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ACCON 08

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Knowledge Management Initiatives for SIRIM Berhad

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Abstract: *In the past two years, there has been growing interest in knowledge management, as evidenced by the large attendance at national conferences and seminars in Malaysia. Knowledge management concepts have become more widely accepted and understood. An organization that initiates and implements an effective knowledge management program should see benefits to their organization. The objective of this study is to identify the level of awareness on KM practices at SIRIM Berhad and to establish and provide a KM framework to initiate KM in the organization. Questionnaires have been distributed to the staff at SIRIM Berhad. The analysis indicated that staff understanding and awareness of KM is important to successfully implement KM initiative in the organization, KM has been practices in the current working environment to support business process in the organization and the usage of information and communication technology (ICT) is the most significant tools towards successful implementation of knowledge management in the organization. The findings are found to help the organization in implementing KM initiatives from the KM model that has been suggested.*

Keywords: *knowledge management, knowledge management framework, knowledge management initiatives, staff awareness.*

INTRODUCTION

In general, knowledge can be experience, concepts, values, or beliefs that increase an individual's capability to take effective action (Alavi & Leidner, 1999; Allee, 1997). It is imperative to address the differences between knowledge, information, and data. Data is raw numbers and facts, while information is a flow of messages or processed data. Knowledge is actionable information that is possessed in the mind (Maglitta, 1996; Nonaka, 1994). In addition, Alavi and Leidner (1999) argued that information becomes knowledge when it is processed in the mind of an individual and knowledge

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becomes information when it is articulated or communicated to others in the form of text, computer output, speech or written words and others. If a person cannot understand and apply the information to anything, it remains just information (Lee and Yang, 2000). Knowledge is classified into explicit and tacit knowledge. Explicit knowledge is knowledge that can be codified and documented while tacit knowledge is embedded in the background and experience of an individual or group and is thus highly idiosyncratic (Dixon, 2000; Roberts, 2000).

The popularity of knowledge management (KM) has increased rapidly, particularly since 1995, and it has become a central topic of management philosophy as well as a management tool. This popularity is reflected in the growing number of articles and books on the topic. Specialist journals have also been established on this subject, and conferences are held on KM every year. In addition, many organizations have introduced KM programmes which can be beneficial to them.

SIRIM Berhad as one of the government agencies is looking forward to implement knowledge management (KM) in the organization. The top management is aware about the importance of KM and they have decided to reorganize the Information Resources & Intellectual Property Department to a new department called Intellectual Property Services, Knowledge Management and Information Resources Department. As a new section in SIRIM Berhad, the researcher perceives it as an opportunity to study towards the implementation of KM framework in the organization. The researcher aims to determine how this framework goes about creating, capturing, organizing, accessing and sharing of knowledge in the organization. Due to this matter, the researcher has decided to determine the level of awareness using the successful practice of KM framework among the staff through the business process with the current technologies within the organization.

LITERATURE REVIEW

There have been many related studies carried out in applying knowledge management (KM) in an organization. The knowledge that supports the organization's processes and decision making capability is indeed an absolute critical resource. Knowledge provided the useful information about things that are important to the organization such as information about customers, competitors, products and so on. To manage knowledge efficiently, an organization needs a highly flexible and adaptable organization structure. Prahalad and Hamel (1990) suggest that in present environments, organizations should be structured on the basic core competencies because these kind of structures are inherently dynamic and flexible and they can sustain high level of environmental uncertainty and chaos (Nonaka, 2004)

Knowledge management is managing the corporation's knowledge by means of systematic and organizational specified process for acquiring, organizing, sustaining, applying, sharing and renewing both tacit and explicit knowledge by employees to enhance the organizational performance and create value (Davenport, et al., 1998; Allee, 1997; Alavi & Leidner, 2001). Many researchers and industrialists suggest that knowledge management centers on the creation or generation of knowledge (Nonaka, 1991; Stewart, 1997).

Knowledge management in an entity that can be defined as any process or practice of creating, acquiring, capturing, sharing and using knowledge, wherever it resides, to enhance learning and performance in organizations (Swan, 1999). Knowledge management is the use of technology to make information relevant and accessible wherever that information may reside. Brown & Duguid (2000) wrote that knowledge management incorporates systematic processes of finding, selecting, organizing, and presenting information in a way that improves an employee's comprehension and use of business assets.

Knowledge is defined as a justified belief that increases an entity's capacity for

effective action (Huber, 1991; Nonaka, 1994). It is a highly complex concept and can be viewed from several perspectives (Alavi & Leidner, 2001). First, knowledge is viewed as 'a state or fact of knowing', where knowing is a condition of understanding gained through experience or study (Schubert et al., 1998). Second, knowledge is viewed as an object that can be stored and manipulated (Zack, 1998). Third, knowledge is posited as a process of simultaneously knowing and acting (Zack,1998). Fourth, knowledge is a condition of access to information (McQueen, 1998). According to this perspective, the organization's knowledge must be organized to facilitate access to and retrieval of content. Finally, knowledge can be viewed as a capability with the potential for influencing future action (Carlsson et al., 1996).

According to Dilip Bhatt (2000), the KM strategies being developed need to ensure the 'people capital' is utilized and the extract is imbedded in the policy and strategies of the company. A key element of a KM concept is a requirement to address People, Process and Technology issues in tandem and do not focus on any one element.

Therefore, figure 2.1 below provides details of the sub-elements of KM concept.
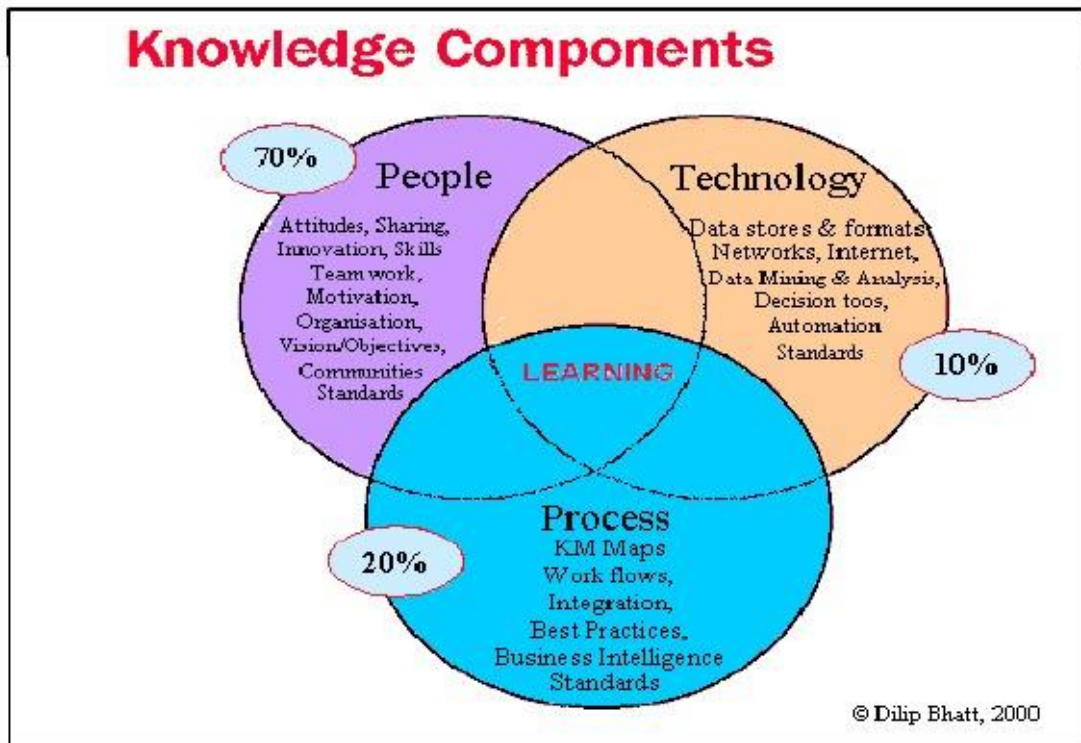
Figure 2.1: Knowledge Management Components and sub-elements

KM gurus often say that Technology is 10% of the effort required; Process is 20% and 70% being people/cultural issues. While technology is possibly the easiest and quickest way to be implemented, tapping into cultural and people issues and at the other extreme, will most likely take longer and cost more. The strategy should also address specific implementation issues, such as an awareness campaign, understanding skills required to maximize knowledge, developing a reward scheme and developing measuring requirements. In other words, a full change of management program must be developed and implemented.

