DETERMINING CONTRIBUTORS OF PERFORMANCE IN MALAYSIAN HIGH PERFORMING SCHOOLS: IN THE LIGHT OF KNOWLEDGE MANAGEMENT AND ORGANIZATIONAL LEARNING

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Abstract

This research aimed to determine contributors of performance within the vicinity of knowledge management and organizational learning aspects in all 52 High Performing Schools in Malaysia. Purposive full sampling technique was employed and 127 out of 132 respondents consisted of national school headmasters or principals and senior assistant teachers have responded to the distributed questionnaires. The research instrument was developed from 3 theories, namely the theory by Sallis and Jones (2002), Bruce Britton (1998), and Satyendra Singh, Yolande Chan and James McKeen (2006). With the Cronbach's Alpha value at .965, the obtained data was analyzed by using multiple regression analyses. From the results obtained, 8 predictors were found to be from knowledge management and another 15 from organizational learning. In terms of the assembling element within the capability factor; support culture, communication system and learning application were the contributors towards the performance of high performing schools. Knowledge creation, support culture and integration to strategy were the contributors for the integration element while organizational culture, knowledge sharing, knowledge creation, external learning and organizational memory were found to be the contributors. For the factor of innovation agility; intellectual asset, knowledge sharing, knowledge creation, external learning, mechanism, integration to strategy and learning application were the contributors. Lastly, for competitive actions; intellectual asset, support culture, external learning, integration to strategy and learning application were the contributors towards the performance of high performing schools.

Keywords: *School Performance*, *Knowledge Management*, *Organizational Learning*, *High Performing Schools*

Introduction

This study is directed to determine contributors of performance in High Performing Schools (HPS) by taking into account the application of knowledge management (KM) and organizational learning (OL) simultaneously.

The first element selected to be experimented for this study, KM, became popular in the 90s when there was awareness on the importance of intellectualism. Economy experts view knowledge-based management to be imperative in enhancing economy and produce extraordinary success. They also proclaim such knowledge era as new, knowledge-driven economy that calls for awareness towards the importance of knowledge (Sallis & Jones, 2002).Shogar(2005) further acclaim that possessed knowledge is vital to function within organizations and human development successes butSenge (1990)cited in Rowley (2000) has warned that many organizations are unable to function as knowledge-based organizations because they suffer from learning diabilities. Although

knowledge-based management is known to be influencing in organizational management, it is still under par in educational institutions due to lacking in research.

The second element, OL was introduced by Peter Senge and defined as organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspirations is set free, and where people are continually learning to see the whole together (Senge, 1990). Senge (1990) further explained OL as a group of people continually enhancing their capacity to create what they want to create.OL was first used in private and corporate organizational relationships (Britton, 1998) and have not been fully exposed to be applied in schools due to low comprehension of its application among schools authorities.

As such, Malaysian schools must especially apply the KM and OL practices to escalate their performances. But their readiness is questionable, as a study by Marinah, Ramlee, Flett & Curry (2011) that intend to find out the readiness of Malaysian Smart Schools revealed that despite of the better technological equipment provided, standard daily schools denoted higher knowledge production. This has shown that Malaysian schools have initiated to apply KM and OL but very little study had been conducted to identify neither their success nor contributing factors.

Literature Review

Knowledge Management

KM is the process of identifying, grasping, arranging and distributing intellectual assets critical for organizational long-term performance (Debowski, 2006), an effort to increase useful knowledge within the organization to boost its performance. Ways to do this include encouraging communication, offering opportunities to learn, and promoting the sharing of appropriate knowledge artifacts (McInerney, 2002). KM is all the structured activities for organizational improvements through knowledge sharing and proper information application (Mcshane & Glinow, 2006) applied to improve the quality of the contributions people make to their organizations by helping people to make sense of the context within which the organization exists, to take responsibility, to cooperate and share what they know and learn, and to effectively challenge, negotiate and learn from others (Kai, Minhong& Yuen, 2011).

