>
<td>Hansen et al., 1999; Edvardsson, 2008; Ewing &amp; West, 2000; Maier &amp; Remus, 2003; Sobahle, 2005; Greiner et al., 2007; Rhodes et al., 2008; Xie, 2009; Schulz &amp; Jobe, 2001.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personalization</td>
<td>Hansen et al., 1999; Edvardsson, 2008; Ewing &amp; West, 2000; Maier &amp; Remus, 2003; Sobahle, 2005; Greiner et al., 2007; Rhodes et al., 2008; Xie, 2009.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
KM processes are systematic stages that providing the knowledge needed for an organization to succeed through knowledge creation, organizing, storage, sharing and utilization (Ramachandran, 2010; Yang et al., 2010).

<table>
<thead>
<tr>
<th>KM processes</th>
<th>Knowledge creating</th>
<th>Knowledge organizing</th>
<th>Knowledge storage</th>
<th>Knowledge sharing</th>
<th>Knowledge utilization</th>
</tr>
</thead>
</table>

5. Organizational Performance

Organizational performance has been defined in different ways. According to Pitt and Tucker (2008: p. 243), it is defined as “a vital sign of the organization, showing how well activities within a process or the outputs of a process achieve a specific goal”. Also, it is defined as “a process of assessing progress towards achieving pre-determined goals, including information on the efficiency by which resources are transformed into goods and services, the quality of these outputs and outcomes, and the effectiveness of organizational objectives” (Amartunga & Baldry, 2003: p. 172).

6. Organizational Performance Measurement

The OP measurement has become an important standard in evaluating the organizational success (Moullin, 2007). It is defined as "comparing the expected results with the actual ones, investigating deviations from plans, assessing individual performance and examining progress made towards meeting the targeted objectives" (Ngah & Ibrahim, 2010: p. 503). Based on this definition, OP measurement can provide more assistance for managers to evaluate the organizational activities and maintain the competitive position or superiority over competitors (Liao et al., 2009; Visser & Sluiter, 2007).

In this regard, Visser and Sluiter (2007) developed indicators of OP measurement that leads to improve OP. The researchers put sets of indicators of OP measurement depending on Balanced Scorecard. These indicators are arranged in four major sections, financial perspective metrics, customer perspective metrics, internal process perspective metrics and learning and growth perspective metrics. As a contribution in this study, the researcher attempts to adopt these indicators.
7. Knowledge Management Implementation and Organizational Performance

The main objective in this section is to highlight studies that investigated the relationship between KM and OP. These studies can be classified into three categories depending on core requirements of KM implementation: (1) the relationship between CSFs of KM and OP; (2) the relationship between KM strategies and OP; and (3) the relationship between KM processes and OP.

7.1 CSFs and OP

The studies in the first category focus on the relationship between CSFs and OP. The literature identifies seven CSFs of KM which are human resource management, information technology, leadership, organizational learning, organizational strategy, organizational structure, and organizational culture. These factors are important for successful KM implementation in order to improve OP.

