Knowledge Management Strategy in Malaysia

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ABSTRACT

A study on Knowledge Management (KM) initiatives was conducted on a sample of various categories of organization in Malaysia. The categories were companies listed in the Kuala Lumpur Stock Exchange (300 of a total of 500 companies), government Ministries and Departments (30), educational institutions (80), small and medium size industries (100), the electronic industries (150) and government-owned agencies (10). About 303 questionnaires were returned and the preliminary findings showed nearly half of the respondents were reporting that they already established formal knowledge management initiatives in their respective organizations. This was evident amongst organizations in the education sector, government own organizations and government departments and/or agencies. Nonetheless, the findings also showed that the Malaysian private sector was slowly catching up to meet the challenges of the competitive business environment.

Keywords

Knowledge Management, Business Strategy, Value Creation

1.0 INTRODUCTION

The key characteristics identified from leading companies that have successfully leverage their assets provide a fertile ground for developing a knowledge management strategy. Companies that want to leverage this asset must approach knowledge management with a focus on their core competencies and tie those in very tightly to the business strategy and vision (Tiwana, 2000). The decades of the last century saw corporations locked in a struggle to out-do one another and in the 21st century will see organizations in a struggle to out-know one another. More than half of the organizations listed in the Fortune 500 in 1993 are no longer in the list today. Even icon names such as Sears and McDonald find themselves in a slump. "What are we doing wrong?" asked some corporate leaders and shareholder. Whilst they are comfortable discussing the management of people, products, financial resources and operations, they are not comfortable when discussing the management of knowledge! But as of today most would realize that knowledge management is a way or concept of doing business that revolves around the following four processes: (1) Gathering: Bringing information and data into the system; (2) Organizing: Associating items subjects, establishing context, making them easier to find; (3) Refining: Adding value by discovering relationships, abstracting, synthesizing, and sharing; and (4) Disseminating: Getting knowledge to the people who can use it.

Knowledge management is crucial because it points the way to comprehensive and clearly understandable management initiatives and procedures. When companies fail to utilize tangible assets, they suffer the economic consequences, and this failure is clearly observable to markets and competitors alike. Although knowledge assets are harder to quantity, they are just as critical for long-term survival and growth of the company. The success in today's competitive marketplace depends on the quality of knowledge and knowledge processes those organizations apply to key business activities (Housel & Bell, 2001). For example, maximizing the efficiency of the supply chain depends on applying knowledge of diverse areas such as raw materials sources, planning, manufacturing and distribution. Likewise, product development requires knowledge of consumer requirements, recent scientific developments and new technologies and marketing.

2.0 DEFINING ORGANIZATIONAL KNOWLEDGE

Knowledge as the insights, understanding and practical know-how that the individuals possess have two basic definitions of interest. The first is regarding the body of information, which might consist of facts, opinions, ideas, theories, principles and models. This could also be referred to a person's state of being with respect to some body of information. Second, knowledge is the major factor that make personal, organizational and societal intelligent behaviour possible. In this regard, knowledge provides the ability to respond to new, unusual and interesting situations. In simple terms, knowledge is regarding the full utilization of information and data, combined with the people's potential skills, competencies, ideas, intuitions, commitments and motivation and the ability and wisdom to use a pool of information in a way that achieve the objectives of the individual and organization (Tan, 2000).

Knowledge is very complex and come in many forms and types. The most common distinction is that between explicit and tacit knowledge (Nonaka, 1991). Explicit knowledge could be expressed in words and numbers and shared from data, scientific formulas, product specifications, manuals, universal principles and so forth. Tacit knowledge is highly personal, hard to formalize, difficult to communicate or share with others. It is something that is not easily visible and expressible, and rooted in an individual's actions, experiences as well as ideas, values or emotions the person embraces. In fact, there are two dimensions in tacit knowledge -- the technical dimension which consist of informal and difficult skills often captured in terms of 'know-how" and cognitive dimension consisted of beliefs, perception, ideas, values, emotion and mental models that the workers occupied.

