

CHAPTER 5 RESULTS AND DISCUSSION OF DATA ANALYSIS

5.1 Introduction

This chapter will mainly analyze the findings based on data analysis on the responses of the questionnaire. The significant scores of any variables which can be imperative in the conclusion and recommendation of Chapter Six will be discussed as well.

5.2 Descriptive Statistics

5.2.1 Perception on Knowledge Management

This section will investigate several perceptions on knowledge management that held by the respondents. The areas will be covered are (i) General Perception on Knowledge Management, (ii) Elements of Knowledge, (iii) Focus of Knowledge Management, (iv) Organizational Perception on Knowledge Management, (v) Reasons of Costly Errors, and (vi) Benefits of Knowledge Management. Except subsection (vi), respondents can select more than one answer which they deem appropriate in subsections (i)–(v),

5.2.1.1 General Perception on Knowledge Management

This question focuses on a group of selected phrases that may represent the meaning of knowledge management. To many respondents, such phrases only reflect a very personal view on the subject matter.

A small majority among the respondents have selected 'Organizational Knowledge' (13.4%) and 'Knowledge Capture and Dissemination' IT management' (12%) to represent their concept of knowledge management. Organisational knowledge

is generally employed into a company's products processes and services; and has to be located the right kind of knowledge in the right form in order to create competitive edge ((Bhatt, 2001).

11.3 per cent of the responses equalled 'Information Technology Management' to knowledge management. This was echoed by Offsey (1997) in the suggestion that most case studies have shown that 'a successful knowledge management programme requires a change in organizational behaviour and in technology infrastructure. Technology is not the solution to an organization's knowledge management needs, but it is clearly required to enable the organization's knowledge management processes.'

This is followed by 'Intellectual Capital', 'Experience Management' and 'Organizational Learning' with the percentages of 10.6%, 9.9% and 9.2% respectively. In this regard, some leading firms in developed countries, they are applying learning support systems as an integral part of their KM efforts (Carneiro, 2001).

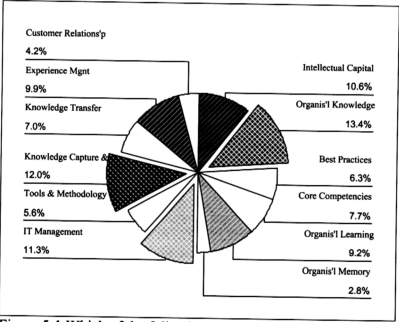


Figure 5-1 Which of the following phrases represent your perception of Knowledge Management?

For 'Core Competencies' (7.7%), 'Knowledge Transfer' (7.0%), 'Best Practices' (6.3%) and 'Tools and Methodology' (5.5%), they are viewed as indirect connection to knowledge management.

The least perceived is the 'Organizational Memory' (2.8%) which may consist of (i) individual memory, (ii) personal relationships, (iii) databases, (iv) work processes and support systems, and (v) products and services (Cross and Baird, 2000). Collectively, these five elements are the stored information from an organization's history that can be brought to bear on present decisions (Walsh & Ungson, 1991).

5.2.1.2 Elements of Knowledge

Knowledge can exist in many abstract forms. To Housel and Bell (2001) knowledge is ideational and conceptual, and to Polanyi (1966) it has a tacit dimension that results us knowing more than we can tell.

As a result of our human thinking faculty, knowledge has many facets and consists of many elements according to different people. Out of 10 types of organizational knowledge elements listed in the questionnaire, 'Soft Information' and 'Education and Training' (14.8% and 14.1%) are on top of the list (See Figure 5-2). It indicates that most of the respondents tend to view the information in a soft or electronic format is the most common knowledge elements in their organisations. Education and training programs are powerful tools for transferring knowledge. These activities can be useful to solve problems and to encourage participative decision making process. Organizations then can be places to develop relationships and manage working groups through the learning process that leads to knowledge improvement and contributes to better performance levels (Carneiro, 2001).

Figure 5-2 shows that ‘Hard Information’ and ‘Personal Experience’ are both 12.5 per cent. This is followed by ‘Creativity and Innovative’ (11.7%) and ‘Intangible Issues’ (9.4%) to be regarded as knowledge elements in the respondents’ organization.

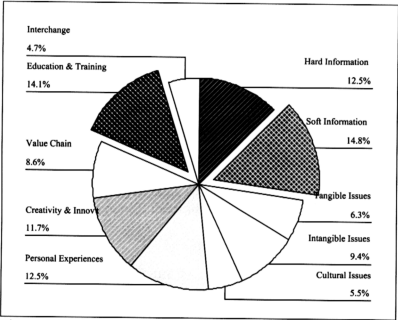


Figure 5-2 What are the elements of knowledge within your organization?

For ‘Interchange with Others’ (4.7%) and ‘Cultural Issues’(5.5%), these are the least perceived as knowledge elements.

5.2.1.3 Focus of Knowledge Management

As a management tool, focuses of knowledge management may vary to different organizational setting, business nature or corporate culture. To a great extent, these focuses link to the business goals an organization wants to achieve, or a corporate culture that is more desirable to create competitive edge.

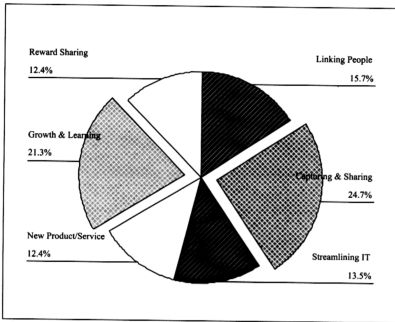


Figure 5-3 What do you think should knowledge management focus on?

As shown in Figure 5-3, 'Capturing and Sharing Knowledge' (24.7%) is the most responded focus in implementing knowledge management. This may imply that knowledge sharing and capturing are recognized as the fundamental issue in knowledge management.

On the other hand, one fifth of the responses have acknowledged knowledge management should focus on 'Helping Growth and Learning' (21.3%). This is by large associated with the ideas of learning organisation, and the importance of human resource development in the 1990s.

A study of 431 US and European companies has identified different knowledge-focused activities that firms had been engaged with. Instances gleaned from the study are generating new knowledge; accessing valuable knowledge from outside sources; using accessible knowledge in decision making; facilitating knowledge growth through

culture and incentives; measuring the value of knowledge assets and/or impact of knowledge management (Quoted in Ali, 2001).

With regard to these knowledge-related activities, Ali (2001) noted that two objectives are generally pursued by companies: the first is concerned with generating new knowledge, the second is focused on administrating knowledge (including activities of documenting, encoding knowledge into digital forms, sharing, controlling, measuring and embedding it within the organisational structures). As the results, the first set of activities is aimed on innovating, bringing something new, most commonly associated with the creative behaviour of entrepreneurial firms, while the second is associated with deploying and administrating knowledge - practices which may inhibit the innovative capability of the firm. (Ali, 2001)

5.2.1.4 Organizational Perception on Knowledge Management

From the organizational perspective, knowledge management is about 'transforming the way our organization doing business' and 'it could help our company organizes information sources better' (both are 41.9%). Traditionally, the transformation might be the changes of business process, enhance the value chains in operation and so forth. But the shift of production factors from tangibles to intangible can most likely demand more than that. According to Kelly, Director, Strategic Futures, at Scottish Enterprise, these 'changes required in individual and organizational behaviour and culture to transform a business into a knowledge-creating company and transforming our very ideas of what an organization is'. The organization 'how it structures, the behaviours and processes and values that define success will in turn change the mixture of skills and attributes that are required by people' (Quoted in Chase, 1997).

Another similar finding based on a report by to Ernst & Young, that 56 per cent of executives believe changing people's behaviour is one of the critical implementation problems in knowledge management because knowledge management projects force a company to redefine its traditional work procedures, power structures, and technologies (Bhatt, 2001).