In this regard, Lee and Choi (2003) proposed that the CSFs of KM are an appropriate instrument for OP improvement. There are four main elements of the CSFs of KM. They are: structure, culture, people and information technology. They found that these elements of CSFs of KM have a positive effect on OP, measured as general success, market share, growth rate, and innovativeness. The researchers further pointed out about the need for more studies in this area. Besides those, Asoh et al. (2007) found a strong and positive relationship between CSFs of KM and OP. The CSFs of KM were technology, leadership, culture, and measurement. They also pointed out the need for more studies on the relationship between CSFs of KM and OP with a bigger sample size. Increasingly, Lin and Kuo (2007) argued that the existence of an organization depends on increased KM capabilities during HRM and organizational learning which can contribute towards achieving high OP. Therefore, the results show the HRM and organizational learning have indirect positive effects on OP through KM capabilities. In a similar vein, Ho (2008) found that existence of an organization depends on increased KM capabilities during self-directed learning and organizational learning which affects OP. Therefore, the results show that the self-directed learning and organizational learning have indirect positive effects on OP through KM capabilities. Afterwards, Zack et al. (2009) stressed that KM has emerged as an increased attention to the direction of OP improvement. Nevertheless, the researchers found that there is a serious gap in the literature in term of the relationship between KM and OP due to lack of empirical evidence. The results of the study show that KM practices indeed (i.e. processes, culture, learning, and strategies) have positive relation with OP (i.e. customer intimacy, operational excellence, and product leadership). In addition, the organizations need to realign their “KM mindset” and perceptions about how KM practices can enable the organization to improve OP. Without these, many KM practices might fail. The researchers suggested that further studies with different sample and culture. Similar recommendations were also made by Wei et al. (2009), who found a positive relationship between business strategy, organizational structure, KM Team, K-Map, and K-Audit, as CSFs of KM, and OP improvement. The researchers suggested more future studies in
this field in different countries and samples, should be carried out. Meantime, Anderson (2009) identified three CSFs of KM i.e. culture, structure, and technology that can help increase the capabilities of organizations. He showed that CSFs of KM have a positive relationship to capabilities of organizations. Zheng et al. (2009) proposed that structure, culture, and strategy are significant success factors for KM to achieve high OP. They recommended that further exploration is needed by integrating RBV and KBV so that understanding about how knowledge resources in an organization could be utilized to achieve high OP can be enhanced. As a consequence, Yang et al. (2009b) regarded CSFs of KM as the heart of OP improvement. The results highlighted the positive effect of culture, structure and information technology of CSFs of KM on the OP, which include innovation, financing and service. However, the researchers also noted that there exists a gap in the literature with regards to the effects of CSFs of KM on OP. Thus they recommended that further studies are undertaken to investigate the relationship between CSFs of KM with OP, in addition to more studies to investigate the relationship between KM resources and process, and OP. Given the recommendations put forth by the above researchers, the present study seeks to investigate the relationships among CSFs of KM as part of KM implementation, on OP.

7.2 KM Strategies and OP
The second category of research involves the relationship between knowledge strategies and OP. Two strategies of KM have been identified in the literature i.e. codification and personalization.

In this regard, Schulz and Jobe (2001) mentioned that achieving high results in OP improvement depends on KM strategies. The results show that the codification, implicitness, focused and unfocused, which considered that KM strategies have a positive effect on OP improvement. Moreover, the results indicate that codification strategy is an important recourse of superior OP. Thereby, the researchers have suggested further studies on the relation between codification strategy and OP. This is in line with the situation of the researchers for selecting the codification as the KM strategy in this study. Similarly, Bierly and Daly (2007) emphasized that KM strategies play an important role in improving OP, but there are limited studies that sought to examine their effects. They revealed that both exploration strategy and exploitation strategy have a positive relationship to OP. They suggested that organizations should give more attention in applying KM strategies, and recommended more studies to confirm their results. Likewise, Choi et al. (2008) noted the lack of the empirical studies that examined the relationship between KM strategies and OP. As such, the researchers examined the interrelationships among KM strategies, and their effects on OP. KM strategies were measured in two dimensions: (i) KM focus: explicit-oriented, tacit-oriented; and (ii) KM source: external-oriented, internal-oriented. Overall, the results indicated that the KM strategies have a positive effect on OP. They further suggested for more studies in this area. Besides those, Wei et al. (2009) proposed four types of strategies in the KM literature of KM: culture, leadership, measurement, and technology. They are described as the core blocks of KM implementation as they were found to have a positive
relationship to the overall OP. They recommended further research to be carried out in different countries and using different samples. Based on the recommendations made above, the present study seeks to investigate the effects of KM strategies, as part of KM implementation, on OP.

7.3 Knowledge Processes and OP
The third category aims to show the studies that examined the relationship between knowledge processes and OP. Based on previous studies, five KM processes can be identified: knowledge creation, knowledge org, knowledge storage, knowledge sharing, and knowledge utilization.