According to Reynolds (2005), KM has provided advantages to students, teachers and schools based on a study conducted in New Zealand and Australian schools to measure KM adaptability success at school levels due to technological and communication strengths in these countries. However, in contradiction, Zhen et. al. (2009) found from their study that the main setback of KM in Taiwanese schools were inadequate teaching time allocation as well as feeble infrastructural planning such as insufficient funds and technology. Hence, they suggested that schools provide additional trainings for teachers to enhance their skills, properly manage school equipment, frequently apply technology and communication and foster KM culture among organizational members. Lee et al. (2010) further study Taiwanese schools to build a system to increase KM at school level. The introduced system enables school management to focus more towards knowledge sharing and interaction among organizational members. While, Leung (2010) identified contributing factors towards KM for primary and secondary schools in Hong Kong and determined that success of KM implementation depends on information technology efficiency, leadership, cultural influence, organizational structure and individual characters. In Cyprus, Dagli (2007) found out that school principals acquire knowledge by attending meetings with supervisory teachers, their experiences and online resources.

The KM Model adapted in this study is by Sallis & Jones (2002), representing a framework that prepares guidelines of systematic KM practice consisted of eight characteristics. They are: knowledge comprehension; knowledge creation; knowledge assessment; knowledge mastery and application; production of new and

effective system; knowledge sharing; creation of new knowledge; and preservation of organizational knowledge.Hence this study implied KM as knowing, creating, assessing, mastering, applying and maintaining organizational knowledge in schools.

Organizational Learning

According to Ulrich, Jick & Von Glinow (1993), the concept of OL is based on different strands while Smith (2001) stated that OL is only the method to achieve strategic objectives, but the ability to create OL is equally vital as thecapacity to learn rigidly and collectively is a prerequisite required to advance within new contexts. As a long term activity, OL will enable competitive advantage on timely basis and needs continuous managerial retention, commitment and efforts (Goh, 1998). However, because certain internal and external barriers do exist in implementing OL (Britton, 1998), its implementation necessitate behavioral change which resulted in obstruction for its achievements (Agarwal, 2003).Apart from that, there are a few authorities that can obstruct and disrupt learning processes, possibly can happen even at individual levels that affect psychologically (Britton, 1998).

In Malaysia, within organizational contexts, OL has beenemphasized in many ways but its implementation was unclear and without precise perceptions. The idea for OL implementation has been initiated by Rozi Baharuddin in 1993 (Abd Rahman, 2011), whom later implied that it does not exist out of coincidence, but with planning, organization and management and was at that time considered as a new recommendation to be reserved for production of future renowned organizations. The concept and practice of OL in Malaysia is still new and has not been clearly portrayed, but it is directed towards implementation in certain parts of public and private sectors (Abd Rahman, 2011).

For this study, the Eight Functions Model by Bruce Britton (1998) was adapted to determine the contributors of OL towards performance in HPS. This model which is designed to achieve success in adapting OL practices for organizations, consisted of eight vital functions namely OL knowledge, support culture, external learning, communication system, mechanism, organizational memory, integration to strategy and learning application.

Performance

Capabilities are an important contributor to organizational performance (Bharadwaj, 2000; Teece, et al., 1997; Tippins and Sohi, 2003). Capabilities refer to an organization's ability to assemble, integrate, and deploy valued resources (Amit and Schoemaker, 1993). They are rooted in processes and business routines (Singh, Chan and McKeen, 2006). KM capability enables an organization to improve its performance relative to its competitors, but the link is not direct (Singh, Chan and McKeen, 2006). An organization's KM capability allows it to achieve innovation agility (i.e., to explore and exploit market opportunities). This agility further allows the organization to take competitive actions in its market, which in turn results in a better relative performance (Singh, Chan and McKeen, 2006).

