

# Engineering Technicians' Views of Sharing Knowledge in a Thai Private Hospital in Bangkok

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## Abstract

The purpose of this paper is to understand the perspectives of sharing knowledge behaviour by engineering technicians at a hospital in a qualitatively oriented research inquiry. The paper examines the knowledge sharing factors, which contribute to the establishment, and strengthening of knowledge relationships between a single group of engineering personnel of sixteen (16) small, non-client interacted working facility at a Thai private hospital. The paper develops a model that attempts to conceptualise the findings from a diverse range of qualitative personnel opinion into an engaged framework. Outcomes from this inquiry suggests that personnel have not established methods or activities about what constitutes effective knowledge sharing practices and explores the derived themes of namely Social issues; Job Related issues; Managerial related issues; ICT issues; and Cost issues. The paper highlights the increasing importance of the engaged knowledge sharer in Thailand's private hospitals. This study also provides insights of a support service activity by helping to understand more effectively technical service quality environments, subsequent service provision and the reactions of established personnel in contributing useful approaches to sharing knowledge in the workplace connected to Thai private hospitals.

## INTRODUCTION

Private hospitals in general has become more strategically knowledge oriented (Corso et al, 2006) through knowledge management (KM) initiatives (Plessis, 2007; Wigg, 1993). However it also appears to exhibit a variety of diverse and competing perspectives (Fong and Chu, 2006; Wiig 1994). These are deemed as "high value" (Davenport, DeLong and Beers, 1998), captured in the collective expertise, knowledge and skills while KM promotes the transfer of explicit and tacit knowledge (Russell, et. al, 2004), which is vital in the sharing process. Further, there does not appear to be any research on this matter in hospitals world-wide which raises its importance (Nicolini et al., 2008) in terms of how vital such an area is to the safety and criticality of an hospital operation (Jackson, 2000) and the survival in competitive environments (O'Dell and Grayson, 1998).

Currently, knowledge management has become a crucial element in service organisations such as private hospitals wishing to internally collaborate for the purpose of achieving an overall common goal (Mancilla-Amaya, Sanín and Szczerbiski, 2010) utilising a useful form of systematic management of knowledge (Nicolini et al., 2008). Small and Sage (2005/2006), however, further state that at present many service organisations implement knowledge

management, in order to increase their performance (Nevis, DiBella, and Gould, 1995; Sveiby, 1997) because each organisation has specific technical and cultural resources that have to be managed in order to be available for easy search, development and application (Garrett and Caldwell, 2002). Fong and Chu (2006) also elude that in order to gain a competitive edge, service organisations should manage and develop a collaborative climate of intellectual capital (Nightingale, 1998), organizational creativity (Borghini, 2005) and to make it simpler to spread by sharing across boundaries, but this still needs to be used selectively (von Krogh, Nonaka and Aben, 2001). On this, Cibora and Andreu (2001) suggest that knowledge and its management are interdependent with the organisational context, culture and consequently, different organisations need different approaches to managing their knowledge assets (O'Leary, 1998). Top managers should clearly make the strategic goals of the organization more visible (Abidi, 1999) in order to help navigate through the codification process, choose the appropriate knowledge processes and problem solving procedures (Wenger, McDermott, and Snyder, 2002) for those goals and provide the applicable support for its useful and appropriate dissemination (Marques, Cardoso and Zapalla, 2008).

It is vital in health services therefore to give enough freedom for knowledge sharing to staff so that experience will flow from one person to another generating true organisational knowledge capital through small, focused communities of practice (Gray, 2004; Wenger, McDermott, and Snyder, 2002). However, Moritz (2004) states that there are many reasons why people choose not to share their experience with others and highlights 'cultural issues' as one of the most decisive and obtrusive barriers and leads to unsustainability of knowledge gathering and sharing processes (Bate and Roberts, 2002). Sun et al., (2009) noticed that there was only limited research carried out on why staff would be willing to share their knowledge thus creating added-value benefits (Liebowitz, 2001). Wolfe and Loraas (2008) also state that in order to survive and succeed in the private hospital competitive market every organization should develop, explore and manage its knowledge effectively through appropriate referrals and enhanced client social interactions (Mohrman, Finegold, and Klein, 2002).

As horizontal divisions of labour at the turn of Century were dismantled and replaced by vertical divisions of labour (Jacoby, 1991) especially in medical practices in Thai hospitals, they have failed to change to other forms of organisations – and remain closely paralleled on the Webber's hierarchal perspective where vertical communications and managerial action dominates the concerns of technical workers. Further, skilled hospital technicians work is seen as generally physical and often repetitive (Taylor, 1911) but still proves more difficult to manage, and from a knowledge management perspective have not been explored effectively. In Thai hospitals, engineering technicians would appear to form communities of practice (Lave and Wenger, 1991) that often extended beyond their workplace and thus enhance their knowledge management experiences.