A wider policy implication would be to establish an innovation and learning culture within the organization. New products of tomorrow are residing in people's heads. Give them a channel to experiment. A learning environment is key to new learning that takes place in the company. People need time to reflect and question. Attending a training course is only a small element of learning that takes place.

Strategy should also include staff development with a wider scope to develop new skills and set career direction. An organization can play a vital supporting role in staff development where staff is encouraged to learn and accept that training courses are only a subset of learning. Learning has many components and a right culture should be developed to foster learning.

In summary, KM strategies must be aligned with the business vision and management and must ensure that staff is clearly onboard. They must have channels for discussion and allow a flow of ideas. Feedback must be given and above all trust must be developed between the executive and the staff.

METHODOLOGY

A quantitative questionnaire was distributed to the sample(staffs/respondents) at SIRIM Berhad in order to examine the staffs' understanding and awareness particularly in the current activities and business process in working environment that involve KM processes and the establishment of ICT in SIRIM Berhad that may support KM initiatives in the organization. The questionnaire was divided into five (5) parts including the respondents' demographic information and the general information about respondents' perception on KM in the organization. The results of this quantitative questionnaire were analyzed by using Z-Test and Chi Square. An interview also has been conducted in order to provide evidence and comprehensive details of the staffs' perceptions on their understanding and awareness towards KM initiatives in the organization; primarily related to the current activities and business process in their working environment that involve KM processes and the establishment of ICT in SIRIM Berhad that may support KM initiatives in the organization. Those data that have been tested to either accepted or rejected the three (3) hypotheses.

RESULTS

Having analyzed the information towards knowledge management initiative in SIRIM Berhad, a model was constructed to ensure that the knowledge management initiatives designed and give emphasis on a variety of aspects that will make the initiatives efficient and effective. The implementation of KM initiatives in SIRIM Berhad can benefit the organization in various innovation programs, business processes and strategy plannings. The important findings from this research are summarized as below:

1. Staff(respondents) understanding and awareness of KM is important to successfully implement KM initiative in the organization

2. KM has been practiced in the current working environment to support business process in the organization

3. The usage of information and communication technology (ICT) is the most significant tools towards successful implementation of knowledge management in the organization

Staff Awareness

After the analysis and interview, the study found that 90.67% of the respondents from the level of management, executives and non-executives are aware and heard of KM initiatives/concepts and they know the basic concepts of KM. Most of them agreed that SIRIM Berhad has implemented the KM initiatives either in a formal or informal way. They believed that it is important to implement KM initiative in SIRIM Berhad as one of the strategic component for their business that could be beneficial for the organization. They also see it important and believe that the management can provide the full support towards KM initiatives in SIRIM Berhad.

Based on the interview sessions, held with the senior executives from the Research and Technology Department (R&TD), most of them are aware and believes that knowledge creation is everyone's responsible and everybody can contribute to it. However, some of the respondents see that the new knowledge creation only involve the R&TD department.

Based on the research, KM initiatives in SIRIM Berhad is yet to be initiated officially and it is just a concept that has been thought about at an initial stage. The top management has been talking about it but no follow up activities have been done, thus far. It shows a very urgent need of KM initiatives in SIRIM Berhad, which will promote the concept of KM among the employees and provide a direction and motivation to the staffs on knowledge creating, capturing, organizing, accessing and sharing. Meanwhile, the top management must encourage their staffs to understand and aware of KM importance through KM programmes such as seminars, dialogues and others.

KM Practices in Business Processes

This research has clarified that majority of the respondents aware and believes that the internal publication and training is the most useful KM tools that has been implemented and used in SIRIM Berhad. 92.67% of the respondents believed that SIRIM Berhad has provided KM knowledge through staffs' training and education, either from internal or external parties. Respondents also agreed that all staffs are required to share their knowledge after attending seminars, training or specialized courses with other colleagues either in presentation format or report documentation. 65.33% of the respondents believed they used to capture and use the knowledge obtained from other industries' sources such as industrial associations, partners, competitors, clients and suppliers for business intelligence.

From the analysis, 58.67% of the respondents agreed that staffs are rewarded for

creating new ideas, for instance, the non-executive levels are required to join the ICC group led by the senior executive levels to create an idea or suggestion to support the business process in their current working environment. In their daily job activities, staffs shares their knowledge by regularly updating each other on good work practices/experiences and successful projects by preparing written documentation e.g. lesson learned, training manuals, knowledge handbook). Approximately 77.33% agreed that they should share their knowledge significantly to contribute to the organization. The business processes has supporting assistance in creating, capturing, organizing, accessing, sharing and using knowledge.
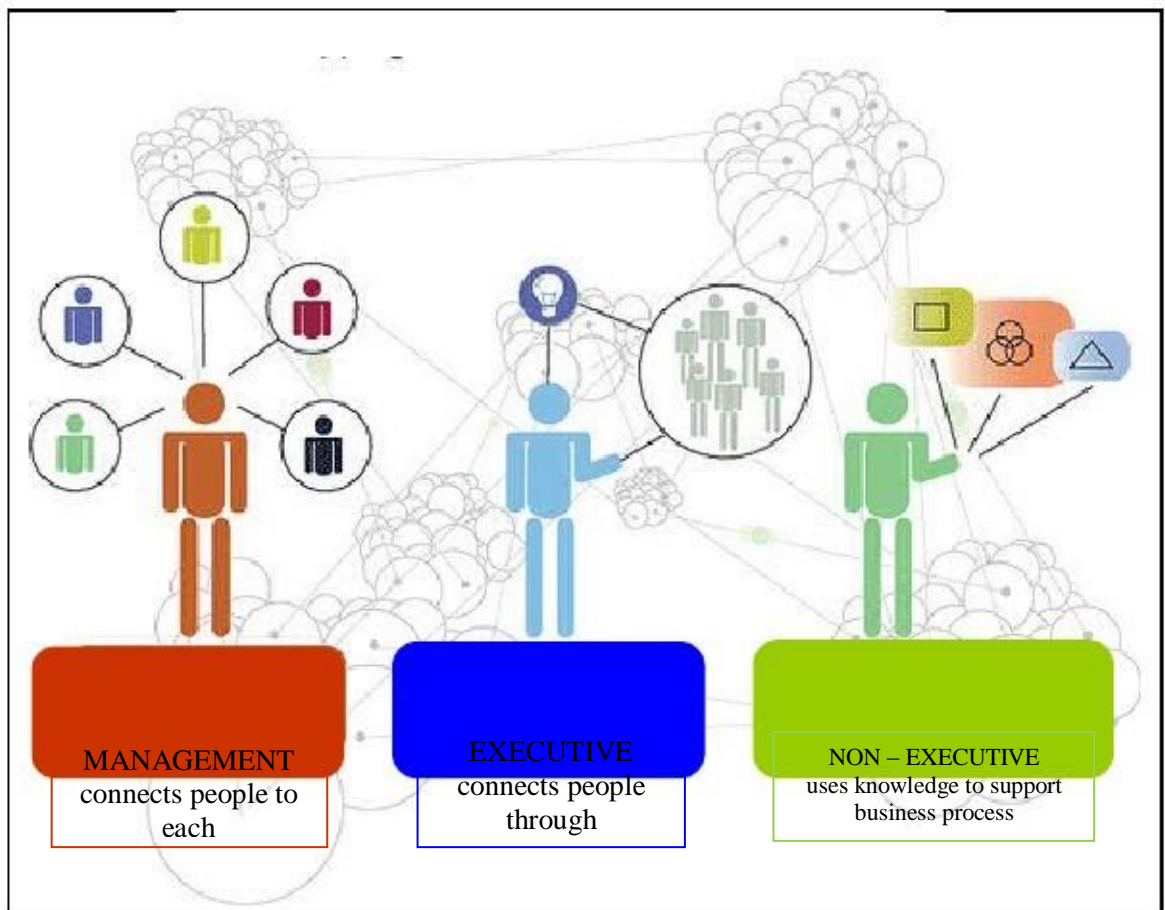

Figure 4.2: KM practices in current working environment that involves Management, Executive and Non-Executive level.

ICT Usage in KM

Another crucial enabler of knowledge that helps connect people with information and people with each other is technology. Technology is one of the main component in an effective knowledge management initiative program. Through information communication technology, explicit knowledge can be captured and disseminated. Majority of the staffs clarified that technologies such as Internet and intranet have been widely used and implemented in SIRIM Berhad to support KM in the organization. Form this research, it shows that more than 70% of the staffs agreed that SIRIM Berhad had provided many facilities including IT infrastructure such as pc/laptop, servers, databases and document processing machines that can help the staffs to create, capture, organize access and share the knowledge. However, there are 33.34% of the staffs either ICT or computer illiterate who do not know how and where they can store their knowledge to be shared with others.