In this regard, Lee and Choi (2003) argued that KM processes are important to improve OP. In this regard, they used Nonaka's knowledge creation processes model to create knowledge, which consists of four stages: socialization, externalization, combination, and internalization. The results showed a positive relationship between KM processes and OP. They also recommended further research to be undertaken. Apart from that, Darroch (2005) hypothesized that three KM processes i.e. knowledge acquisition, knowledge responsiveness and knowledge dissemination could improve OP. But she found that both acquisition and dissemination did not positively affect OP and knowledge responsiveness positively affects OP. More studies are needed to confirm the results found. Besides that, Haas and Hansen (2005) revealed that knowledge utilization is considered a critical part of the KM processes. It has an ability to achieve OP improvement. Therefore, the organizations must find ways to utilize knowledge through the activation of both, codified knowledge and personal knowledge. The study shows that there is a positive relationship between knowledge utilization and OP. Increasingly, Tsai and Li (2007) indicate that the OP can be viewed as an outcome of knowledge creation processes that depended on the effectiveness of the organizational strategy. The organizational strategy has positive effects on socialization, externalization, combination, and internalization, which lead to create new knowledge. Researchers have called for further studies to investigate the effects of other organizational factors on the knowledge creation process towards improving OP. Meanwhile, Anderson (2009) found that KM processes, measured in terms of conversion, application, and protection, have a positive relationship to organizational capabilities. He suggested conducting future studies to examine the role of KM processes on the team level in the successful KM implementation. Similarly, Fugate et al. (2009) noted that improvement in the overall OP comes from effective KM processes. They found that knowledge interpretation, knowledge responsiveness, and knowledge dissemination are positively related to OP.

Meantime, Liao and Wu (2009) found that that OP, measured in terms of financial, market and partnership, depends on effective implementation of KM processes, which consist of four processes i.e. acquisition, conversion, sharing and applications. In this regard, the results indicate that KM processes have a positive effect on OP. In a similar vein, Wei et al. (2009) asserted that successful achievement of overall OP is based on actual application of KM processes. They showed a positive relationship between construction, embodiment and deployment as KM processes and OP. They also suggested that further research in different countries and samples, be
conducted. From the literature, there is an agreement between the previous studies and the opinion of the researchers in selecting the KM processes to investigate the relationship between KM implementation and OP.

Despite the main aim of KM implementation is the improvement of OP, studies that looked at the relationship are still unintelligible (Bierly & Daly, 2007; Choi et al., 2008). There are also limited studies that investigated the relation between successful KM implementation and improvement of OP (Shahrokhi, 2010). Therefore, a large gap still exists in the literature between KM and OP (Yang et al., 2009b; Zack et al., 2009).

8. Conceptual Framework

From the previous arguments, the middle managers role that consists of analyst, intuitive and pragmatic is regarded as the best way to implement KM (Janczak, 2004, 1999). On the other hand, the successful KM implementation is reflected on improvement of OP (Asoh et al., 2007; Bierly & Daly, 2007; Choi et al., 2008; Ho, 2008; Kim & Gong, 2009; Liao & Wu, 2009; Yang et al., 2009b; Zack et al., 2009). Besides those, this study seeks to measure OP through financial perspective metrics, customer perspective metrics, internal process perspective metrics and learning and growth perspective metrics (Visser & Sluiter, 2007).

Based on the above, the conceptual framework is developed based on holistic theory of knowledge, which explains the individual behavior has direct effect on successful KM implementation (Yang et al., 2009b). Furthermore, it is developed based on resource based view and knowledge based view theories, which explain that organizational knowledge leads to improve OP (Asare, 2008; Kiessling et al., 2009; Kim and Gong, 2009; Liao and Wu, 2009; Pathirage et al., 2007). Figure 1 shows the conceptual framework of the relationships among study’s variables; middle managers role, core requirements of KM implementation and OP.
9. Conclusion

This study has revealed the importance of middle managers role in KM implementation, which reflected on improvement of OP. Therefore, this study contributed to the previous studies through the conceptual framework, which is based on holistic of knowledge, resource based view and knowledge based view theories. The conceptual framework explains the direct relationship between middle managers role (consist of analyst, intuitive and pragmatic) and core requirements of KM implementation (CSFs of KM, KM strategies and KM processes). In addition, it shows the direct relationship between core requirements of KM implementation and OP (consisting of performance financial perspective metrics, customer perspective metrics, internal process perspective metrics and learning and growth perspective metrics). Furthermore, the future is wide open for further research empirical in this area.

References


Ramachandran, S. D. 2010, ‘Knowledge management in higher education: a case study in Malaysia’, Printed and Published in Malaysia by: Universiti Teknikal Malaysia Melaka.


Tannenbaum, S. & Alliger, G. 2000, ‘Knowledge Management: Clarifying the Key Issues’, IHRIM.