Thus, the role of the hospital engineering technician would appear to operate within the hierarchal work structure of a hospital which has been studied previously and dichotomies still appear to remain such as Adhocracies (Mintzberg, 1979), networked organizations (Powell, 1990), and even lean structures (Womack, Jones and Roos, 1990). These in themselves have been examined but not from a knowledge management perspective. Further, the author's own previously published studies have been from a Doctor's, nurses and hospital management approach and this further work allows a more complete investigation to be addressed of the hospital environment relating to knowledge

management.

This raises the first research question - How does the working relationships among staff in an engineering discipline at a private hospital affect the knowledge sharing process?

Postmodern societies appear to be going through a conversion period from the industrial era to an informational era in which knowledge is becoming a key resource (Diringer, 2010; Mulder and Whiteley, 2007). Recently, many scholars have started paying close attention to the process of knowledge sharing in organizations (Østerlund and Carlile, 2005; Russell et. al, 2004) with the added benefits of keeping knowledge more structured and available to the organisation (Liebowitz, 2001). The success of any organisation now depends not only on acquiring knowledge but also on its ability to understand, manage and successfully transfer it from one individual to another (Pantano, 2005; Soller, 2004). Fong and Chu (2006) indicates that an organisation's core competency is mostly based on the 'know-how' process type of knowledge which is tacit by definition and inclination and especially important and related in the technician's area of expertise. Small and Sage (2005/2006) remark that tacit knowledge transfer is worth ninety per cent of knowledge sharing of the whole organization. Fong and Chu (2006) further remark that the assets of the organisation are essentially damaged each time an employee retires or leaves the organisation for some other reasons, because useful and irreplaceable knowledge is lost to the organisation or its operating community. Thus, it becomes vital for all organisations to create a productive knowledge management system on which to promote knowledge sharing inside the organisation and to help motivate employees to share their experiences with their colleagues (Alavi et al., 2001). McAndrew et al. (2004) indicate that knowledge management shouldn't only be considered as a standardised set of well-planned processes, unless all these processes are supported by different tools and flexible working practices that help shape the way workers in the organisation co-operate with each other (Garcia-Lorenzo, 2006). Thus, Powers (2004) discusses an example of knowledge management "style" to be focused more on supporting a learning culture among individuals rather than technology - which appears to complicate and inhibit direct human interaction processes (Hislop, 2002). Robbins (2003) supports this by stating that only those organisations that prioritise its knowledge sharing culture and do not fully rely on technology can expect an increase in

the quality of service or product resulting from employee satisfaction. This raises the second research question - What internal/external factors affect engineering technician's desire to share their knowledge with their co-workers?

Wolfe and Loraas (2008) indicate that there are different ways of motivating knowledge sharing processes; whilst Moritz (2004) concludes that there are also various factors that may prevent individuals from engaging in such activities. Thus, in order to become a "knowledge enterprise" it's very important for any organisation to figure out and cultivate those practices that actually help their employees to share knowledge and also to try to eliminate those ones that negatively affect these processes. Hislop (2002) argues that any knowledge contains both explicit and tacit components, which are 'mutually constituted and irreplaceable'. Nonaka and Takeuchi (1995) further elude that in order to create organisational knowledge there must be a continuous interaction between both explicit and tacit types of knowledge. Sun et al. (2009) agrees that the foundation of any organisational knowledge is the conversion of tacit knowledge into explicit and back. Thus, knowledge management is considered to be a very helpful way of enunciating employees' tacit knowledge and consequent experiences.

Compantangelo and Meisel (2003) define knowledge sharing as the same interpretation of a specific artifact or piece of knowledge by different human beings. Elmholdt (2004) states that the knowledge management literature is focused on making knowledge accessible for traditional management through individual ownership and control. Deutsch, Lambe and Leyuva (2007) suggest that in the current environmental situation when most parts of organisations strive to become globalised, it is very important to be able to easily share knowledge across any boundaries - mirroring Fong and Chu (2006). Mancilla-Amaya et al. (2010) highlights that if the organization learns from its past experiences and adapts to constantly changing environments it will lead the competition. Consequently, Britt (2007) determines that if most of an organisation's critical knowledge circulates in a single separate department or a branch it is not going to be very useful to the organisation - seemingly supporting a protectionist culture. Wickramasinghe and Alahakoon (2005) add that when the knowledge sharing process is engaged appropriately it becomes indispensable as it is possible to find solutions to some tasks that could never be solved without applying this process. Unfortunately, Østerlund and Carlisle (2005) agree by stating that at present

most researchers are focused on knowledge sharing processes across boundaries because those who still focus on individuals do not explore the environment as effectively and maintain knowledge resources (Massey, Montoya-Weiss and O'Driscoll, 2002).