On the other hand, it is recognised that knowledge management 'could help our company organizes information sources better'. To organize the information better entails more effective diffusion of knowledge, and to make the information available at the right time, at the right place and to the right person.

Figure 5-4 also indicates that 11.6% of the responses claim that knowledge management is 'something we do but we don't have a fancy name for.' This may imply that some companies have already implemented some practices that support knowledge management in place without formal initiative. Likewise, the researchers of another survey on ten high-tech companies in Kulim, (Rahman and Mohamed, 2001) share the

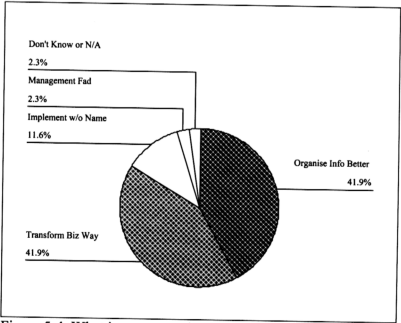


Figure 5-4 What is your organization's perception towards knowledge management?

same view that the respondents may practice knowledge management to certain extent without a formal name.

There is about 2.3 per cent of the respondents who consider knowledge management as ‘just a management fad that will be forgotten’, and ‘don’t know’ on this question.

5.2.1.5 Sources of Costly Errors or Reasons for Missed Opportunities

There are at least two reasons a company’s profitability is adversely affected. Firstly, it has made costly errors in the process from strategic planning to the design of production plant. Secondly, it has missed business opportunities that were eventually seized by its competitors. The results are lesser market share and to become a marginalised market follower in the particular product or service.

As illustrated in Figure 5-5, among nine sources or reasons for losses, ‘Knowledge not Available’ (16.1%) is top of the list. This is followed by ‘Lack of

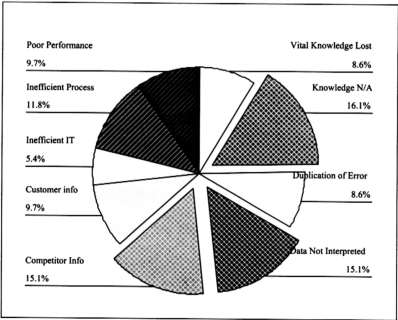


Figure 5-5 What are the sources of costly errors or reasons for missed opportunities?

competitor Information' and 'Data is not Interpreted or Inability to use information' which are both 15.1 per cent. Obviously, these three main causes, that may force company to pay a high price, are knowledge-related in nature.

To put these three costly causes together, we will find that both 'Lack of Competitor Information' and 'Data is not Interpreted' are the reasons that contribute to the state of 'Knowledge not Available'. As discussed previously, data and information should be processed, managed and purified before they become usable knowledge. Without proper data interpretation or unable to use such information, the organisation's members are not able to benefit from the hidden intellectual capital. By the same token, a central repository that gathers and classifies competitor information is yet in place to many companies. This situation could possibly lead to inaccurate market research and slower response on market movement and customers' demands.

5.2.1.6 Benefits for Implementing Knowledge Management

In this survey, the most agreeable benefit of knowledge management among respondents is to 'increase organizational effectiveness' (Mean=1.62). Table 5-1 also illustrates that the benefits of 'gaining new opportunities ahead of competitors' and 'improving customer retention or enhance client/customer relationships' are generally agreed by the participating companies.

Other benefits such as 'Faster response rate' to the customer, 'Accelerated learning & development' among employees and 'Enhanced communication flow' within the organisation are also fallen into the range between 'Strongly Agree' and 'Agree'.

Interestingly, the promise of 'increased market share' by knowledge management is the least agreed by the respondents. This may be due this benefit is not

an immediate result and hard to measure their correlation between knowledge management and market share.

Table 5-1 What are the benefits for implementing Knowledge Management?

Perceived Benefits	Mean
Reduced operating cost/mistakes	1.77
Increased organizational effectiveness	1.62
Increased market share	2.50
Improved customer retention (Enhanced client/customer relationships)	1.69
Better innovation and reduced cycle times	1.88
Gained new opportunities ahead of competitors	1.65
Shorter problem solving time or better decision making	1.81
Faster response rate	1.73
Shared best practices	1.88
Accelerated learning & development	1.73
Better employees participation	2.04
Enhanced communication flow	1.73

Legends: Strongly Agree(1) 1-----2 Agree(2) 2-----3 Fairly Agree(3) 3-----4 Disagree(4) 4-----5 Strongly Disagree(5)

Based on various researches, the benefits of knowledge management are not exhaustive (See Appendix C). Significant benefits which can improve business performance, such as better decision making, enhanced customer service and improved staff efficiency, were identified as critical drivers for implementing knowledge sharing measures (Chee, 2000). Despite of the potential benefits, the unclear contribution of knowledge management to meeting business objectives is always makes itself unjustifiable. As noted by Chee (2000), ‘without a clear and purposeful vision for the management of knowledge, businesses are compensating for knowledge losses in which the resulting costs may be substantial.

5.2.2 IT Infrastructure

This subsection will examine the current IT infrastructures that are being used in the participating companies. Among other, email, Local/Wide Area Network, Internet,

intranet, extranet, groupware, document management, and data warehousing or data mining are the specified infrastructures to be asked.

Besides the infrastructure, the level of satisfactory on the effectiveness of IT in facilitating learning transfer and dialogue in their organization is another concern. Finally, this subsection also studies who is the driver, whether IT specialist or other inputs, for any technological changes and investment.

5.2.2.1 Existing Infrastructure of Information Technology

All of the respondents have deployed email as a tool for communication. On top of this, there are two companies have practiced to use email as a mean for knowledge management.

For the infrastructure of Local Area Network or Wide Area Network (LAN or WAN), they are widely existed in most companies except one. Similar to email deployment, there are two companies use LAN or WAN for the purpose of knowledge management.

It is almost all companies have the Internet in place for their business needs except one. Furthermore, four companies are using this world wide computer network linked to the benefits of knowledge management (Details in Table 5-2).

Comparing with the wider network as Internet, the usage rate of intranet, an internal company network, is relatively low. There are 10 companies have not implemented this internal network that uses the same infrastructure, telecommunication protocols and browsers as the Internet. Out of 16 companies that have intranet in place, two of them make it for knowledge management. The importance and functionality of intranet to translate the explicit knowledge from one knowledge-carrying entity (such as people) to the another (such as people, digital documents, or database) are evident. As

Ali (2001) points out that 'the technological infrastructure (most notably the intranet) has been widely acclaimed as a useful medium, as it speeds up and facilitates the process of moving explicit knowledge from one knowledge-carrying entity to another'. He further suggests that 'the intranet can only deal with the explicit aspects of skills and knowledge underlying the complex and varied activities of a firm', and 'has proved effective for facilitating and nurturing the development and transfer of certain skills (such programming skills), but less so in connection with more artistic, design related skills. (Ali, 2001)

Extranet, as a portion of an intranet that is made accessible to suppliers, customers or subscribers, seems the most unemployed network method among the participating companies. There is 88.5% of them have not deployed it in their business, and only three companies (including one for knowledge management) have been using extranet in according to this survey.

The ability of groupware that captures formal and ad hoc discussions, and structures them for greater searchability and accessibility in a variety of ways is well recognized by the participating companies (implementation rate at 57.7%). It enables discussions to take place across departments and geographical distance. It also provides a vehicle to disseminate knowledge, and the data stored in groupware is the major knowledge resources. For functionality and benefits promised by the groupware, all the participating companies are using it for better communication, knowledge sharing and knowledge transfer. This also involves networked computers to access expertise and databases across an organization in order to conduct dialogues virtually.

The tremendous amounts of information workers receive will create two problems. The first is how to organize or classify the information into an information mapping. The second is how to ensure that new information is filed correctly to this

map. In view of this problem, an effective document management system may help. According to this survey, there are 13 companies have integrated it into their IT infrastructure, whereas 13 companies are not using such system for managing its documents.