Knowledge is being recognized and well known as the main and crucial organizational resources that give market leverage (Skyme, 2000). Knowledge become the one sure source of sustainable competitive advantages and it is also associated with the driving force of change. In fact, knowledge has to be seen as a key asset in organization as it becomes the most important determinant of organizational growth. In business terms knowledge is vital to the continued operation and development of organization and their plans. In other word knowledge must be managed effectively to ensure that the basic objectives are attained to the greatest extend possible.

Given the importance of knowledge in virtually all aspects of daily and commercial life, Wiig (2000) lists two knowledge-related aspects that are vital for viability and success at any level: knowledge assets - the valuable knowledge available to be used or exploited must be nurtured, preserved, and used to the largest extent possible by both individuals and organizations; and knowledge-related processes - to create, build, compile, organize, transform, transfer, pool, apply, and safeguard knowledge. Nonaka and Takeuchi (1995) identifiy four kinds of knowledge creation in organization known as socialization - the exchange of experiences whereby personal knowledge is being created in the form of mental models; externalization - personal knowledge is made explicit in the form of metaphors, analogies, hypotheses, and models; internalization- a process in which explicit knowledge become part of tacit knowledge; and combination - notions are synthesized into a knowledge system.

In view of the above scenario, it could be concluded that the whole perspective of knowledge management become as a central productive and strategic asset where the success of the organization increasingly depends on its ability to gather, produce, maintain and disseminate knowledge.

The six core processes of knowledge management are: knowledge identification, knowledge acquisition, knowledge development, knowledge sharing and distribution, knowledge utilization, and knowledge retention (see Figure 1). According to Probst, Raun & Romhardt (2000) once knowledge objectives are set and existing knowledge assessed, a management system could be constructed which would give a helpful start to all knowledge managers. Knowledge management could be applied to individuals, groups, or organizational structures. It has a strategic and normative aspects as well as the operational use. Identifying external knowledge would mean analyzing and describing the company’s knowledge environment. A surprisingly large number of companies now find it difficult to maintain a general picture of internal and external data, information and skills. This lack of transparency leads to inefficiency, uninformed decisions and duplication. Effective knowledge management must therefore ensures sufficient internal and external transparency, and helps individual employees to locate what they needed (Probst et al., 2000).

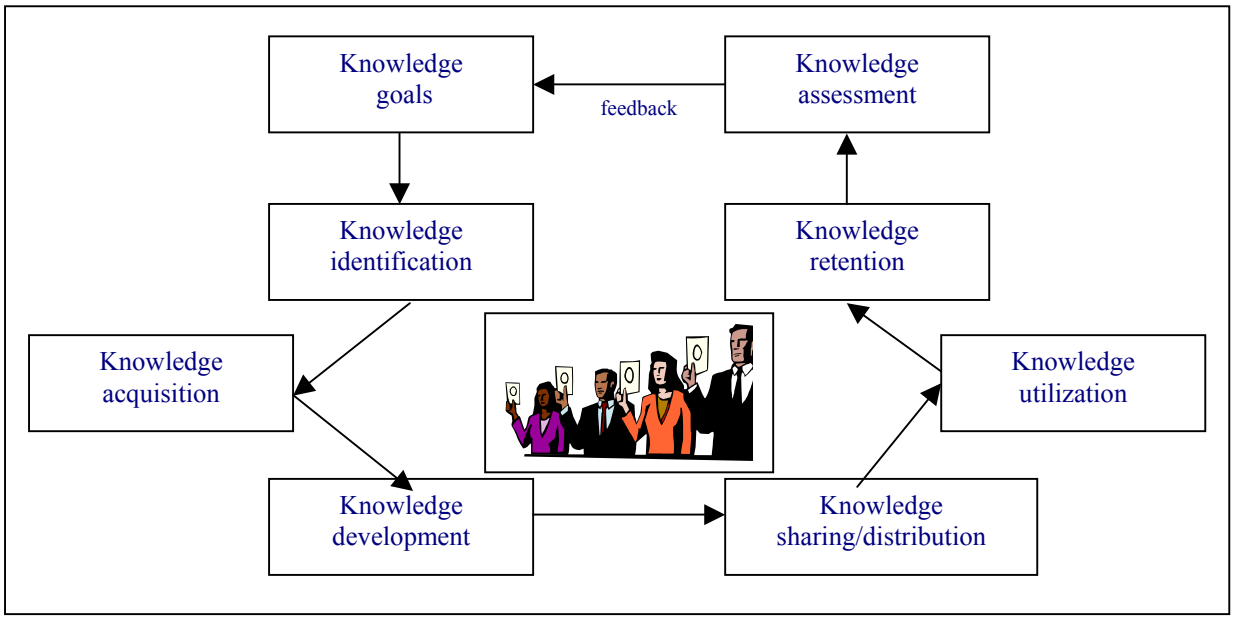

Figure 1: Building blocks of knowledge management

Theorists and practitioners alike are struggling to find a common set of principles to apply in successfully managing knowledge. Principles have been categorized according to how to create, collaborate, disseminate, reuse, embed, store, monitor and measure knowledge to meet a variety of organizational goals. The principles have been derived from practice, theory and various combinations of the two. Customer knowledge, deploying knowledge in information technology and monitoring and measuring knowledge assets are the places where knowledge management principles can be practically applied (Housel & Bell, 2001).

3.0 ALIGNING KNOWLEDGE MANAGEMENT AND BUSINESS STRATEGY

Knowledge drives strategy, and strategy drives knowledge management. Without a clearly articulated link between knowledge management and business strategy, even the world's best knowledge management system will deliver zilch. Business strategy is usually at a high level whilst developing systems is always at a low level. Specifications and features are needed, not abstractions, visions or business ideas. There is a need to raise knowledge management system design to the level of business strategy and pull strategy down to the level of systems design. This is part and parcel of the process to align knowledge management and business strategy. This can result in a long-lasting competitive advantage and can actually benefit organizations and their employees.

But when knowledge assets are not properly deployed in a situation of competitive environment, the following disastrous events may occur: (1) Lost of marketplace due to declining rate of innovation; knowledge not evolve and assimilated at a faster rate; (2) Companies may not organize business units to meet customer value, whilst staff and management functions are not redirected. As a result there is no strong push to replace informal staff policies with formalized methods and hence business processes are not strategically aligned to customers needs; (3) Competitive pressures reduce the size of the workforce that holds corporate knowledge. These pressures include increased employee mobility and early retirement, and they are all lead to a loss of corporate knowledge; (4) Employees will not have less and less unstructured time in which to acquire knowledge; and (5) Technologies increase complexity by not allowing small operating companies to link with suppliers into transnational sourcing operations.

Restructuring often results in changes in strategic direction and in the loss of knowledge in specific functional areas. Subsequent reversals may create demand for the lost knowledge, but the essential employee with

knowledge may be long gone. Effective eliminate the need for drastic restructurings as they help organizations evolve with the changing economic environment. They can also help capture knowledge assets that would otherwise be lost due to necessary restructurings, retirement, and departing employees. This in turn can result in increased revenues, increased customer satisfaction and loyalty, enhanced competitive standing and the ability to response to changing market conditions. In this sense, knowledge management rather than knowledge mismanagement is as critical for companies in the Information Age as the assembly line and production management were in the Industrial Age.

The lack of knowledge-strategy link of customer knowledge can results in higher transaction costs, decrease of volume of transactions and deteriorating customer satisfaction. These outcomes are accomplished when not embedding customer knowledge to the transaction process. Customer errors can take place in three stages of a service encounter: preparation, encounter and resolution.

3.1 Preparation

knowledge management initiatives can help Mistakes in the preparation for the encounter occur when customers fail to: (1) Bring necessary information or materials to the encounter (transaction); (2) Understand and anticipate their roles in the service transaction; and (3) Engage the correct service.

3.2 Encounter

Mistakes in the encounter arise from failure to: (1) Remember steps in the service process; (2) Follow system flow; (3) Specify desires sufficiently; and (4) Follow instructions.

3.3 Resolution

Mistakes in the resolution of the encounter occur from failure to: (1) Signal service failures; (2) Learn from the experience; (3) Adjust expectations appropriately; and (4) Execute appropriate post encounter actions.