The study also found that the repository of knowledge must be considered when applying the ICT usage to support KM in the organization. The granted knowledge is vital to the organization. In order to maintain the explicit knowledge and facilitate further sharing, it is important to have a repository for maintaining all the critical knowledge. What knowledge and how it should be placed into the repository are major issues that need to be catered by the organization.

As stated in data analysis, it is shown that staffs' awareness towards KM initiatives in organization related to the current activities and business process in working environment that involve KM processes and the establishment of ICT in SIRIM Berhad is very important and will influence in implementing KM framework for KM initiatives.

People are supported by appropriate processes to improve knowledge sharing

enabled through technology behavior among its people supported by appropriate processes to improve knowledge sharing enabled through technology. Therefore, a model calls 'KM framework for KM initiatives' was designed as in figure below.
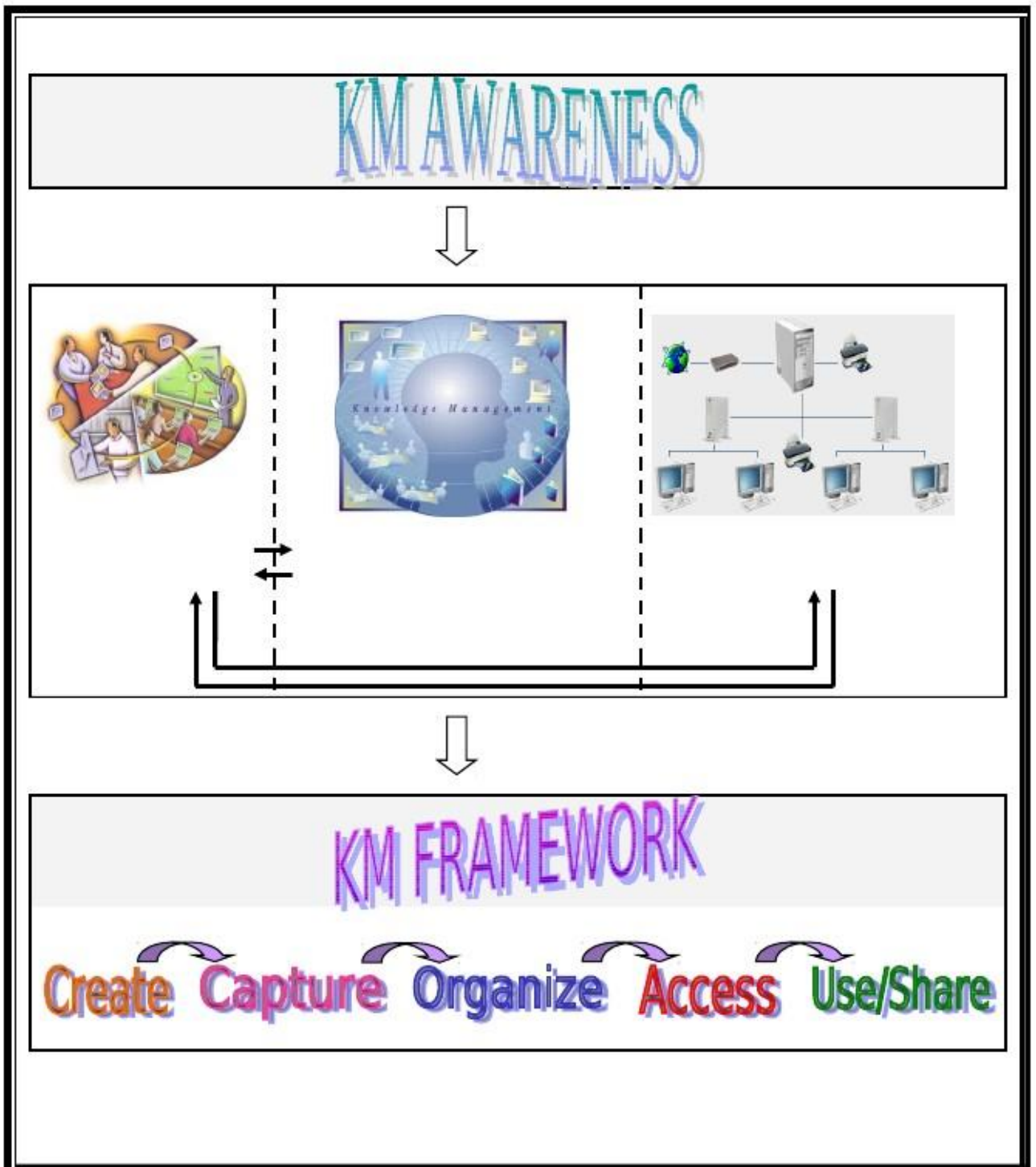
Figure 4.3: KM framework for Implementing KM initiatives in SIRIM Berhad

Figure 4.3 represent the suggested KM framework to implement KM initiatives in SIRIM Berhad. The details of the strategy in KM framework is described in the following:

- Create

  The researchers have found that the activity of creating knowledge in SIRIM Berhad has continuously carried out in order to create innovation. The R&T department encourages their staffs to develop new ideas while the S&Q department continuously collaborate with the Department of Standard Malaysia to create new Malaysian Standard that assemble the new innovation products in Malaysia. The S&V department has provided the services to the entire SIRIM Berhad and its customers (eg. Library, Corporate, Intellectual Department, etc) in terms of relationship and networking. Therefore, the researcher suggested that the awareness programs should be promoted among staffs to create knowledge that will support the business processes in SIRIM Berhad.

- Capture

  From the study, the researchers have found out that most staffs were not aware about the knowledge capturing. Therefore, the management should encourage the staffs to capture their knowledge in a manageable way, so that they can share their knowledge with others. Reports, documentations, guidelines and manuals are the example that has been used in SIRIM Berhad to capture knowledge.

- Organize

Organizing knowledge has been actively practiced within the SIRIM Berhad working environment. Each department has its own quality activities by following the standard documentation of ISO 9001:2000. They have Project Quality Plan (PQP) to organize the projects information. Business plan is one way for the management to organize the information for the business planning process.

The usage of ICT also can facilitate the way of organizing the knowledge among the staffs. The action plan, data warehouse and network environment provided will assist staffs to organize their knowledge efficiently. Therefore, the researcher has suggested that the management should promote documented and electronic methods comparatively to be used by staffs to organize the knowledge in the organization.

- Access

In working environment at SIRIM Berhad, the staff mostly aware that intranet is the important way to access knowledge. However, there are many activities carried out to deliver the knowledge among the staffs such as seminars, performance review (PDA), empowerment, motivation, leadership and recognition. Therefore, as mentioned before, the top management further needs to promote other activities that may help the staffs to access knowledge besides totally depending on the IT and network infrastructure provided.

- Use/Share

The issue of using and sharing important knowledge among the staffs is mostly awared. Most of them think that KM is only about using and sharing knowledge. They think that the other process of creating and capturing

knowledge is normally done by the R&T and S&Q department, while the IT department will organize the knowledge to be accessed and used/shared by the staffs. Once again, the management has to promote staffs perception on ICT as it is one of the most important tool to share and process the knowledge. They should emphasized that all the process of creating, capturing, organizing, accessing and using/sharing knowledge will involve all staffs from the different level of positions.

Contributions to KM Initiatives

The model suggested can help SIRIM Berhad in successfully implementing KM initiatives in the organization. The KM pyramid and toolkit will be the recommendation for the development of KM initiatives in SIRIM Berhad. This model can also be a reference to other company to implement KM initiatives in their organization. The implementation of KM initiatives can be initiated by developing the staffs' awareness towards KM implementation in organization.

Besides that, the research findings can be used by other organizations to apply KM through the process of creating, capturing, organizing, accessing and sharing the knowledge. The organization should identify KM strategy and toolkit that can influence the successfulness of KM in organization.

CONCLUSION

The idea of this research was to examine the staffs' awareness towards KM initiatives in organization, the current activities and business process in working environment that involve KM processes and the establishment of ICT in SIRIM Berhad that may support KM initiatives in organization. After the investigation, the staffs' awareness, the business processes and ICT environment have significant influence towards KM initiatives in organization. This study hoped to give more added values and benefits to SIRIM Berhad in implementing KM initiatives.

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