Data warehousing includes the efforts building a repository of data from various sources and data mining denotes to explore the said repository of data for decision making. With a system that enables data warehousing and data mining, it is believed that the process of decision making is much faster and better. For this reason, half of the participating companies are utilizing such system for effective decision making.

In fact, technologies are embodied in user interfaces, computer memory and databases (or knowledge bases) that have evolved, and they are now capable of increasing the intellectual potential (Carneiro, 2001). The apparent advantages that technology has brought to knowledge management are in two forms: knowledge presentation and knowledge distribution. In knowledge presentation, organisations have to transform the explicit and tacit knowledge into different medium for easier accessibility and more presentable. Whereas in knowledge distribution, technology facilitates the interactions between organizational technologies, techniques, and people so that it can have direct bearing on knowledge distribution. The application of e-mail, intranet, bulletin board, and newsgroup can support the distribution of knowledge throughout the organization and allows organizational members to debate, discuss, and interpret information through multiple perspectives (Bhatt, 2001). In short, technology can certainly be a tool for building relationships and facilitating the exchange of ideas among colleagues (Cross and Baird, 2000).

Table 5-2 Technological Infrastructure in Your Organization

Email for communication	Implemented	Count	24
		Col %	92.3%
	For KM	Count	2
		Col %	7.7%
Local/Wide Area Network	Implemented	Count	23
		Col %	88.5%
	Not Implemented	Count	1
		Col %	3.8%
	For KM	Count	2
		Col %	7.7%
Internet	Implemented	Count	21
		Col %	80.8%
	Not Implemented	Count	1
		Col %	3.8%
	For KM	Count	4
		Col %	15.4%
Intranet	Implemented	Count	14
		Col %	53.8%
	Not Implemented	Count	10
		Col %	38.5%
	For KM	Count	2
		Col %	7.7%
Extranet	Implemented	Count	2
		Col %	7.7%
	Not Implemented	Count	23
		Col %	88.5%
	For KM	Count	1
		Col %	3.8%
Groupware	Implemented	Count	15
		Col %	57.7%
	Not Implemented	Count	11
		Col %	42.3%
Document Management System	Implemented	Count	11
		Col %	42.3%
	Not Implemented	Count	13
		Col %	50.0%
	For KM	Count	2
		Col %	7.7%
Data Warehousing/Mining	Implemented	Count	13
		Col %	50.0%
	Not Implemented	Count	13
		Col %	50.0%

Notwithstanding the imperative of information technology in knowledge management, one has to bear in mind that 'experiencing something is quite different from an account of what is experienced.' Another concern is the 'thin line between administrative needs (documenting and controlling knowledge) and creating the appropriate technological and socio-cultural infrastructures that support and unleash entrepreneurial creativity and innovation' (Ali, 2001).

In many cases, it is no uncommon among business leaders jumping into conclusion to prejudge knowledge management is another information technology project equally. As a McKinsey survey of 40 companies in Europe, Japan, and the United States, it has shown that many executives think that knowledge management begins and ends with building sophisticated information technology systems. (Hauschild *et al.*, 2001)

5.2.2.2 Technology facilitates learning transfer and dialogue in your organization

Learning transfer and dialogue have been taking place since human being started socialization. Whether one-to-one dialogue or one-to-many social gathering, human knowledge and experience could be exchanged and shared. So does in any organisation, such valuable intangible assets are transfer through apprenticeship, coaching and mentoring.

The advent of information technology has transformed the way of communication----it becomes much faster and cheaper. But in terms of facilitating learning transfer and dialogue, the average satisfactory level of the participating companies on their technological infrastructure for this purpose is in between 'Fair' and

‘Satisfactory’ (Mean =3.58). Figure 5.6 illustrates only three companies ‘very satisfactory’ of their technological infrastructure in helping the transfer of learning.

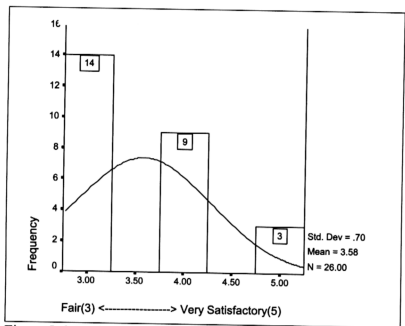


Figure 5-6 Technology Facilitates Learning Transfer and Dialogue

5.2.2.3 What is the driver for the technology?

Who drives the technology in an organization? In this survey, nearly half of the responses go to the notion of ‘People are the starting point’ (36.7%). This perception is largely user-oriented that believes the users or the end users will request and drive any upgrade or changes in the technology (See Figure 5-7).

Figure 5-7 also illustrates the second most selected answer is ‘Technology is seen as a key enabler’ (33.3%). In this case, the force behind a technological shift in an

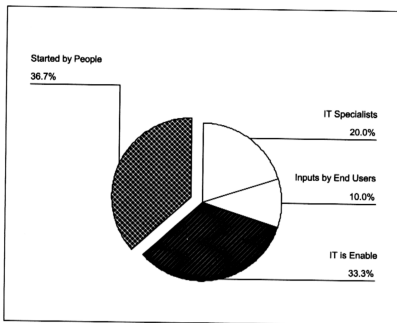


Figure 5-7 Drivers of Technology

organization, be it hardware or software, will be depended on the advent of technology. This means the adoption and investment of new information technology might be inspired by the introduction of new products and services.

5.2.3 People and knowledge worker

This subsection will mainly deal with human issue. As we know and many corporate leaders preach, people are the most crucial factor to determine the competitive advantage of an organization. In addition, what makes an employee a production factor is intangible in nature---- his or her knowledge, skills and attitude. Unfortunately, any employee can come and go as a result of declining loyalty but more professional minded.

In this subsection, we will first examine what are the effects of a key employee when he or she walks out of the company. Then the respondents will take a stand on

how they agree on the increasing number of knowledge workers in their organization, and who are the knowledge workers based on the position. Finally, the respondents will ponder some effective ways to manage knowledge worker.

5.2.3.1 What is the effect of a key employee leaving the organization?

There is 42.6 per cent of the responses suggest that the biggest effect of a key employee leaving the organization will be ‘lost knowledge of best practice in specific area’.

Figure 5-8 also shows that ‘lost information vital to the running of the organization’ and ‘damaged relationship with key client, supplier or customer’ have together acquired significant responses with both 23.4%.

For the effect of ‘lost significant income or revenue’ (8.5%), it is rather the final result of the three major effects mentioned earlier. And 2.1 per cent of the respondents claim that there would be no effect if a key employee leaves his company. As a

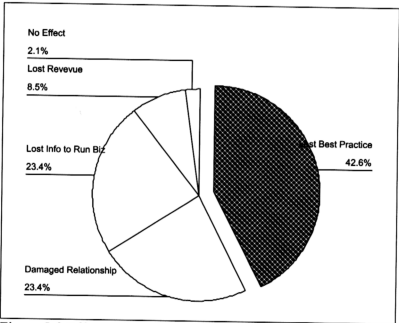


Figure 5-8 Effects of the Leaving of a Key Employee

matter of fact, in the event of employee turnover, it would by and large ‘endangers organisational memory, since people take away what they know with them’ (Cross and Baird, 2000), and become a threat to the organisation (Bontis, 2000).

5.2.3.2 Employees are Becoming Knowledge Workers

Averagely, the respondents agree (mean=2.12) that their employees or co-workers are becoming knowledge workers. In this regard, they have the same opinion

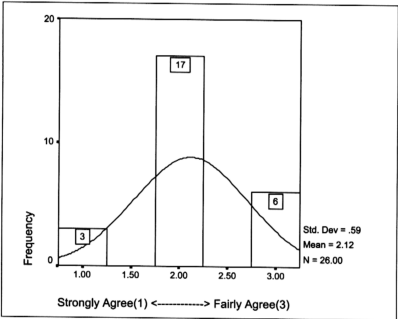


Figure 5-9 Employees in your organization are becoming ‘knowledge workers’

that employees in their organization rely less on physical capability and more on intellect and knowledge. None of the respondent differs that knowledge will become dominant in workers performance, and employees are tend to be more intellect-oriented in completing daily tasks (Figure 5-9).