Ju et al., (2009) suggests that the knowledge sharing process occurs when one individual spreads created or acquired knowledge to others by conceptualising work-related knowledge through a deliberate personal learning and sharing process, through mentoring (Bialachowski, 2009). Hustad (2004) (cited in Mancilla-Amaya, Sanin and Szczerbicki, 2010) adds that this process can involve different levels of participants: from individual to individual, between group and individual, among groups and between the group and the organisation. Evans (2007) compares knowledge sharing with "synergism" and enhanced group development (Meltzer et al., 2010) because it is defined as some effect caused by a collaboration of two or more entities, which can never be achieved by one individual. Shoemaker (2009) also states that effective cooperation between employees can increase the productivity of the organisation. Ochocka, Janzen and Nelson (2002) showed how participants admitted that working and sharing practices in a team helped them to more easily collaborate on a personal level and also to speak in a 'full voice' (Park, 1993 - cited in Ochocka, et al., Ibid) closing the knowledge gap (Bali and Dwivedi, 2006). However, Sun et al. (2009) claims that despite the apparent benefits and positive effects of knowledge sharing, the process can be severely restrained as it is not simply carried out easily (Davenport and Prusak, 1988). This raises the third research question - What motivational factors can increase engineering technicians' interests in the knowledge sharing process?

### **METHODOLOGY**

To develop a much broader, and deeper approach surrounding the issues generated within the hospital engineering facilities context and to consider more implicitly the issues and questions raised, this empirical groundwork utilised an interpretive approach (Walsh, White and Young, 2008). This was an attempt to understand the perceptions of hospital engineering service knowledge sharing practices. Hospital engineering staff were considered specialist knowledge agents and actors (Benn et al., 2008) as their opinions and experiences influenced the effectiveness of hospital practices, and the development and application of sharing knowledge in the engineering support facility. The research used a semi-structured interview conducted with

hospital engineering staff, which provided an appropriate element of context and flexibility (Cassell and Symon, 2004) and this was further aided by applying an inductive/theory building approach (Glaser and Strauss, 1967). Given the lack of appropriately focused research in this area, this methodology is seen as suitable for creating contextual data for the purpose of forming richer theory development (Cayla and Eckhardt, 2007). The population for this study was made up of twenty-two (22) engineering technicians located at a single facility in a private Bangkok Hospital, Thailand – chosen through applying the approach of a targeted population of interest (Carman, 1990) and this reflected the criteria of theoretical purpose, relevance and appropriateness (Glaser and Strauss, 1967). Further, using Glaser's (2004) sampling processes, a total of 16 technicians were thus determined as the resultant sample frame, which could also be considered convenience sampling according to Harrel and Fors (1992). Each interview was audio recorded for future analysis. Interviews were conducted in English and took approximately one hour. All interviews were recorded digitally after gaining explicit permission, and were later transcribed verbatim using NVivo 10 software. The conduct of the interviews follows a similar process used by Gray and Wilcox (1995), with each individual group being asked the same set of questions – modified through ancillary questioning (probes and follow-ups) in the same way as Balshem (1991). To increase the reliability of the data, the actual transcription was returned to each respondent – via e-mail – for comment, correction, addition or deletion and return, which followed the process of validated referral (Reeves and Harper, 1981). Whole-process validity was achieved as the respondents were considered widely knowledgeable of the context and content associated with the research orientation (Tull and Hawkins, 1990). Each interview was initially manually interrogated and coded initially using the Acrobat software according to sub-themes that 'surfaced' from the interview dialogue – using a form of open-coding derived from Glaser (1992a); and Straus and Corbin (1990). This treatment was also reinforced and extended through the use of thematic analysis conducted using the NVivo 10 – qualitative software package (Walsh, White and Young, 2008). Each interview was treated and coded independently. In this way, no portion of any interview dialogue was left uncoded and the overall outcome represented the shared respondents views and perspectives through an evolving coding-sequence (Buston, 1999). Various themes were sensed from the use of the software packages, as well as from the initial manual-coding attempts.