Therefore this study has defined three main factors that influence HPS performance based on a study by Singh, Chan and McKeen (2006), which were capabilities, innovation agility and competitive actions. These factors were later converted into five as capabilities can be divided into three elements: assembling, integration and deployment of valued resources; resulting in the five factors being applied for this study to be assembling, integration, deployment of valued resources, innovation agility and competitive actions.

High Performing Schools

By definition, HPS are carefully selected schools that possess their own personalized ethos, characteristics and identity which are unique and outstanding in all educational aspects (Malaysian Ministry of Education, 2010).

To be selected as HPS means that these schools were among the best in terms of working culture traditions and excellent with human assets that develop holistically and continually. These schools were also expected to be competitive within the nation as well as at international level. Purportedly, the Malaysian Ministry of Education aims to set all selected HPS as measuring constituent for educational excellence in Malaysia, specifically as exemplification for all other schools. HPS were decided as a vital element in the educational National Key Results Area (NKRA) with the purpose of boosting the excellence of Malaysian schooling system (Malaysian Ministry of Education, 2010). The foremost reason in realizing the recognition of HPS was of course to create conducive environment for students to experience proper if not effective learning but instantaneously, HPS are equipped with the ability to be independently autonomous and accountable in areas related to students' management and achievements. An imperative autonomous ability granted by the Malaysian Ministry of Education for HPS to perform within their sovereignty were the freedom to make decisions in curriculum selection and teaching methodology as well as selection and replacement of teachers according to performance (Malaysian Ministry of Education, 2010).

In direct relevance to this study, HPS were selected in opposition to standard schools because of their recognizable ability to perform and succeed in educational success expectations. The relationship between HPS with KM and OL can be promptly comprehended where HPS themselves are being held responsible to ensure excellence in students' achievements at world class level. With such load, HPS can be best associated with the application of KM and OL because of the freedom to select outstanding teachers from all over Malaysia who can later be exploited of their knowledge and expertise to further improve and enhance the existing excellence. The fact that HPS were required to devise a network of coaching and mentoring with other schools also clarify the significance of utilizing KM and OL in their curriculum management and all aspects related to teaching and learning process.

Methodology

The conduction of this study was initiated with the approval of grant application from University of Malaya Research Grant (UMRG). Designed to be quantitative in nature, the purpose of this study was to find out the contributors towards performance in HPS in Malaysia within the contexts of KM and OL. The instruments were adapted from the Knowledge Management Model by Sallis & Jones (2002), the Eight Functions Model by Britton (1998) andOrganizational Performance Model by Singh, Chan & McKeen (2006).

By employing purposive sampling method, exactly 132 questionnaires were distributed to respondents consisted of national school headmasters or principals and senior assistant teachers in all 52 HPS throughout Malaysia after permission was granted from the Malaysian Ministry of Education, which, 127 of them responded. Multiple regression empirical analyses were then conducted to determine the contributors towards performance in HPS in Malaysia within aspects of knowledge management and organizational learning, with performance as the dependent variable.The performance variable was divided into 5 sub-variables to enable better divisional interpretation at the findings section. The 5 sub-variables were assembling, integration, deployment of valued resources, innovation agility and competitive actions. On the contrary part, the independent variables were selected from both KM and OL factors; 7 from the former and 8 from the latter. For KM, the variables used were KM knowledge (KMM), vision & mission (VM), strategy (ST), organizational culture (OC), intellectual asset (IA), knowledge sharing (KS) and knowledge creation (KC) whereas for OL, the variables were OL knowledge (OLK), support culture (SC), external learning (EL), communication system (CS), mechanism (MC), organizational memory (OM), integration to strategy (IS) and learning application (LA). With the internal consistency of Cronbach's Alpha at .965, the multiple regression analyses were simultaneously run by employing the Statistical Package for Social Science (SPSS) version 18 and not in

separation because this study assumed that KM and OL both coexist together within the HPS climate and culture.

Findings and Discussions

Table 1 Factors Contributing tothe Performance of Malaysian High Performing Schools

Variables	School PerformanceIndicators				
	Assembling	Integration	Deployment of Valued Resources	Innovation Agility	Competitive Actions
Knowledge Management (KM)					
1. KM Knowledge (KMM)					
2. Vision & Mission (VM)					
3. Strategy (ST)					
4. Organizational Culture (OC)			.001*	.001*	.001*
5. Intellectual Asset (IA)			.006*	.004*	
6. Knowledge Sharing (KS)		.001*	.000*	.028*	
7. Knowledge Creation (KC)					
Organizational Learning (OL)					
1. OL Knowledge (OLK)					
2. Support Culture (SC)	.003*	.005*			.003*
3. External Learning (EL)			.015*	.000*	.000*
4. Communication System (CS)	.001*				
5. Mechanism (MC)				.000*	
6. Organizational Memory (OM)			.043*		
7. Integration to Strategy (IS)		.021*		.007*	.000*
8. Learning Application (LA)	.004*			.007*	.010*

N = 127

From the results obtained, 8 predictors were found to be from KM and another 15 from OL. In terms of the assembling element within the capability factor, SC (β = .226), CS (β = .334) and LA (β = .233) were the contributors towards the performance of HPS. KC (β = .258), SC (β = .052) and IS (β = .234) were the contributorsfor the integration element while OC (β = .059), KS (β = .047), KC (β = .049), EL (β = .054) and OM (β = .046) were found to be the contributors towards the deployment of valued resource element towards the performance of HPS. For the factor of innovation agility, IA (β = .037), KS (β = .041), KC (β = .043), EL (β = .048), MC (β = .045), IS (β = .048) and LA (β = .040) were the contributors towards the performance of HPS. Lastly, for competitive actions, IA (β = .040), SC (β = .036), EL (β = .052), IS (β = .052) and LA (β = .043) were the contributors towards the performance of HPS.

Table 1 also showed that from the five elements of school performance indicators, competitive actions contributes the highest percentage of 88% (r = .94) towards the variance change in the criterion variable [F (1,15) = 56.50, p ≤ 0.05] followed by innovation agility at 86% (r = .94), [F (1,15) = 53.08, p ≤ 0.05]; deployment

of valued resources at 78% (r = .89), [F (1,15) = 26.62, p ≤ 0.05]; assembling at 71% (r = .86), [F (1,15) = 21.08, p ≤ 0.05]; and integration at 69% (r = .85), [F (1,15) = 19.77, p ≤ 0.05].

Discussion

The success in creating and fostering appropriate culture within school environment has made it possible for a school to be accredited as HPS, in accordance with Low et al. (2003) that organizations must overcome the cultural barriers to efficaciously enhance performance. Similarly, Kai, Minhong & Yuen (2011) and Marinah, Ramlee, Flett & Curry (2011) reported that culture inevitably contribute towards school organizational success in implementation of KM. However, the results were opposed to the study by Mohd Ghazali, Azirawani, Man Norfaryanti & Mar Idawati (2007) which discovered info-structure support and knowledge substitute as main factors in KM effectiveness. In another study by Sharimllah Devi, Chong & Hishamuddin (2009), six factors were known to be contributing towards KM namely knowledge creation, knowledge mastery, knowledge organization, knowledge storage, knowledge distribution and knowledge application. In accordance with Sharimllah Devi, Chong & Hishamuddin (2009), it is prudent to declare thatKM practice in Malaysian public higher learning institutions were identified to be at moderate level.

Results obtained from this study denote that administrators in Malaysian HPS have sufficiently applied both KM and OL to enhance their organizational performance. However, there are still rooms for improvements, especially in terms of the insignificant factors as portrayed from the results. The privileges provided by the Malaysian Ministry of Education for HPS in terms of sufficient infrastructures and facilities as well as appropriate trainings and initiatives have been proven to be successful towards their performances, looking back at the results acquired. With the provision of opportunities, HPS have demonstrated higher creativity and innovation.

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