5.2.3.3 Knowledge Workers and Position Levels

Research and studies show that the definition of knowledge workers could be contrary according to different perspectives. While some researchers argue that all employees for certain extent are knowledge-connected to create value to their company, findings on the other hand suggest that only the highly professional and the superior talent should be placed in the first priority in managing knowledge workers.

In this survey, 38.1 per cent of the responses consider those who hold the positions of ‘Managers’ are knowledge workers (Figure 5-10). In this case, the term of ‘Manager’ denotes members of management team which normally consists of top

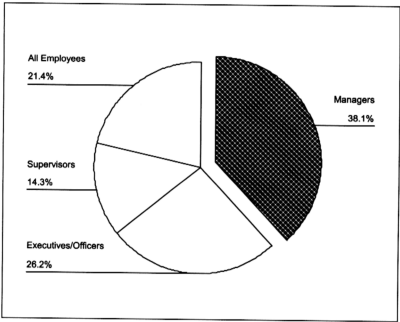


Figure 5-10 In your organization, knowledge workers are those who hold the particular position

management, senior management, and managers for divisions, department, or section, according to the organizational setting of a company.

‘Executives or Officers’ who usually hold tertiary qualification, promoted or hired to the position based on years of relevant experience, are viewed of knowledge workers by 26.2 per cent responses. Closely followed is the perception that ‘All

Employees' (21.4%) are knowledge workers, regardless hierarchical ranking, position power, or educational background.

5.2.3.4 Managing Knowledge Workers

The task of managing knowledge workers has a distinctive role comparing with traditional people management. To manage these workers effectively, one has to ensure the flow and transfer of knowledge is smooth and value added to the organization.

There is 37.5 per cent from the responses go for 'Design supporting business process'. To deploy this approach effectively, organizational and cultural issues have to be taken into consideration. This is also include the 'process of reengineering, formal empowerment programs, or even quality improvement initiatives specifically targeted at high-end knowledge workers' (Davenport *et al.*, 2002).

Figure 5-11 also illustrates that about 31.3 per cent of the answers go to the approach of 'Providing conducive work place' for those knowledge workers. Davenport

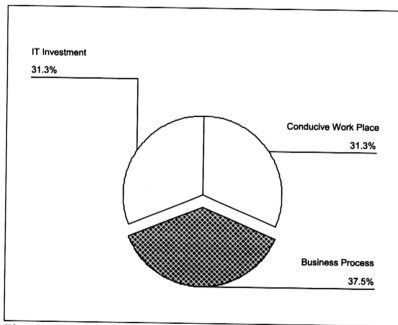


Figure 5-11 How to manage knowledge workers effectively?

et al. (2002) suggests that an appropriate workspace design is not only attract the most talented, 'but also to promote a more collaborative culture.

Davenport and his colleagues further detail that the design of a conducive workspace should

- (i) share office arrangements encouraging or facilitating worker mobility, includes satellite and home offices, wireless WANs;
- (ii) encourage informal interaction with others inside (and sometimes outside) the organization;
- (iii) include interesting objects in the workplace to stimulate innovation;
- (iv) minimize differentials in workspace design.

The approach to 'invest sufficient technological infrastructure' (31.3%) is the least responded by the participating companies. This may be due to the limited resources, which is one characteristics of SME.

Davenport *et al.* (2002) view technology as the primary enabler for the enhancement of mobility for knowledge workers. Several technologies that are believed helpful to deliver desirable results include knowledge management, personal productivity devices such as portable digital assistants (PDAs) (which are not well integrated into the corporate information environment), tools for remote collaboration (from videoconferencing to webcasts) and artificial intelligence. These technologies however, should be accompanied by changes in organizational arrangements to gain real value.

5.2.4 Knowledge sharing

Knowledge sharing happen everyday in any organization. Occasionally, there are activities such as conversation or chatting across the partitions, an exchange of ideas

at the pantry, or any discussion over a topic at the meeting room that facilitates knowledge sharing. In fact, knowledge sharing unconsciously without any formal mechanism is not uncommon. A knowledge management programme however, without the culture and infrastructure that support knowledge sharing will not be promising.

In this subsection, the respondents are asked whether their organization facilitates knowledge sharing (in any forms) or dialogue regularly. And if they do, how is the knowledge sharing being facilitated. Furthermore, respondents were posed four modes of knowledge sharing that had been adopted from the theory developed by Nonaka (1995:72). Finally, along the journey these organizations attempt to share knowledge, what are the obstacles that they have encountered so far will end this subsection.

5.2.4.1 Regular Knowledge Sharing is Facilitated

There is 84.6 per cent of the respondents agree or strongly agree that their organizations facilitate knowledge sharing regularly. Figure 5-12 also suggests that only

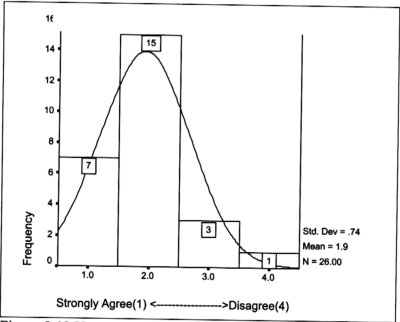


Figure 5-12 Your organization facilitates knowledge sharing regularly.

one company disagree of this practice in a regular basis. The average of all respondents falls into the range of 'Agree' (Mean=2.0).

5.2.4.2 Dialogue is encouraged and facilitated in your organization.

It is obvious that dialogue, any conversation takes place formally or informally for exchanging perception, ideas, insights to achieve mutual understanding, is highly facilitated in respondents' organization.

In overall, the participating companies are above the level of 'Agree' in this case (Mean=1.75, between 'Strong Agree' and 'Agree'). Figure 5-13 exhibits majority of the respondents are favourably to acknowledge the dialogue, an open and two ways communication, is encouraged in their organization.

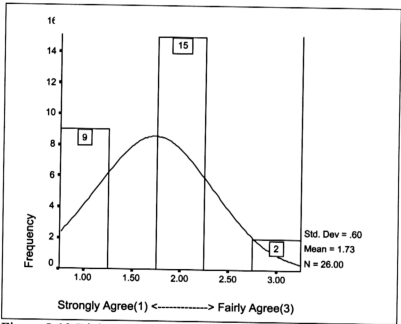


Figure 5-13 Dialogue is encouraged and facilitated in your organization.

5.2.4.3 Knowledge Sharing Facilitation

There are many ways making knowledge sharing possible. In this finding, 'Face to Face' and 'Mentoring and Coaching' have considerably higher answered rate equivalent to 22.6 per cent and 19.4 per cent respectively. These two approaches in fact share a common characteristic that is both are mainly human touch and have a great emphasis on human relationship. In other words, the 'personalization' strategy is apparent in those companies in transferring tacit knowledge.

Brown and Duguid (1991) suggest 'most skill transfer takes place face to face, through word of mouth within the restricted social networks or communities of practice employees have formed, based on proximity, trust and interpersonal communication. The tendency of skills and knowledge to spread is not enhanced by technology, but by social contexts'. This observation is resonated by Cross and Baird (2000) that people are about five times more likely to turn to friends or colleagues for answers than to other sources of information.

Figure 5-14 further suggests that 'Workshops and Forums' (15.1%) and 'Lesson Learned from Project Groups' (12.9%) are not less popularly used by the participating companies to facilitated knowledge sharing. Workshops and forums are another appropriate platform to gather employees with common background, same interest and similar cognitive capability to share predetermined topics. This can be done by appointing and inviting experienced employees to become session speakers.