This dual form of interrogation was an attempt to increase the validity of the choice of both key themes and sub-themes through a triangulation process. NVivo 10 was further used to explore these sub-themes by helping to pull together each of these sub-themes from all the interviews (Harwood and Garry, 2003). In this way, it was possible to capture each respondent's comments across transcripts (Riessman, 1993) on each supported sub-theme and place them together for further consideration and analysis.

## THE RESEARCH FRAMEWORK

**Figure 1**

Illustration of Research Outcomes



The outline of the research outcomes for this study is shown in Figure 1 above. The framework supported by appropriate literature, illustrated below in Table 1, consists of five (5) main themes, namely Social issues; Job Related issues; Managerial related issues; ICT issues; and Cost issues. Table 1 further shows the nineteen (19) sub-themes and subsequent issues raised from the literature forming the basis for this framework.

**Table 1**

Framework Literature References

	Research Question	Main Themes	Sub-Themes	No.Refs
Q1	How does the working relationships among staff in an engineering discipline at a private hospital affect the knowledge sharing process?	Social Issues	Personal respect Sharing capacity Worker Interaction Lack of adaptability Resentment	15 12 18 22 16
Q2	What internal/external factors affect engineering technician's desire to share their knowledge with their co-workers?	Job Related       Managerial Related          ICT Related	Hierarchy Competence Training Leaving Show lack of knowledge Hierarchy Problem solving Coaching and Support Professional network Connectivity Communication	21 11 14 17 16 13 24 13 8 17 23
Q3	What Cost Issues affect engineering technicians' interests in the knowledge sharing process?	Cost Issues	Training Skills Development Share Training	14 18 6

The outcomes are stated below where the discussion focuses on the sub-theme elements within each key theme. The discussion format used in this paper reflects the respondent's voice through a streamlined and articulated approach for reporting. Consequently, the style adopted for reporting and illustrating the data is greatly influenced by Gonzalez, (2008) and also Daniels et al. (2007) and is discussed below, focusing on the raised research questions and the resultant main themes.

**Table 2**

Research Question	Major Themes	No. Respondent
1	Social Issues	2, 3, 4, 5, 6, 8, 9, 11, 12, 15, 16
2	Job Related	2, 4, 5, 7, 8, 9, 12, 14
	Managerial related	1, 2, 3, 4, 5, 6, 7, 8, 12, 16
	ICT Related	2, 7, 8
3	Cost Issues	1, 4, 12, 15

## RESULTS

The results are presented below using the research questions as pointers and supportive evidence through indicated factors. The first research question - How does the working relationships among employees in a engineering discipline at a private hospital affect the knowledge sharing process?

### Main Theme – Social Issues

In terms of personal respect, some technicians showed mixed notions of respect to younger and/or older individuals alike. Respect was given as an outward sign of cultural visibility, but in reality as one respondent (R2) stated, ...you kinda respect the older ones, but they don't really know what they're doing. Further, another respondent (R8) indicated, ...I'm just a screwdriver. They only give us little tasks to do. They always call in from outside. What good is that?

In terms of sharing capacity, one respondent (R4) suggested, we have tons to give, but no-one asks us. No one. Another respondent (R12) suggested, ...we have some training each year, and we get lots of experience but we are never asked what we know. Another respondent (R3) suggested, that ...we don't seem to work as a team. We each know what is needed and that's it.

Worker interaction appears to be haphazard and infrequent. For example, one respondent (R11) suggested, that ...we don't really talk amongst ourselves, we just do what we're told. It's that simple. Another respondent (R2) suggested, that ...we have a meeting in the morning and that's it – we're just told where to go and what to do.

In terms of lack of adaptability, it was reported by one respondent (R5), that ...we are given exactly the same type of job to do. It's so boring. This was supported by another respondent (R16) who suggested that ...the meetings are a waste of time because we know what we need to do it's just where it is. Further, another respondent (R8) indicated, that ...we seem to just be given only one type of job and that's it. Never any other kind. Another respondent (R15) suggested, that ...its not that we don't want to, its just management telling us what to do. It seems easier for them.

It would appear that many respondents show resentment about not being able to share knowledge or even change jobs. As one respondent (R9) stated clearly, ...we often work on our own, so it's difficult to share knowledge then. During breaks no one is interested. Resentment regarding sharing of knowledge appears to be more with younger staff than older. For example, one respondent (R2) indicated that ...they just keep it to themselves. They don't give any help and even laugh at us when we get it wrong. Another respondent (R6) indicated that ...yes, they appear jealous when we do things well. This is not so good.

The second research question - What internal/external factors affect engineering technician's desire to share their

knowledge with their co-workers?

#### Main Theme - