Review of Knowledge Management Success Factors in Higher Educational Organizations

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ABSTRACT
Knowledge management has become indispensable for organizations. Most of the literature on knowledge management is investigate the construct in business organizations. The purpose of this paper is to investigate the success factors of KM implementation in higher educational institutes. Building on the review of literature pertaining to business organization and educational institute, this study propose a conceptual model. The study incorporates constructs related to the educational institutes. These are strategy, culture, ICT infrastructure, Systematic processes, and rewards. Discussion and directions for future work are discussed.

Keywords: Knowledge Management, Success Factors, Higher Educational institute

1. Introduction
During the last decades, there has been increasing trend to adopt knowledge management practices by business organizations and educational institution. Researchers have found links between adopting knowledge management practices and positive organizational outcomes that include increase innovativeness, competitive advantages, and financial performance (Chen, & Fong, 2012), (Chuang, 2004), and (Grant, 1996). The theory of Knowledge based view by (Grant, R. M., 1996) has proposed that utilizing knowledge management leads organizations to achieve better performance. Many studies have attempted to find the success factors of KM implementation in business organization. Mainly researchers focused on culture (Arntzen, & Ndlela, 2009), (Choy, & Suk, 2005) and (Meyer, 2007). organization strategies (Meyer, K. E. 2007). Nevertheless, other researchers have referred to the knowledge measurement (Suresh, A., 2012).

Previous studies in KM implementation are dominated by business organization e.g. (Arntzen, & Ndlela, 2009), (Choy, & Suk, 2005), (Meyer, 2007), (Ismail Al-Alawi, Yousif Al-Marzooqi, & Fraidoon Mohammed, 2007), and (Suresh, 2012). Few studies have investigated the success factors of KM in educational institutes (Ali, Sulaiman & Cob 2014). In addition, researchers have found conflicting findings regarding the success factors.
Furthermore, it is important to identify the success factors because failing to do so might lead the fail of implementing KM (Yaghoubi, N. M., & Maleki, N., 2012).

The purpose of this study is to investigate, review, and combine the literature to find the success factors of KM implementation in higher educational institutes. The structure of this paper consists of five sections. In the first section, we present the knowledge gap regarding the studies in higher educational institutes along with the significance and objectives of the study. Next, we review and integrate the literature to find the success factors of KM in higher educational institutes. After that, we present the conceptual model and discussion. Lastly, we conclude the study and provide direction for future work.

2. Literature reiew

2.1 Knowledge Management

Meier (Meier, M., 2011) predicted that the only source of competitive advantage in the future would be the knowledge that an organization possesses and the ability to learn faster than competitors. Alavi and Leidner (Alavi, M., & Leidner, D. E., 2001) defined knowledge as the implications of linking between information within working environment. The most acceptable classification of knowledge is categorizing the knowledge into two types, which are: (1) Explicit Knowledge: represent the documented forms of knowledge such as articles, books, and online resources. (2) Tacit Knowledge: represent the knowledge that stored in the minds of employees and reflected as skills and experiences (Debowski, John Wiley & Sons, Milton 2006), (Adolph, 2005).

Walters et al. (David Walters, Michael Halliday, Stan Glaser, 2002) argued that, KM is the necessary activities to maximize the competitive advantages of the organizations through efficient value chain of Knowledge. In another definition, (Van der Spek, R., & Spijker, A., 1997) defined KM as “the explicit control and management of knowledge within an organization aimed at achieving organizational objectives.” James (James, P., 2005) defined the practical processes of KM as series of processes that collect, manage, design, and share the knowledge efficiently to maximize the outcomes performance of organizations activities. In this paper, the definition of (James, P., 2005) is adopted.

Hana (Hana, U., 2013), and Hamel and Green, (Hamel, G. & Green, B., 2007) pointed out that there are many advantages of effective KM. these include (1) develop the tacit knowledge of employees to support the working activities; (2) create new solutions; (3) ensure the business strategies by supporting the businesses vision; (4) support the leadership decision making and decisions predictions.

2.2 Knowledge Management in Higher educational

According to (Lee & Lee, 2007), universities face many challenges in managing the various explicit knowledge sources and contents to support and enhance the employees’ skills and expertise to ensure accurate academic services and activities. The universities need to achieve two main objectives of KM implementations in order to maximize the outcomes of leaning processes; (i) to share knowledge between employee so that they can maximize the efficiency of employees’ skills, expertise and information, and (ii) to reflect the university strategies, plans and visions on tacit knowledge through explicit knowledge. Seonghee and
Boryung (Seonghee, K., & Boryung, J., 2008) pointed out that universities can benefit from KM implementations in five areas; academic researches, curriculum development, manage the academic strategies administration, and enhance students’ outcomes. The authors emphasized on the role of tacit knowledge development and enhancement as the driver for effective KM implementation. On the other hand, there are many difficulties, regarding acquiring explicit knowledge, that face employees at universities (Seonghee, K., & Boryung, J., 2008) these include (1) time, (2) cost, and (3) search effort.

2.2 Km Success Factors In Organizations

Business organizations are alike of educational institutes. They share the structure, culture, strategies, vision, and mission. Razi and Abdul Karim (Yip, M. W., Lau, D. H. C., & Songip, A. R., 2010) found the success factors are lined to the culture and structure along with systematical process and ICT infrastructure. Similarly (Choy & Suk, 2005), (Meyer, 2007) related the factors to the employees culture and ICT infrastructure. In different approach, (Meyer, K. E. 2007) focused on the organization strategies and related these strategies to the success factors of KM. lastly, a study conducted by (Suresh, A., 2012) focused on the measurement of knowledge. Table 1 shows a literature survey of the success factors in business organization.

<table>
<thead>
<tr>
<th>Source</th>
<th>Method</th>
<th>Findings</th>
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<tbody>
<tr>
<td>(Razi, M. J. M., &amp; Karim, N. S. A., 2010)</td>
<td>Critical analysis of KM success factors in Organizations of different fields.</td>
<td>Culture, Organizational structure, Systematical processes, and infrastructure The employees’ cultures and ICT factors is the most important factors of KM implementations.</td>
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<tr>
<td>(Arntzen, A. A. B., &amp; Ndlela, M. N., 2009)</td>
<td>Several interviews conducted with the top and middle managers in Organizations of different fields.</td>
<td></td>
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<tr>
<td>(Choy, C. S., &amp; Suk, C. Y., 2005)</td>
<td>Develop KM framework through review various knowledge management models.</td>
<td>The employees’ culture, organizational leadership, knowledge evaluation, IT infrastructures, KM structure, Employee training, Employee involvement, Open and trustworthy spirit of teamwork and Employee empowerment are the most important factors of KM implementations in various organizations. The employees’ culture is a foundation success factor of knowledge management in higher educational organizations.</td>
</tr>
<tr>
<td>(Meyer, K. E. 2007)</td>
<td>Develop framework of KM implementations through critical analysis of KM success factors in Organizations of different fields.</td>
<td>The organizations strategies and employees cultures are the success control factors of KM implementations in any organization.</td>
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<td>(Ismail Al-Alawi, A., Yousif Al-Marzoqi, N., &amp; Fraidoon Mohammed, Y., 2012)</td>
<td>Survey questionnaire were designed to assess knowledge sharing in Organizations of different fields.</td>
<td>There is a positive relationship between the existence of knowledge sharing information systems/technology and</td>
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knowledge sharing in organizations, and there is a positive relationship between certain aspects of organization structure and knowledge sharing in organizations.

Data collected via questionnaire from the sample size, which consists of 160 respondents of various organizations in and around Chennai through simple random sampling.

knowledge measurement, IT processes, organizational culture, and evaluate the explicit knowledge to share it to develop tacit knowledge are the most important KM success factors in organizations in different fields.

Data collected from 204 academicians in Malaysian public universities using online survey.

Emphasized on the role of Knowledge management at higher education Those who are not able to cope with the change in KM will not survive.

### 2.3 Km Success Factors in Higher Educational Organization

Despite the studies in KM are dominated by business related studies, there are some few studies have investigated success factor of KM implementation in higher educational institutes. A study conducted by (Mathi, K., 2004) to find the success factors in German university found that these factors are culture, knowledge measurement, infrastructure, and strategy. There are many studies focuses on analyze the KM successful factors in higher educational organization. another study conducted on educational institutes in Malaysia has found that culture, incentives, KMS, training are among the factors that lead to successful implementation of KM in higher educational institutes (Ali. NA, Sulaiman.h, & Cob.Z, 2014). Similarly, another study conducted in Malaysia by (M. B. Yaakub, K. Othman and A. F. Yousif, 2014) found that top management support, strategies, planning innovative enhancement, and IT infrastructure. The focus on strategy, top management support, and IT infrastructure is also found in a study conducted in Indonesia (Nuryasin, I., Prayudi, Y., & Dirgahayu, T., 2013). Leadership support, IT infrastructure, strategy, rewards, and culture were identified as success factors of KM implementation (Shoemaker, 2014), (Zwain, Teong & Othman, 2014), (Omona, Van & Lubega, 2010), (Basu & Sengupta, 2007), (Nasiruzzaman, Qudaikh & Dahlan, 2013), (Yip, Lau & Songip, 2010), and (Razi & Karim, 2010). Table 2 shows a literature survey of the success factors of KM implementation in higher educational institutes.

<table>
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<tbody>
<tr>
<td>(Mathi, K., 2004)</td>
<td>Surveyed employees of METZELER Universities as case study of German Universities.</td>
<td>Culture, knowledge measurement, organizational management, systematical processes and infrastructures, and strategies of sharing, incentive, knowledge content quality, KMS use for retrieval, KMS use for sharing, leadership, perceived usefulness, subjective norm, KMS system quality,</td>
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Previous studies in Table 1 and 2 showed that the success factors that can influence the KM implementation in educational institutes could be categorized under five constructs.

3. Conceptual model

Previous studies in Table 1 and 2 showed that the success factors that can influence the KM implementation in educational institutes could be categorized under five constructs.
First construct is the strategy of the organization. The higher educational organizations have many learning strategies to ensure the working and learning outcomes. The academic and non-academic staffs need to have the right knowledge to do their tasks efficiently based on organization strategies. Previous studies found that strategic planning, vision, mission, and strategies are drivers for successful implementation of KM (Nuryasin, Prayudi & Dirgahayu, 2013), (Yaakub, Othman & Yousif, 2014), and (Zwain, Teong & Othman, 2014). This study assumes that strategy influence the success of KM implementation.

Second construct is the culture. Culture is one of the most important construct in knowledge management studies. Almost all the previous studies focused on culture and incorporated it as one of success factor for KM implementation e.g. (Ali, Sulaiman & Cob, 2014), (Yaakub, Othman & Yousif, 2014), and (Basu & Sengupta, 2007). Positive culture is a tool to encourage knowledge sharing and cooperation between organizational members. Previous studies have found positive links between culture and successful implementation of KM in business organization (Mathi, 2004), (Razi & Karim, 2010). This study assumes that positive culture influences positively the successful implementation of KM at educational institutions.

ICT infrastructure is the third construct. It has been found that ICT infrastructure has significant role in leading KM to be implemented and utilized effectively. Internet, intranet, groupware, and other facilitating condition ease the sharing and accessing of knowledge between organizational members (Yip, Lau & Songip, 2010), (Choy & Suk, 2005), and (Nawaz & Gomes, 2014). The previous studies have found link between ICT infrastructure and successful implementation of KM in business organization (Choy & Suk, 2005), (Laal, 2010). This study assumes that ICT infrastructure can drive the success of KM implementation in educational institution.

Fourth construct is systematic process. Organization must have clear processes to create, share, apply, and protect the knowledge of individuals. Previous studies linked the success of KM implementation to the IT, and Systematic processes (Nawaz & Gomes, 2014), (Mathi, 2004), and (Zwain, Teong & Othman, 2014). This study assumes that the official and clear processes of KM can drive the success of KM implementation in educational institutes.

Last construct is reward. Reward enforces the positive behavior of employees and encourages them to involve effectively in the KM implementation and its processes (Zwain, Teong & Othman, 2014), (Shoemaker, 2014). These studies have found that the relationship between reward and successful implementation of KM is positive. Similarly, this study assumes that rewards influence positively the KM implementation in educational institutes.
Based on above discussion, Figure 1 presents the conceptual model of this study.

![Conceptual Model of Knowledge Management Success Factors In Higher Education Organizations](image)

Thus, the hypotheses of this study are:

- **H1**: Strategy is related directly to successful implementation of KM
- **H2**: Culture is related directly to successful implementation of KM
- **H3**: ICT infrastructure is related directly to successful implementation of KM
- **H4**: Systematic process is related directly to successful implementation of KM.
- **H5**: Reward is related directly to successful implementation of KM.

### 4. Discussion

Constructs of this study were proposed based on the literature. Strategy of the organization is essential for employees and for the organization in the first place to implement effective knowledge management. Previous studies have pointed out the role of strategy and its elements on KM implementation (Nuryasin, Prayudi & Dirgahayu, 2013), (Yaakub, Othman & Yousif, 2014). Therefore, proposed strategy as a construct that influence KM is in agreement with the literature e.g. (Nuryasin, Prayudi & Dirgahayu, 2013), (Yaakub, Othman & Yousif, 2014), and (Zwain, Teong & Othman, 2014).

Similarly, the construct culture has been associated with the effective and successful implementation of KM. we proposed the culture as an effective factor based on the work of others. Many researchers in KM field linked the organizational culture to the success of KM implementation e.g. (Nuryasin, Prayudi & Dirgahayu, 2013), (Yaakub, Othman & Yousif, 2014), and (Zwain, Teong & Othman, 2014).

In proposing other constructs, we followed the same approach. All the constructs are in accordance with the literature. ICT infrastructure was proposed by many researchers as a factor that influences the success of KM (Choy & Suk, 2005), (Nawaz & Gomes, 2014). Similarly systemic process (Mathi, 2004), (Zwain, Teong & Othman, 2014), and rewards (Shoemaker, 2014), (Zwain, Teong & Othman, 2014).
It is worthwhile to mention that some of the constructs are general and could contain sub-constructs. For example, strategy of the organization can contain, as elements, vision, value based organization, planning, innovative enhancement, and senior management support factors are lies to organizational strategies main factor. Similarly, Culture can include many sub constructs such as knowledge sharing behavior, academic staff involvement, motivation.

5. Conclusion and Direction for Future Research

The purpose of this study is to review and integrate the literature to come up with a model that is applicable to the educational institutions. Previous studies in business organization along with educational institutes were reviewed and discussed. Based on the review, we proposed five construct to influence the success of KM implementation in educational institutes. Organizations strategies and culture considered as essential factors of KM. In addition, ICT infrastructure, clear systemic process of acquiring, applying, utilizing and protecting knowledge are proposed along with rewards to be influential factors that influence the KM implementation.

Previous studies mainly focused on factors related to IT infrastructure and organizational environment. The literature lacks for studies that investigate the individual part of the KM success factors. It is recommended for future work to focus on the individual factors such as self-efficacy, willingness to be involved in KM practices, etc.

In addition, this model is conceptual; it is recommended that future work to test the model empirically by employing questionnaire and conducting the study on one or more university.

References


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