The relationship between customer knowledge and the amount of transaction process knowledge employed is shown in Figure 2. The more customer knowledge embedded in the transaction process, the more transaction knowledge customers employ. This generally makes customers happier because it increases their control over the process.

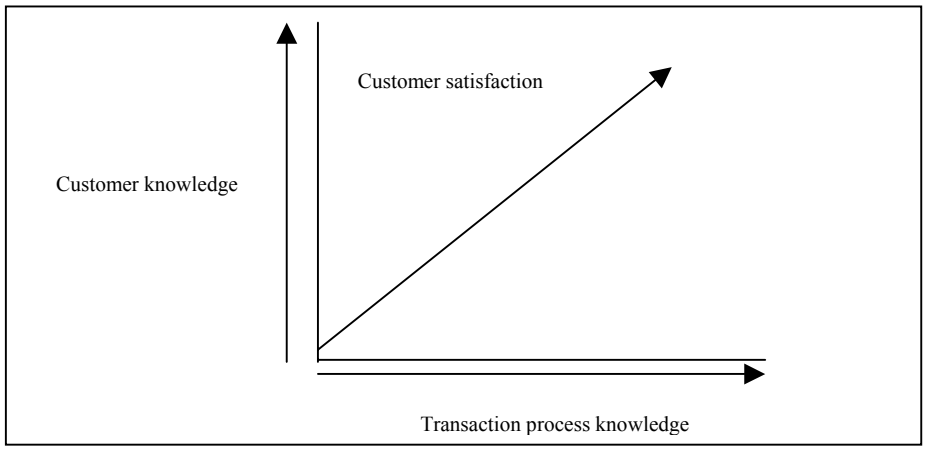

Figure 2: Customer-transaction knowledge

Figure 3 shows the relationship between the amount of customer knowledge embedded in a transaction process and the speed with which it takes place. As more customer-specific knowledge is embedded in a transaction process, it operates faster because customers do not have to work as hard at navigating and decision making through the process. Company interfaces designed to increase customer-fired knowledge reduce the time required to execute transactions because of customer knowledge reuse and integration within transaction process. A random comparison of companies doing business in the Internet marketplace will provide examples that have been designed with varying levels of "fail-safe" and customer knowledge embedding. Many traditional companies do not employ the principles of fail-safe and do not train service workers to answer questions about products and service. They also fail to create electronic interfaces that embed such knowledge and will therefore be doomed to failure over the long haul.

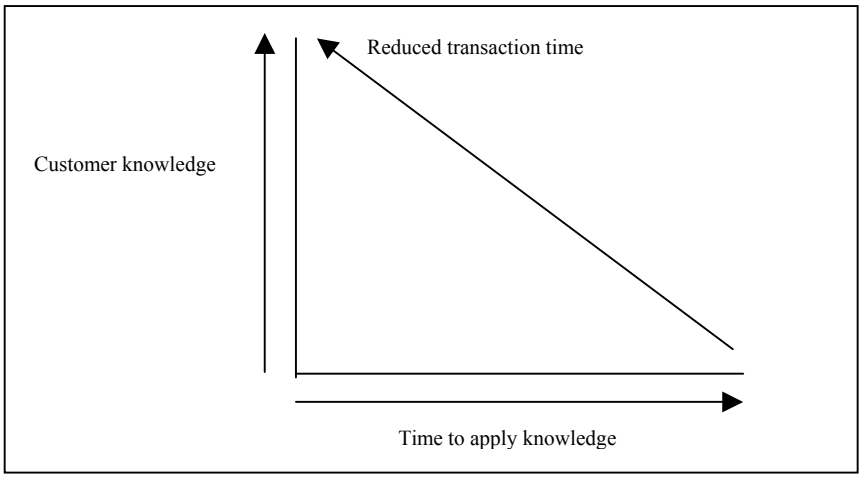

Figure 3: Amount of embedded knowledge and transaction speed

4.0 THE RESULTS OF THE EXPLORATORY STUDY

A survey conducted on 303 Malaysian organizations indicated that 139 or 46% were reporting that they already established formal initiatives in knowledge management in their respective organizations. The remaining 54% of the respondents still did not have the formal approach in knowledge management (KM). The practice of KM was evident amongst organizations in the education sector, government own organizations and government departments and/or agencies. For examples, 33 out of 56 (or 59%) respondents from the education sector reported to have formally implemented the knowledge management approach in their organizations. This followed by government own organizations (58%) and government departments and/or agencies (57%). However, the private sector, represented by Small and Medium Enterprises (SME) and companies listed on the Kuala Lumpur Stock Exchange (KLSE) recorded a relatively lower rate of formal KM initiative. Amongst the SME surveyed, only 36% practiced formal KM while the rate was about 38% in KLSE listed companies (see Table 1).

Sector	Formal		Informal		Total
	No.	(%)	No.	(%)	
Education	33	58.93%	23	41.07%	56
SME	44	36.36%	77	63.64%	121
KLSE Listed Companies	20	37.74%	33	62.26%	53
Government Own Organization	14	58.33%	10	41.67%	24
Government	28	57.14%	21	42.86%	49
Total	139	45.87%	164	54.13%	303

Table 1: Comparison of formal KM initiative amongst different sectors

A further analysis of the 139 organizations that had formal knowledge management initiatives revealed they were not progressing on the similar state. 29 of these organizations were at the 'investigation' state, 22 at the 'review', 28 at 'preparation', 7 at 'setting budget', 32 at 'implementation' and 18 at 'monitoring stage.

The KM approach could be considered as relatively new in the Malaysian context as most of the organizations were at the initial phase of formal KM implementation. It was interesting to note that the progress of KM implementation in different sectors was not similar (see Figure 4).

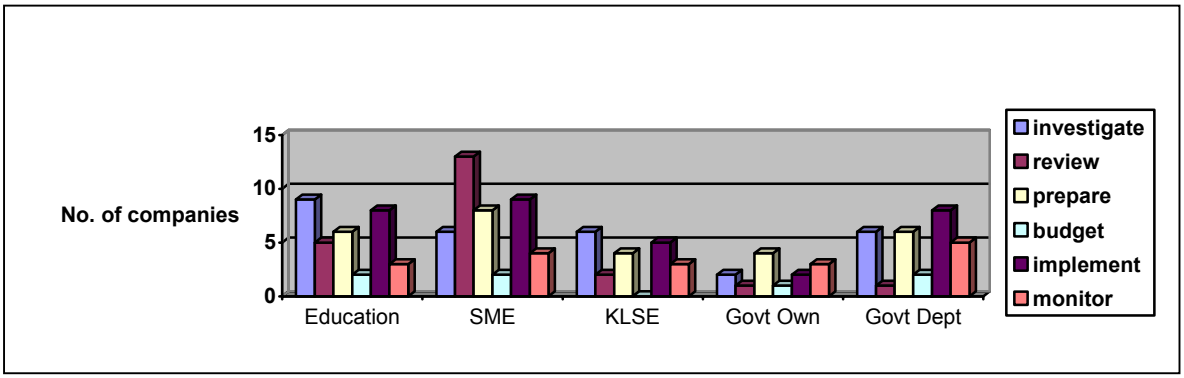

Figure 4: Current state of KM initiatives in different sectors

Of the 33 companies in the education sector who had formal KM initiatives, 9 or 27% were at the investigation stage, 5 (15%) at review stage, preparation 6 (18%), setting budget 2 (6%) and monitoring 3 (9%). Amongst the 42 SME responded, 6 (14%) were at investigation stage, review 13 (30%), preparation 8 (18%), setting budget 2 (5%), implementation 9 (20%) and monitoring 4 (9%). The trend in the KLSE listed companies was 6 companies or 30% at investigation stage, review 2 (10%), preparation 4 (20%), setting budget 0 (0%), implementation 5 (25%) and monitoring 3 (15%). The trend was again differed in the government own organization with which 2 (14%) companies were at investigation stage, review 1 (7%), preparation 4 (29%), setting budget 1 (7%), implementation 2 (14%) and monitoring 3 (21%). Meanwhile, amongst the 28 government departments or agencies surveyed, 6 or 21% were at investigation stage, review 1 (4%), preparation 6 (21%), setting budget 2 (7%), implementation 8 (29%) and monitoring 5 (18%).

It was observed that individual department head (60 respondents) was the most common personnel in steering the knowledge management initiatives in these organizations. This was followed by named position from IT/system (42 respondents), Chief Information Officer (24), named position from human resource (23), Chief Knowledge Officer (16), Director of Business Improvement (16), named position from finance (14) and Board of Director (10) (see Figure 5).

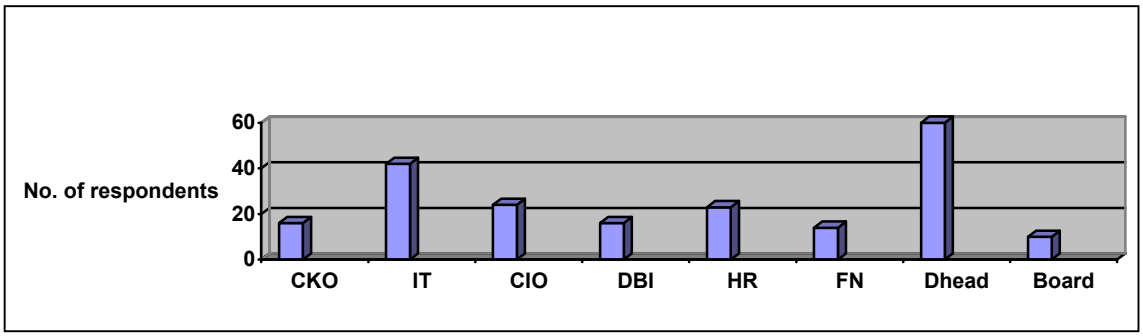

Figure 5: Personnel responsible for KM initiatives

The general trend for persons responsible in initiating knowledge management programs in the different sectors surveyed can be seen in Figure 6 below. In the SME for instance, each department head was the popular choice to initiate KM related projects. This was followed by named position from finance, named position from human resource and director of business improvement. Similarly, the responds received from the education sector showed each department head should be the major player in promoting knowledge management in their organizations. This followed by named position from IT and named position from HR.

Respondents from the government departments and agencies believed that department heads were the key players for successful knowledge based organizations then followed by named person from IT. Quite surprisingly, the respondents from the KLSE listed companies were of the same opinion with government departments that department heads should lead their employees in any KM related programs. Otherwise this task should be the responsibility of named person from IT department. Meanwhile, responds received from government own companies indicated their preference for named person from IT department to lead any KM related projects and this followed by each department head. In the Malaysian context, it could be said that generally KM sponsored activities were being instrumented mainly through initiatives of the respective department heads.

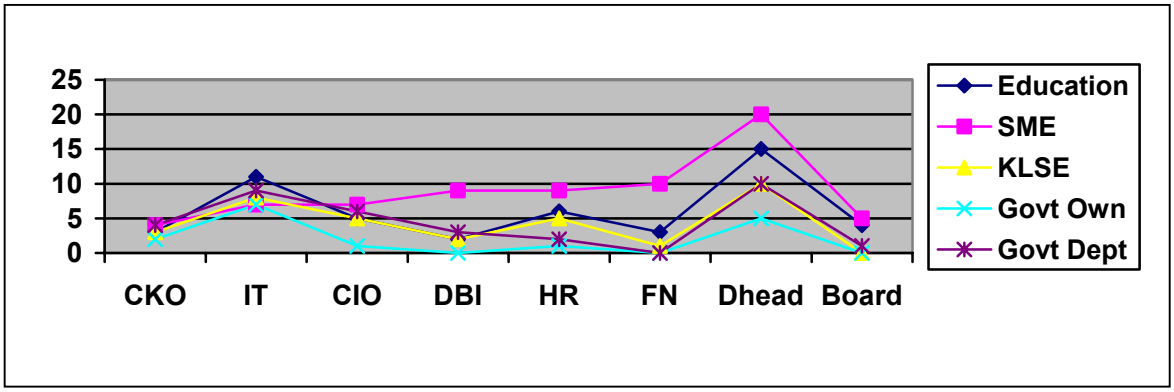

Figure 6: Persons responsible for initiating KM by sector

As described at the outset, it was generally found that each department head would encourage the transfer of tacit knowledge embedded in the minds of their staff and encouraged sharing through the process of internalization and socialization or combination of both amongst their knowledge workers. What need to be highlighted that the role of Chief Knowledge Officer was perhaps quite new in the context of Malaysia that not many of the organizations surveyed think that they had major role in KM (Table 2).

Table 2: Roles of CKO in knowledge management

Sector	Yes	No	Total
Education	3	42	45
SME	4	115	119
KLSE Listed Companies	3	27	30
Government Own Organizations	2	21	23
Government Departments	4	43	47
Total	16	248	264

The survey showed that Information Technology department (IT) was considered the major and leading source of knowledge initiatives in these knowledge based organizations. Their roles mainly to capture and analyze corporate information and apply it strategically in the form of data warehousing and data mining, decision support systems and executive information systems. Despite this common belief, they were also thinking that every department should be equally responsive in creating and disseminating knowledge. The main source of knowledge initiative by sector is given below:

1. In the education sector 'information technology' was the main source of knowledge initiative followed by 'research & development'

2. In the SME sector 'information technology' was the main source of knowledge initiative followed by 'human resource' and 'customer sales & services'

3. In the KLSE listed companies 'all departments' was the main source of knowledge initiative followed by 'information technology'

4. In the government own organizations 'information technology' was the main source of knowledge initiative followed by 'human resource'

5. In the government departments 'information technology' was the main source of knowledge initiative followed by 'all departments'

Generally, in this survey it was evident that knowledge creation could be originated from different department with the pivotal role of information technology in providing physical supports in terms of infrastructure such as technology enablers both hardware and software alike (Table 3). The technical role of information technology came into play especially in addressing aspects of knowledge repository, knowledge access and knowledge transfer involving technologies such as Internet, Intranet, Groupware, Data Warehousing/Mining, Extranet and Unifying Messaging System.

Table 3: IT as source of knowledge management

Sector	Yes	No	Total
Education	19	26	45
SME	19	100	119
KLSE Listed Companies	7	23	30
Government Own Organizations	5	18	23
Government Departments	13	34	47
Total	63	201	264

Some however of the view that role of human resource was equally paramount in creating knowledge workers through knowledge sharing and knowledge application especially in this era of Information Communication Technology (Table 4).

Table 4: Human resource as source of knowledge management

Sector	Yes	No	Total
Education	6	39	45
SME	17	102	119
KLSE Listed Companies	5	25	30
Government Own Organizations	5	18	23
Government Departments	7	40	47
Total	40	224	264

Amongst existing major knowledge initiatives prevailed in these organizations were knowledge management training and awareness campaigns (Table 5).

Table 5: Knowledge management training/awareness

Sector	Existing	Within 1-3 years	Within 3-5 years	Total
Education	12	14	2	28
SME	23	16	3	42
KLSE Listed Companies	10	7	2	19
Government Own Organizations	8	5	0	13
Government Departments	19	7	0	26
Total	72	49	7	128

This followed by setting up informal knowledge networks within the organization (Table 6) and using knowledge warehousing to enhance their job and/or process design (Table 7).

Table 6: Establishment of informal knowledge management networks

Sector	Existing	Within 1-3 years	Within 3-5 years	Total
Education	11	14	3	28
SME	18	18	4	40
KLSE Listed Companies	12	5	2	19
Government Own Organizations	8	4	0	12
Government Departments	14	8	1	23
Total	63	49	10	122

Table 7: Job/process redesign

Sector	Existing	Within 1-3 years	Within 3-5 years	Total
Education	9	16	3	28
SME	19	16	4	39
KLSE Listed Companies	10	5	2	17
Government Own Organizations	4	8	0	12
Government Departments	15	6	0	21
Total	57	51	9	117

Planned initiatives within say 1-3 years were on benchmarking and performing organization audit of current situation (Table 8). This will help companies or organizations to develop and complete projects with improved speed, agility and safety.

Table 8: Benchmark/audit current situation

Sector	Existing	Within 1-3 years	Within 3-5 years	Total
Education	7	18	3	28
SME	17	20	4	41
KLSE Listed Companies	6	8	2	16
Government Own Organizations	7	5	0	12
Government Departments	10	10	1	21
Total	47	61	10	118

Other area of interest included the development and measurement of intellectual capital that can leverage the accumulated knowledge of past experiences across the company (Table 9). This would provide platform for better quality enhancement and leading to competitive advantage in the wake of globalization.

Table 9: Developing/measuring intellectual capital

Sector	Existing	Within 1-3 years	Within 3-5 years	Total
Education	6	17	4	27
SME	8	21	10	39
KLSE Listed Companies	4	6	3	13
Government Own Organizations	5	7	0	12
Government Departments	8	10	1	19
Total	31	61	18	110

In the pipeline, the planned incentive within 3-5 years was focus on incentives and rewards management to retain their knowledge workers (Table 10). This helped created processes for worldwide access to information, enabling employees to make faster, more informed and better decisions through intranets, groupware and group decision support systems.

Table 10: Incentives and rewards for knowledge working

Sector	Existing	Within 1-3 years	Within 3-5 years	Total
Education	8	14	3	25
SME	15	18	6	39
KLSE Listed Companies	3	9	3	15
Government Own Organizations	4	7	1	12
Government Departments	8	5	5	18
Total	38	53	18	109

Not having a formal knowledge management strategy could results in information becoming inaccessible and/or obsolete (56.4% of the sample answered this). This was followed by sub-optimal decision making, expertise inaccessible, internal communication breakdown, external communication breakdown, employee left company, downsizing, breach of copyright and secret and delayed organization growth (Table 11).

Table 11: Implications of knowledge mismanagement

Implication of knowledge mismanagement	% of sample	Rank
Information inaccessible/obsolete	56.4	1
Sub-optimal decision making	50.8	2
Expertise inaccessible	50.2	3
Internal communication breakdown	40.6	4
External communication breakdown	28.1	5
Employee left company	18.2	6
Downsizing	8.9	7
Breach of copyright & secret trademark	6.6	8
Delayed organization growth	0.3	9

Amongst the barriers faced by the organizations surveyed, in implementing knowledge management strategy were difficulties in motivating employee (49.5%), difficulty in identifying the KM related roles and responsibilities, level of technology, ability of existing IT systems, obsolete data, information overload and data overload (Table 12).

Table 12: Barriers for implementing knowledge Management

Barriers for implementing knowledge management	% of sample	Rank
Motivating employees to share knowledge	49.5	1
Identifying the KM related roles & responsibilities of employees	44.6	2
Level of technology within company	32.7	3
Inter-operate ability of existing IT systems	24.1	4
Obsolete data	16.8	5
Information overload	13.9	6
Data overload	1.0	7

5.0 CONCLUSION

Knowledge management and business strategy must drive each other. This is possible only if the two are in perfect alignment. For example take the many benefits of incorporating customer knowledge via the company interface: (1) Customer perception of more control over the transaction process; (2) Closer bonding with customers; (3) Lower company transaction costs; and (4) Greater volume of transactions per time period.

Companies making the investment in knowledge management can realized huge bottom-line benefits. Those who prefer not to link knowledge and strategy do suffer tremendous costs in terms of lost revenues, customers and markets. Consider the significant tangible benefits experienced by the following companies:

- Dow Chemical increased its annual licensing revenues by US$100 million by strategically managing its patents and licenses.

- Booz Allen & Hamilton saves over US$7 million a year by reducing the time needed to find and access employee and collaborative information.
- Silicon Graphics improved its Product Information Communication process and reduced annual sales-training costs from US3 million to US$200,000

Nearly half of organizations surveyed in Malaysia were reporting that they already established a formal knowledge management strategy in their respective organizations. This was evident amongst organizations in the education sector, government own organizations and government departments and/or agencies. The private sector was slowly catching up to meet the challenges of the competitive business environment with focus on customer related knowledge to ultimately reap the bottom line benefits. Lack in knowledge management strategy can results in information becoming inaccessible and/or obsolete, sub-optimal decision making, expertise inaccessible, communication breakdown, high employee turnover, downsizing, breach of copyright and secret and delayed organization growth.

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