Lesson learned could be shared through many ways. To document the particular project with well-written description of problems and solutions is a good way. Organizing community of practice (CoP) to gather specialist or experts to exchange experience through debriefing is another. For Malaysian SMEs with their employee

scatter within an inbound geographical area, high-end infrastructure like teleconferencing and webcast are seemed not financially viable or practically feasible.

The only two ways, convergent databases and divergent databases, that deploying information technology to share knowledge are not significantly responded. Convergent databases (7.5%), a knowledge-based or expert systems with data-search to connect with a restricted repertoire of old decisions (Newman, 1997), seems to be not so popular in place among the participating companies. On the other hand, the divergent databases (2.2%) that only used in the particular department or territory, is rather a rare method to share knowledge according to the respondents.

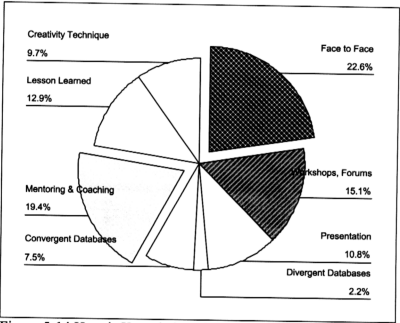


Figure 5-14 How is Knowledge Sharing Facilitated?

5.2.4.4 Levels of Practice of Knowledge Sharing

Derived from the conceptualization by Nonaka (1995), there are four modes in knowledge creation based on the contents of knowledge. Based on different types of

knowledge, the knowledge creation will be taken place in the form of socialization, internalization, externalization and combination.

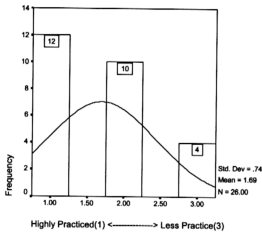
In this subsection, these four modes of knowledge sharing are explained to the respondents as follows:

- i) Socialization : Exchange of experience during formal and informal discussion and gathering;
- ii) Internalization: Individuals gather explicit knowledge from several resources and combine with own personal experience to create new knowledge but there are not documented;
- iii) Externalization: Individuals share the new discovery through published documents;
- iv) Combination: A situation exists where all the above three methods are embedded in the organisation system.

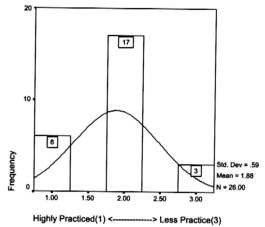
In discussing the first three modes, it is noticeable that 'Socialization' is relatively more frequently practised among the participating companies (Mean=1.69). This is not surprising as this mode can be deployed without any substantial organisational change or investment on technological infrastructure.

For 'Internalization', it has an average of 1.88 which is between 'Moderately Practised' and 'Highly Practised' but slightly less practised compares to 'Socialization'. Among the four, 'Externalization' is the least practised with an average of 2.5 scoring. Nonetheless, this could be one of the toughest things in knowledge management. This is because to get employees to document their experience and knowledge, people may face the difficulties of transferring tacit knowledge to explicit knowledge. The phenomena as described by Polanyi (1966), 'we have a knowledge that we may impede

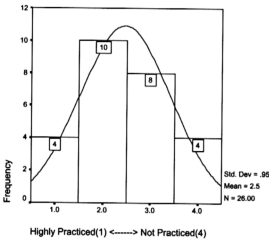
(i) Socialization



(ii) Internalization



(iii) Externalization



(iv) Combination

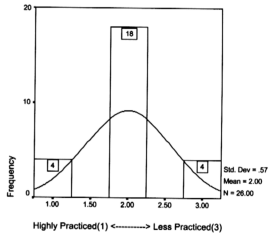


Figure 5-15 What are the levels of practice of the following knowledge sharing in your organization?

not be able to tell', can stop an employee from externalizing his or her knowledge. To encourage more externalization, it requires a supporting culture and reward system.

The state of combining 'Socialization', 'Internalization' and 'Externalization' are 'Moderately Practised' among the respondents.

5.2.4.5 Obstacles of Knowledge Sharing

Out of nine possible obstacles listed in the questionnaire, there are two obstacles seem to be the most agreed by the respondents. First, it is agreed that even though employees are ‘willing to share knowledge’, they ‘do not have the time or platform’ (Mean=2.7) to do so. Second, the ‘lack of understanding of KM benefits among employees’ (Mean=2.8) may dissuade them to recognize how knowledge management may benefit him or her in return.

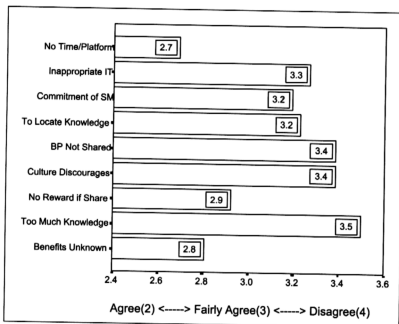


Figure 5-16 What are the obstacles of sharing knowledge in your organization?

The reasons of ‘No reward for knowledge sharing’ (Mean=2.9) is associated with the cultural issues and performance management in the company concerned.

For other obstacles such as ‘Lack of appropriate technology’, ‘Lack of commitment KM from senior management’, ‘Knowledge is difficult to locate’, ‘Individuals do not share best practice’, ‘Current culture does not encourage knowledge sharing’ and ‘Too much knowledge’ are not much agreed by the respondents.

The root reasons of hoarding knowledge, of course, are far more than the two obstacles as highlighted by the respondents. To Adams (2002), there are many organizations compensate 'status and rewards go to the knowledge owners, not the knowledge sharers'. Therefore, knowledge management often entails a review of 'corporate values and this leads to changes in performance measurements'. Incentive systems that focus on team approach and reward their effort are more conducive to knowledge management.

In view of the multiple problems in knowledge sharing and transfer, Davenport and Prusak (1998a) list out seven of them including possible solutions as shown in Table 5-3.

Table 5-3 Frictions and Possible Solutions of Knowledge Transfer

Friction	Possible Solutions
Lack of trust	Build relationship and trust through face-to-face meeting
Different cultures, vocabularies, frames of reference	Create common ground through education, discussion, publication, teaming, job rotation
Lack of time and meeting places; narrow idea of productive work	Establish time and places for knowledge transfer; fairs, talk rooms, conference reports
Status and rewards go to knowledge owners	Evaluate performance and provide incentives based on sharing
Lack of absorptive capacity in recipients	Educate employees for flexibility; provide time for learning; hire for openness to ideas
Belief that knowledge is prerogative of particular groups, not-invented-here syndrome	Encourage non-hierarchical approach to knowledge; quality of ideas more important than status of source
Intolerance for mistakes or need for help	Accept and reward creative errors and collaborative; no loss of status from not knowing everything

Source: Davenport & Prusak (1998a)

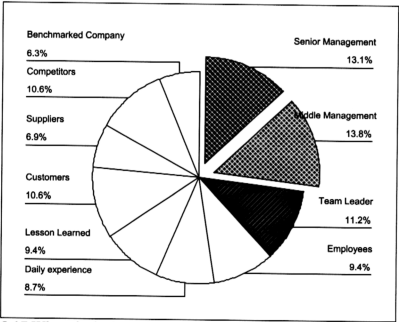
5.2.5 Storage of Knowledge Component

Knowledge is captured everywhere in an organization. From individual memory to electronic knowledge repository, it is up to the organization to keep knowledge in a space where can store, retrieve, and transfer knowledge easily. As Bukowitz *et al.* (1999) observes a situation ‘when people know what they are looking for, they do not know where to look,’ could probably lead to ‘reinventing the wheel’ in the organization.

Therefore, where is the knowledge captured and who has the prime role to capture knowledge are the areas covered in this section. In addition, what are the methods, whether merely depends on human memory or repository, to store various form of information is a another focus.

5.2.5.1 Knowledge Capturing

In this survey, the categories of ‘Middle Management’ (13.8%) ‘Senior Management’ (13.1%), and ‘Team Leaders’ (11.2%) collectively have more than 35



5-17 Where is the knowledge captured that for organizational competitiveness?

per cent responses. This is largely linked to the perception that the management people are the knowledge workers.

Figure 5-17 also exhibits that knowledge can be captured outside the organisation such as ‘Customers’ and ‘Competitors’ (both 10.6%) and valuable for organizational competitiveness. The ‘Employees’ and ‘Lessons learned through projects’ (equally 9.6%) are another place that stored with critical knowledge.

5.2.5.2 Prime Responsibility for Capturing Knowledge

Similar to ‘Knowledge Capturing’ that discussed previously, ‘Senior Management’ (35.37%) is deemed has the prime responsibility to capture knowledge. Sharing the same percentage of responses is the notion that ‘Each individual involved’ (35.3%) in capturing the relevant knowledge for better business improvement.

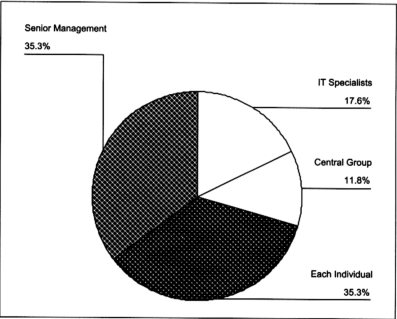


Figure 5-18 Who has prime responsibility for capturing knowledge?

5.2.5.3 Knowledge Storing or Repository Method

As building a knowledge repository is a safer step to retain organizational knowledge, emphasis will be placed at the 'Electronic Access', be it limited or unlimited access, As shown in Table 5-6, some types of data or information of the participating companies have been mostly captured in an electronic repository. These include the data of 'Company's own product and service' (10 unlimited and 13 limited), 'Customer' (5 unlimited and 15 limited), 'Company's own market' (3 unlimited and 16 limited), 'Employee knowledge and skills' (6 unlimited and 9 limited). For the data of 'Methods and Process', the electronic method is slightly excess the use of paper documents.

Table 5-4 also indicates that the information of 'Regulatory Environment' has been stored with more in paper document (11 companies) than digital forms. Likewise, the intelligence information on 'Competitors' more resides in individual memory (nine companies) and paper document (six companies) comparing with electronic databases.

Table 5-4 What is the method used to store the following type of data in your organization?

Customer	Individual memory	Count	1
		Col %	3.8%
	Paper document	Count	5
		Col %	19.2%
	Electronic unlimited access	Count	5
		Col %	19.2%
Company's own market	Electronic limited access	Count	15
		Col %	57.7%
	Paper document	Count	7
		Col %	26.9%
	Electronic unlimited access	Count	3
		Col %	11.5%
Company's product & service	Electronic limited access	Count	16
		Col %	61.5%
	Paper document	Count	3
		Col %	11.5%
	Electronic unlimited access	Count	10
		Col %	38.5%
Competitor	Electronic limited access	Count	13
		Col %	50.0%
	Individual memory	Count	9
		Col %	34.6%
	Paper document	Count	6
		Col %	23.1%
	Electronic unlimited access	Count	2
		Col %	7.7%
	Electronic limited access	Count	8
		Col %	30.8%
Employee knowledge & skills	Do not know	Count	1
		Col %	3.8%
	Individual memory	Count	3
		Col %	11.5%
	Paper document	Count	7
		Col %	26.9%
	Electronic unlimited access	Count	6
		Col %	23.1%
	Electronic limited access	Count	9
		Col %	34.6%
Regulatory environment	Do not know	Count	1
		Col %	3.8%
	Individual memory	Count	2
		Col %	7.7%
	Paper document	Count	11
		Col %	42.3%
	Electronic unlimited access	Count	6
		Col %	23.1%
	Electronic limited access	Count	2
		Col %	7.7%
Methods & process	Do not know	Count	5
		Col %	19.2%
	Individual memory	Count	1
		Col %	3.8%
	Paper document	Count	10
		Col %	38.5%
	Electronic unlimited access	Count	7
		Col %	26.9%
	Electronic limited access	Count	5
		Col %	19.2%
	Do not know	Count	3
		Col %	11.5%

5.2.6 Formal Initiative of Knowledge Management

5.2.6.1 Existing Knowledge Management Initiative

In view of their business scale and limited resource, it is understandable Malaysian SMEs are not prepared for the changes of organization, culture, business process and technology to embrace knowledge management. After all, there are 'very few companies appear to have systematic and comprehensive approaches to the management of their knowledge' (Chee, 2000). Deciding to continue for an unconscious knowledge sharing and knowledge transfer may lose substantial benefits out of a systematic one. This is because a formal strategic knowledge management system can enhance the organisational effectiveness and preserve data, ideas, operational solutions and acquired knowledge within the organisation (Carneiro, 2001). According to this survey, however, there are eight companies have started their knowledge management project in varied stages. Same as the research done in Kulim, there are hardly any systematic knowledge management on strategic and tactical level among the participating companies (Rahman and Mohamed, 2001).

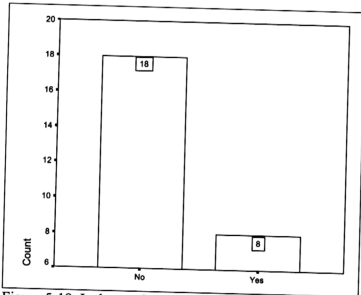


Figure 5-19 Is there a formal knowledge management initiative in your organization?

5.2.6.2 The Barriers For Implementing Knowledge Management

For those companies that are yet to initiate a formal knowledge management programme, they are further posed the barriers of such initiative. Most of responses suggest that the lack of ‘KM-related roles and responsibilities of employees’ (31.4%), which should be empowered to specified personnel or department, could lead to the deferment of knowledge management. Organisations can either assign a single person (like Chief Knowledge Officer, Knowledge Manager) who will design and manage the architecture of knowledge management, or to cluster those responsible for knowledge management and each is accountable for a particular of knowledge body. Their responsibilities typically include championing the programme, educating the organisation, mapping knowledge, and integrating the organisational and technological resources critical to the knowledge management architecture.

The second greatest barrier to these companies is ‘Have to motivate employees

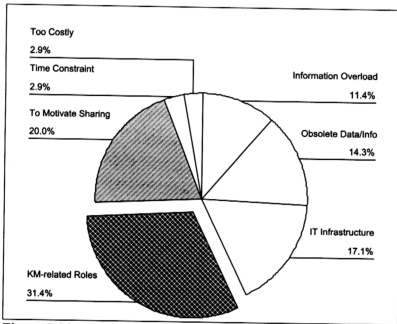


Figure 5-20 What are the barriers for implementing knowledge management in your organization

to share knowledge' (20%). The third barrier suggests that the 'technological infrastructure within company' (17.1%) is not appropriate or ready to support such initiative. There is about 14.3% responses claim that 'Obsolete data or information' can hinder knowledge management to kick off. This is true when the data or information presently stored are not updated due to inadequacy of system integration .

5.2.6.3 The Pioneer of the Knowledge Management Initiative

Almost one third of the responses indicate CEO (33.3%) is one of the pioneers to lead the knowledge management in the particular company. There is 22.2 per cent of the responses suggest that 'Each Departmental Head' also play a leading role to set off a knowledge management programme.

This is a combination of style of US and UK companies in pioneering knowledge management project. According to Chee (2000), 'US companies was found to be led and supported by top management such as chief executive officers, chairmen

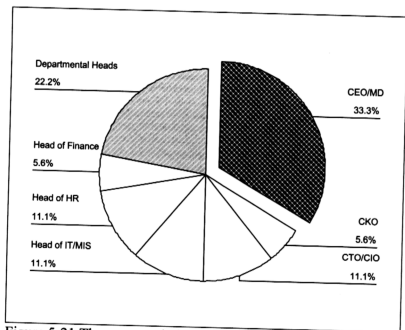


Figure 5-21 The personnel pioneer the knowledge management initiative in your organisation

and directors. In contrast, findings from the Cranfield Information Systems Research Centre (1997) indicated that for UK companies, middle managers – not CEOs – were observed to be the agents of knowledge management.'

5.2.6.4 Source of Knowledge Management Initiative

In terms of departmental functionality and relevancy, the source of knowledge management initiative has been concentrated on both 'Sales and Marketing' (21.1%) and 'Customer Services' This may be due to the demand of market share expansion and bottom line issue have to be addressed to launch such programme. Besides, customer relationships management (CRM) seems to be increasingly noteworthy nowadays to ascertain high customer retention rate. In view of this, an integrated CRM is apparently very essential to boost up the successful possibility of any knowledge management programme.

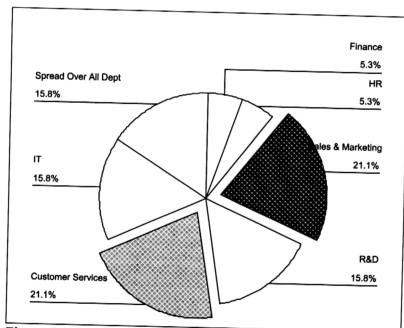


Figure 5-22 Source of Knowledge Management Initiative

There are three perceptions share an equal weight of responses. As shown in Figure 5-22, ‘Research and Development’ , ‘and ‘Information Technology and ‘Spread over All Departments’ are the second large source of this initiative.

5.2.6.5 Current Phases of Knowledge Management Initiatives

The design of this portion in the questionnaire is basically derived from ‘The 10-Step KM Road Map’ (Tiwana, 2000). There are Four Phases to monitor the 10-Step as the programme progresses as shown in Table 5-5 as follows:-

Table 5-5 Four Phases and Ten Steps in Knowledge Management

Four Phases	Ten Steps
Infrastructural Evaluation	Analyse the existing infrastructure
	Align KM and business strategy
KM System Analysis, Design and Development	Design the KM infrastructure
	Audit existing knowledge assets and systems
	Design the KM team
	Create the KM blueprint
	Develop the KM systems
Deployment	Deploy, using the appropriate methodology
	Manage change, culture and reward structure
Evaluation	Evaluate performance, measure ROI & review KM system

Source: Tiwana (2000)

As the Figure 5-23 shows, there are five participating companies are now conducting an audit on their existing knowledge assets and systems, and three of the eight respondents are ‘aligning knowledge management and business strategy’ and to ‘design the knowledge management infrastructure’.

For the stages like ‘analyse the existing infrastructure’, ‘design knowledge management team’, ‘develop knowledge management system’ and ‘evaluate performance, measure ROI and review knowledge management system’ are being undertaken by two companies during this survey being conducted.

Figure 5-23 also indicates that there is only one company at the stages of 'creating the knowledge management blueprint', 'deploying and using the appropriate methodology' and 'managing change, culture and reward structure'

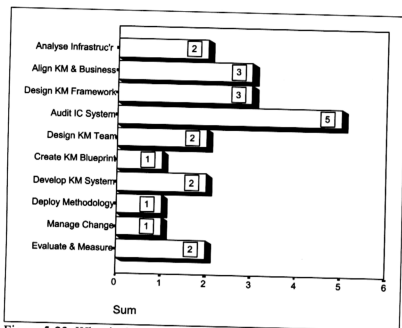


Figure 5-23 What is the current phases of knowledge management initiatives?

5.2.6.6 Existing and planned initiatives

In the final question, some KM-related activities are asked whether they are 'Exist', 'Planned within one year' or 'Planned within two to three years'. For initiative of 'Knowledge Management Training or Awareness', all the eight companies have been organizing and implementing as shown in Table 5-6. Other initiatives that mainly exist in most companies are 'Job/process redesign' (7), 'Create a knowledge management strategy' (5), 'Establishment of formal KM networks' (5), and 'Establishment of informal knowledge management networks' (5). An informal networks to any knowledge management is instrumental because it is the 'central nervous system driving the collective thought process, actions, and reactions of its business units' As

the ‘complex webs of social ties’ it will function automatically whenever ‘unexpected problems arise’ (Krackhardt and Hanson, 1997).

Table 5-6 Existing and planned initiatives

KM training	Exist	Count	8
Create KM strategy	Exist	Count	5
	Planned within 1 year	Count	3
Benchmark/audit current situation	Exist	Count	3
	Planned within 1 year	Count	5
Developing/Measuring intellectual capital	Exist	Count	2
	Planned within 1 year	Count	6
Job/process redesign	Exist	Count	7
	Planned within 1 year	Count	1
Establishment of informal KM networks	Exist	Count	5
	Planned within 1 year	Count	2
	Planned within 2-3 years	Count	1
Establishment of formal KM networks	Exist	Count	5
	Planned within 1 year	Count	2
	Planned within 2-3 years	Count	1
Rewards for knowledge sharing	Exist	Count	3
	Planned within 1 year	Count	4
	Planned within 2-3 years	Count	1

For the initiatives that are already planned within one year, ‘Developing and measuring intellectual capital’ (6 companies) seems to be a relatively difficult among all listed tasks. Another initiatives like to ‘benchmark and audit current situation’ (5) and to design ‘incentives and rewards for knowledge sharing’ may be placed on second priority in terms of urgency.

5.3 Correlation Analysis

5.3.1 Perceived Benefits of Knowledge Management

Table 5-7 Correlations of Benefits of Knowledge Management

		Correlations											
		Reduced operating cost	Increased organizational effectiveness	Increased market share	Improved customer retention	Better innovation	Gained new opportunities	Shorter problem solving time	Faster response rate	Shared best practices	Accelerated learning & development	Better employee participation	Enhanced communication flow
Reduced operating cost	Pearson Correlation	1.000	.487*	.228	.420*	.377	.046	.223	.500*	.321	.106	.208	.444*
	Sig. (2-tailed)		.012	.262	.033	.058	.824	.274	.009	.109	.605	.308	.023
	N	26	26	26	26	26	26	26	26	26	26	26	26
Increased organizational effectiveness	Pearson Correlation	.487*	1.000	.309	.640*	.466*	.237	.555*	.186	.561*	.032	.557*	.500*
	Sig. (2-tailed)	.012		.125	.000	.016	.243	.003	.362	.003	.877	.003	.009
	N	26	26	26	26	26	26	26	26	26	26	26	26
Increased market share	Pearson Correlation	.228	.309	1.000	.362	.339	.605*	.154	.158	.289	.122	.513*	.406*
	Sig. (2-tailed)	.262	.125		.069	.090	.001	.454	.440	.152	.552	.007	.040
	N	26	26	26	26	26	26	26	26	26	26	26	26
Improved customer retention	Pearson Correlation	.420*	.640*	.362	1.000	.458*	.077	.401*	.291	.467*	.180	.434*	.605*
	Sig. (2-tailed)	.033	.000	.069		.019	.707	.042	.149	.016	.379	.027	.001
	N	26	26	26	26	26	26	26	26	26	26	26	26
Better innovation	Pearson Correlation	.377	.466*	.339	.458*	1.000	.325	.644*	.409*	.613*	.324	.520*	.385
	Sig. (2-tailed)	.058	.016	.090	.019		.105	.000	.038	.001	.106	.006	.052
	N	26	26	26	26	26	26	26	26	26	26	26	26
Gained new opportunities	Pearson Correlation	.046	.237	.605*	.077	.325	1.000	.121	.032	.277	-.030	.377	.101
	Sig. (2-tailed)	.824	.243	.001	.707	.105		.556	.878	.171	.885	.058	.623
	N	26	26	26	26	26	26	26	26	26	26	26	26
Shorter problem solving time	Pearson Correlation	.223	.555*	.154	.401*	.644*	.121	1.000	.620*	.810*	.468*	.638*	.423*
	Sig. (2-tailed)	.274	.003	.454	.042	.000	.556		.001	.000	.016	.000	.031
	N	26	26	26	26	26	26	26	26	26	26	26	26
Faster response rate	Pearson Correlation	.500*	.186	.158	.291	.409*	.032	.620*	1.000	.685*	.606*	.376	.317
	Sig. (2-tailed)	.009	.362	.440	.149	.038	.878	.001		.000	.001	.058	.114
	N	26	26	26	26	26	26	26	26	26	26	26	26
Shared best practices	Pearson Correlation	.321	.561*	.289	.467*	.613*	.277	.810*	.685*	1.000	.536*	.661*	.485*
	Sig. (2-tailed)	.109	.003	.152	.016	.001	.171	.000	.000		.005	.000	.012
	N	26	26	26	26	26	26	26	26	26	26	26	26
Accelerated learning & development	Pearson Correlation	.106	.032	.122	.180	.324	-.030	.468*	.606*	.536*	1.000	.393*	.409*
	Sig. (2-tailed)	.605	.877	.552	.379	.106	.885	.016	.001	.005		.047	.038
	N	26	26	26	26	26	26	26	26	26	26	26	26
Better employee participation	Pearson Correlation	.208	.557*	.513*	.434*	.520*	.377	.638*	.376	.661*	.393*	1.000	.689*
	Sig. (2-tailed)	.308	.003	.007	.027	.006	.058	.000	.058	.000	.047		.000
	N	26	26	26	26	26	26	26	26	26	26	26	26
Enhanced communication flow	Pearson Correlation	.444*	.500*	.406*	.605*	.385	.101	.423*	.317	.485*	.409*	.689*	1.000
	Sig. (2-tailed)	.023	.009	.040	.001	.052	.623	.031	.114	.012	.038	.000	
	N	26	26	26	26	26	26	26	26	26	26	26	26

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

The significant correlations are as follows (Table 5-7):-

- (i) Shared best practices and shorter problem solving time;

Time spent on problem solving, especially for those cases are repeated or similar, could be shorter with reference to best practices explicitly available.

This is true to avoid events of 'reinventing the wheels'.

(ii) Better employees participation and shared best practices

Employees will only codify and share their experience and knowledge that have yielded good results in a participative environment. Information and communication technologies (ICT) are undoubtedly instrumental in building virtual communities or knowledge repository.

(iii) Enhanced communication and better employees participation

High quality of communication across the organization, whether top-down or bottom-up, could promote positive employees' participation. With the internet-based technology available, two-way communication is much easier whereby top executives are accessible and approachable via email and virtual forum.

5.3.2 Costly Error and Turnover of Key Employees

The significant correlations are as follows (Table 5-8):-

(i) Lack of customer information and lack of competitor information

Costly errors due to information of customer and competitor is ineffectively managed. This is especially true that 57 per cent of the competitor information is kept in individual memory and document.

(ii) Insufficient organizational processes and lack of customer information

Insufficient organizational processes have resulted in the customer information that is not codified and managed. For this reason, the company has little sense and incapable to understand the needs and wants of its customers/clients.

Table 5-8 Costly Error and Turnover of Key Employees

		Correlations												
		Vital knowledge lost	Knowledge not available	Duplication of errors	Data not interpreted	Lack of competitor info	Lack of customer info	Inefficient organization	Insufficient employee performance	Lost knowledge	Damaged relationship with clients	Lost information	Lost significant business revenue	Lost no Effect
Vital knowledge	Pearson Cor	1.000	.065	.458*	.283	.116	.391*	.098	.441*	.040	.365	.104	.272	-.053
	Sig. (2-tailed)		.753	.019	.161	.573	.048	.635	.024	.845	.067	.614	.178	.796
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Knowledge not interpreted	Pearson Cor	.065	1.000	.065	-.012	.144	-.031	.023	-.370	-.195	.270	.103	.418*	.149
	Sig. (2-tailed)	.753		.753	.954	.482	.879	.912	.083	.340	.182	.616	.034	.466
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Duplication of errors	Pearson Cor	.458*	.065	1.000	.116	.116	.391*	.098	.441*	.216	.167	.104	.104	-.053
	Sig. (2-tailed)	.019	.753		.573	.573	.048	.635	.024	.290	.144	.614	.614	.796
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Data not interpreted	Pearson Cor	.283	-.012	.116	1.000	-.083	.025	.256	.168	.187	.042	.012	-.144	.395*
	Sig. (2-tailed)	.161	.954	.573		.686	.904	.207	.412	.360	.838	.954	.482	.046
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Lack of competitor info	Pearson Cor	.116	.144	.116	-.083	1.000	.674*	.256	.324	.025	.225	.168	.012	-.033
	Sig. (2-tailed)	.573	.482	.573	.686		.000	.207	.106	.904	.268	.412	.954	.873
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Lack of customer info	Pearson Cor	.391*	-.031	.391*	.025	.674*	1.000	.260	.522*	.150	.399*	.195	.195	-.086
	Sig. (2-tailed)	.048	.879	.048	.904	.000		.199	.006	.464	.044	.340	.340	.676
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Inefficient IT	Pearson Cor	.098	.023	.098	.256	.256	.260	1.000	.372	.260	.036	.372	.175	.333
	Sig. (2-tailed)	.635	.912	.635	.207	.207	.199		.061	.199	.863	.061	.393	.097
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Inefficient organization	Pearson Cor	.441*	-.370	.441*	.168	.324	.522*	.372	1.000	.195	.284	-.103	-.103	-.149
	Sig. (2-tailed)	.024	.063	.024	.412	.106	.006	.061		.340	.159	.616	.616	.466
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Insufficient employee performance	Pearson Cor	.040	-.195	.216	.167	.025	.150	.260	.195	1.000	.015	-.132	.195	.138
	Sig. (2-tailed)	.845	.340	.290	.360	.904	.464	.199	.340		.943	.520	.340	.502
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Lost knowledge	Pearson Cor	.365	.270	.167	.042	.225	.399*	.036	.284	.015	1.000	-.085	.284	-.272
	Sig. (2-tailed)	.067	.182	.414	.838	.268	.044	.863	.159	.943		.679	.159	.178
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Damaged relationship with clients	Pearson Cor	.104	.103	.104	.012	.168	.195	.372	-.103	-.132	-.085	1.000	.055	.066
	Sig. (2-tailed)	.614	.616	.614	.954	.412	.340	.061	.616	.520	.679		.791	.747
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Lost information business	Pearson Cor	.272	.418*	.104	-.144	.012	.195	.175	-.103	.195	.284	.055	1.000	.066
	Sig. (2-tailed)	.178	.034	.614	.482	.954	.340	.393	.616	.340	.159	.791		.747
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
Lost significant business revenue	Pearson Cor	-.053	.149	-.053	.395*	-.033	-.086	.333	-.149	.138	-.272	.066	.066	1.000
	Sig. (2-tailed)	.796	.466	.796	.046	.873	.676	.097	.466	.502	.178	.747	.747	
	N	26	26	26	26	26	26	26	26	26	26	26	26	26
No Effect	Pearson Cor	-.133	-.234	.300	-.216	-.216	-.146	-.098	.234	.275	-.365	-.171	-.171	-.085
	Sig. (2-tailed)	.516	.251	.136	.289	.289	.478	.635	.251	.174	.067	.403	.403	.679
	N	26	26	26	26	26	26	26	26	26	26	26	26	26

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).