Knowledge Management Experience in Malaysian Schools

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Abstract

Nowadays, knowledge management has become an important element in the success of an organization including schools. In relation to that, this study was conducted to investigate the elements of knowledge management in Malaysian schools. Knowledge management in this study was measured by the elements vision and mission, strategy, organizational culture, intellectual capital, learning organization, leadership and management, teamwork and learning communities, sharing knowledge, knowledge creation and digital sophistication proposed by Sallis and Jones. This study was investigated the relationship between principals' experience and age with the elements of knowledge management in the Malaysian schools based on teachers' perceptions. A number of 132 teachers were selected as respondents from 3 schools which included primary and secondary schools. This study used a set of questionnaire to gain the teachers' views on knowledge management. Data was analyzed descriptively. Overall, schools in Malaysia had shown high mean score for every element of knowledge management in this study and it can still be improved. All the elements have significant, weak relationships with the principals' experiences. The elements of vision, mission and organization strategy showed significant relationships with principals' age but the relationship was also weak.

Keywords:

Knowledge management, schools, principals' experience

INTRODUCTION

Knowledge management is a process of applying knowledge selectively based on past experiences in making decision to present and in the future. The quality of knowledge output is influenced by the quality of the professional expertise and experience available. This process is purposely to increase the effectiveness of the organization (Jennex, 2005; Mumtaz, 2009).The current era of technology has caused massive information explosions and this phenomenon has caused challenges to everyone in managing that information well. These overload information becomes the source of knowledge which is increasingly important to all organizations including schools. Knowledge has become the main source of success of the economy and business globally as stated by the World Bank (1998/99:16), "...Today's most technologically advanced economies are truly knowledge-based." At the same tone, Drucker (1993:42) also stated that, "In fact, knowledge is the only meaningful resource today. The traditional "factors of production"—land (i.e., natural resources), labor, and capital—have not disappeared, but they have become secondary. They can be obtained, and obtained easily, provided there is knowledge. And knowledge in this new sense means knowledge as a utility, knowledge as the means to obtain social and economic results".

Knowledge management has become the main strategy for survival of an organization including educational organization. Understanding of how the knowledge is formed and managed is crucial for the effectiveness and efficiency of the organization including schools. Schools can realize the formation of knowledge and the importance of sharing knowledge to improve student learning and staff. Teachers are also facing the challenges in managing the tremendous information and knowledge to make the teaching and learning process interesting. The skills will help them to communicate better with the students (Sallis & Jones,

2002). Nowadays, it is not difficult to gain knowledge with the existence of rapid information development, but it is difficult to manage the knowledge. The challenge to the organization is on how to process the knowledge and identifying the important knowledge which is needed creatively (Argyris,1993; Nonaka, 1994).

Knowledge management is important for the organization in gaining and generating relevant knowledge which can be used effectively when needed in assisting the success of the organization (King, 2009; Svetlana & Jucevicius, 2010). The process of knowledge management has a variety of approaches, including linking knowledge management with new knowledge generation, sharing and transfer of new knowledge and existing knowledge, acquire, store, exploit and measure the impact of knowledge (Grey, 1999; Bishop, Bouchlaghem, Glass, & Matsumoto, 2008). The organization must also have a high level of organizational learning at all levels, using ICT and technology in a creative way; a cultural organization that promotes the formation of knowledge and culture of an organization that supports the development and growth of prototypes (Baets, 2005; Pasher & Ronen, 2011).

The best way to describe knowledge management is a system that enables the organization to generate and find critical information so that it can be manipulated, use and re-use the information in creative ways so that new understandings and new knowledge emerge Mumtaz, 2009; Supermane, 2010). The same system applies to teaching and learning process where teachers play the role to deliver the content knowledge and tacit knowledge that helps students to learn more about the content and life. The teaching and learning should be the important process to gather information, selecting and sharing the knowledge in order to build informational and well-organize generations. Students love to gain new knowledge either its directly stated in the specific contents or indirectly shared from teachers experience or others. It is the way how they learn to be a better person and yet knowledgeable (Kai Wing Chu, Minhong Wang, & Allan H.K. Yuen, 2011; Cochran Smith and Lytle, 1999). Therefore, teachers should always bear in mind to enhance their skills in any aspect.

Petrides, and Nodine (2008) found that the barriers to implementing knowledge management in schools is lack of staff, data collected is inconsistent, poor leadership, lack of technology, no clear priorities and not enough trust among the staffs. Additionally, available time is used to reduce the barriers more than the benefits derived from the knowledge management process. To facilitate knowledge management, ICT systems are really needed to be available (Abdullah, Sahibuddin, Alias, & Selamat, 2005). Schools need systems to acquire, store and retrieve information systematically. Well kept information will help schools in solving problems and making decision effectively (Jamaliah, 2007). To provide effective management information system requires the integration of information systems and human ecology (Tsung-Yi Chen, 2009). With an effective management system allows the sharing of knowledge within the organization and thus can improve the culture of knowledge sharing and reduce the barriers of time and space in the partnership and the addition of knowledge (Rao & Upadhyaya, 2006; Singh & Salam, 2006; Tsung-Yi Chen, 2009).

Knowledge management involves instilling certain kinds of values and these values requires "a high appreciation and respect for individual knowledge, as well as commitment toward fostering knowledge interactions through mutual thrust" (Pasher & Ronen, 2011: 49). To generate and apply the knowledge in complying the needs of the organization requires a culture to share knowledge and also requires mental and physical infrastructure to enhance the success of the organization. Knowledge management can be a useful tool for teachers to acquire and sharing knowledge in schools. There have been very few studies that focus on this topic. Therefore, this study will be the the starting point to examine the elements of

knowledge management in Malaysian Schools. Knowledge management in this study is measured by the elements proposed by Sallis and Jones (2002). This study also investigated the relationship between principals' experience and age with the elements of knowledge management in Malaysian schools based on teachers' perceptions.

METHODOLOGY

This study selected 132 respondents through convenient and purposive methods from three schools which includes primary and secondary schools. The respondents consisted of 56.8 percent ladies teachers and 43.2 percent men teachers. They were 74.2 percent primary school teachers and 25.8 percent secondary school teachers.

This study adopted an instrument proposed by Sallis and Jones (2002) which focused on 10 elements of knowledge management, which are vision and mission, strategy, organizational culture, intellectual capital, learning organization, leadership and management, teamwork and learning communities, sharing knowledge, knowledge creation and digital sophistication. The reliability of all constructs were high with alpha values higher than 0.8. This instrument used 5 point Likert scale of 1 = low value through 5 = high value. Data was then analyzed by dividing the 5 points to the three levels of 3.67 to 5.0 scores mean as high, 2.34 to 3.66 as average and 1.0 to 2.33 as low (Azizi, Jamaludin & Mazeni, 2010).

FINDINGS, DISCUSSION AND RECOMMENDATION

A total of ten elements studied were ordered by the highest mean score to lowest. Table 1 showed the percent of teachers who answered according low level, average and high. Based on the results, it was found that knowledge creation had the highest percentage 74.8 percent, followed by the vision and mission with 74.2 percent, learning organization and strategy with 72.7 percent, sharing knowledge with 72.0 percent, organizational culture with 71.9 percent, leadership and management with 71.0 percent, teamwork and learning communities with 68.2 percent, digital sophistication and intellectual capital with 65.2 percent. By viewing the mean scores, it was found that all elements were categorized in high and average categories (between 3.58 to 3.77).

These findings are similar to the findings by Jamaliah (2007) which had the mean score for knowledge management in Malaysian schools of 3.65 with SD 0.69. While, the study by Singha, and Soltanib (2010) found that the knowledge management index for awareness and commitment to the knowledge management initiative are high among the staffs of ten IT companies in North India. However, these companies only managed to document critical information, but not general information. In order for any organization to achieve efficiency and effectiveness, a good understanding and effective implementation of an appropriate model of knowledge management is important (Tan Thai Soon & Fakhrul Anwar Zainol, 2011).

Knowledge creation in most schools in this study were at the high level with means between 3.69 to 3.80. Based on this finding, it indicated that principals can still increase the generation of knowledge by identifying the sources of new knowledge from specialist teachers and excellent teachers in schools. Other than that, school principals are also capable of changing new knowledge of valuable services to students. According to Singh and Salam (2006) by preparing more supportive environment which support knowledge sharing, motivating the staff, give meaningful tasks and giving appropriate rewards also encourage staff to be more creative and innovative will generate the organization's success where

knowledge is 'knowledge applied to knowledge itself (Tsung-Yi Chen, 2009). Knowledge creation also requires discourse, set goals, investigate problems and promote the impact of new ideas (van Aalst, 2009).

Teachers in this study perceived that their schools' Vision and Mission as a knowledge based organization was high with a mean score of 3.77. Strong partnership with stakeholders, and have a mission of generating knowledge may translate the vision and mission of schools into a practical strategy. Policies and guidelines are needed in ensuring the aim to share knowledge can be conducted well. These policies and guidelines are not only for sharing knowledge also to ensure the information and knowledge are being planned and updated from time to time (Bushweller, 2000; Jamaliah, 2007).

Table 1: Knowledge Management Experience in Malaysian Schools

Elements	Low (%)	Medium (%)	High (%)	Mean	S.D.
Knowledge Creation	-	25.2	74.8	3.77	0.77
Vision and Mission	0.8	25.0	74.2	3.77	0.75
Organizational Culture	0.8	27.3	71.9	3.74	0.72
Teamwork and Learning Communities	-	31.8	68.2	3.71	0.74
Strategy	3.0	24.2	72.7	3.70	0.76
Leadership and Management	1.6	27.4	71.0	3.69	0.77
Learning Organization	-	27.3	72.7	3.68	0.68
Sharing Knowledge	-	28.0	72.0	3.66	0.71
Intellectual Capital	1.5	33.3	65.2	3.65	0.78
Digital Sophistication	-	34.8	65.2	3.58	0.76

Schools have a high Organizational Culture with mean score 3.74. This indicated that schools are capable of improving knowledge management culture which will help towards innovation, learning and knowledge sharing. Other than that, with the culture of knowledge sharing, it will place knowledge and learning in between the school's mission and knowledge will be used as the main element of school success. The findings of Singha and Soltanib (2010) indicated lower means of 2.91 to 2.96 from their study which implied that a company which manage to capture, validate and distribute new knowledge rapidly, is able to change the strategic focus and source allocation effectively even in an unstable situation.

Teamwork and Learning Communities in schools studied was at the high level with a mean scores of 3.71. Recent study by Rahmad Sukor Ab. Samad et al. (2014) found a correlation between teamwork and learning communities with understanding of knowledge management among teachers. These learning communities can be enhanced by increasing the communication circles between staffs and ensuring the existence of this learning group by regarding it as a formal group. This is due to the tendency of this group to exist informally in an organization. The important thing is that tacit knowledge can be generated from this learning group (Sallis & Jones, 2002).

Schools in Malaysia are having a high Strategic Knowledge Management with the mean score of 3.70. Knowledge management strategy in schools can still be improved, especially in knowledge sharing strategy and knowledge exploration strategy. The findings are parallel with the findings by Jamaliah (2007) for the knowledge strategy which gain mean

score of 3.83 (SD=.53). According to her, the findings indicated that teachers have used only a few strategies in acquiring, documenting, sharing, using and generating knowledge.

Leadership and Management in the schools studied showed a high mean score of 3.69, which indicated the schools have principals who support knowledge management. Knowledgeable leader usually has a strategy in moulding expert teachers, has expertise with leadership skills by encouraging knowledge sharing, and has capable managers to generate knowledge. Managing knowledge means managing human so that they would get the best from them. In ensuring this situation happens, management style should be changed, especially the traditional management by giving orders to giving attentions, coaching, encouraging and mentoring. The initiative of knowledge management can only become a success if the top management and leaders involved actively (Anantatmula & Kanungo, 2010).

Learning Organization in the schools studied showed a high mean score of 3.68. This means that a lifelong learning culture can still be improved. It is similar for identifying skills and needed ability in generating new knowledge, understanding important emotional quotient to generate new knowledge, encouraging staff to think creatively and out of the box and encouraging the use of action learning as individual and group development. Schools can develop a learning organization by adopting the thinking system as proposed by Peter Senge in The Fifth Discipline (Senge, 1990). The thinking system will encourage staff to take personnel mastery in their life, bringing the prevailing mental model to the fore and challenge them, developing vision together and supporting group learning.

The mean scores for Sharing Knowledge is 3.66 and at moderate level. This shows that schools can still improve procedures to share and gather knowledge, the procedures for exchanging information, and a system that allows all staff to know what information they need to know. The findings of Singha and Soltanib's (2010) study indicated lower mean scores between 2.67 to 3.01. According to them, managers are encouraged to participate in various forums to share experiences as information sharing that will encourage a positive cultural change within an organization.

Intellectual Capital in schools is less being focused by the organization with the mean scores of 3.65. Schools should acknowledge intellect as an asset, appreciating knowledge and could generate knowledge. Leaders and the school management must ensure that staffs are not managed in the organization as managing physical resources. Intellectual capital is based on intelligence and skills of the staffs. The level of knowledge utilization in an organization should be correlated with its level of intellectual capital (Ramirez et al., 2007). Knowledge management forms the basis for successful leveraging on intellectual capital (Rastogi, 2000; Ramirez et al., 2007).

Digital Sophistication is an important element in knowledge management. Schools in this study were identified by the lack of clear vision and technology experts in ensuring there are no digital divide between staffs. These schools also do not have adequate technology system in knowledge management, lack sufficient technology in knowledge sharing and enable staff to form a virtual learning community (mean scores of 3.58). The mean scores in the study carried out by Singha and Soltanib (2010) for the information technology is closely similar, 3.64. They proposed the usage of LAN and other technology broadly to encourage widespread sharing of knowledge and effective knowledge upgrading. Schools should have a technology infrastructure as technology is the enabler which accelerates the process of managing and producing information (Jamaliah, 2007). Jamaliah's study in Malaysian

schools also found that info-structure and info-culture were still at an average level (mean= 3.50, SD=.73 and mean=3.42, SD=.73).

The Relationship of Principals Experience and Age with Knowledge Management

The study found that principals' experience that was surveyed by the number of years as a school administrator has a significant influence on all elements of knowledge management. Age have significant influence only for the element of vision and mission and strategy in knowledge management. However, the correlation among the elements of knowledge management and principals' demographic factors is not really strong as shown in Table 2. Therefore, it is suggested that future studies examine other factors that influence the effectiveness of knowledge management. Leadership factor is important because if the leaders do not value information management, information management systems will not be created. Organizational leaders will be able to integrate the processes in knowledge management with the overall objectives of the organization and other processes and initiatives within the organization (Svetlana & Jucevicius, 2010). Good management will encourage the generation and sharing of knowledge, to reward those who contribute to knowledge and provide technology resources to facilitate the retrieving, use and share of knowledge.

In addition, this study also suggests all the elements of knowledge management are examined in more detail since all the elements are closely related to each other. The future study will need to see the whole element as an integrated entity to the success of the organization. This has been explained by Bartholomew (2008) that assuming knowledge management as a separate tool and process is totally wrong as it is an integrated system with the objectives of the organization.

Table 2: The Relationship of Principals' Experience and Age with Knowledge Management

Item	Principals' Experience	Principals' Age
Vision and Mission	.198[*]	.212[*]
Strategy	.219[*]	.210[*]
Organizational Culture	.211[*]	.146
Intellectual capital	.189[*]	.069
Learning Organization Strategy	.198[*]	.089
Leadership and Management	.175[*]	.115
Teamwork and Learning Communities	.187[*]	.059
Sharing Knowledge	.264[**]	.053
Knowledge Creation	.259[**]	.099
Digital Sophistication	.192[*]	.043

*significant at p=0.05

CONCLUSION

Knowledge management in Malaysian schools can further be developed as this study has indicated that despite most schools agreed that knowledge generating in their schools were quite good, the technology system is still low in accelerating information sharing. The success of knowledge economies requires the use of existing knowledge effectively to generate new knowledge and also need the existence of good leaders. These leaders are able to manage, nurture and generate new knowledge in the organizations. Intelligence and skills of teachers should be identified to ensure they can produce the best for the organization. Malaysian schools are still weak in managing intellectual capital and in providing technology

infrastructure to expedite the management of information. Overall, the findings of this study found that the elements of knowledge management cannot be separated in details as each of it is integrated. All of the elements need to be managed by competent principals and with the existence of information management system as the enabler.

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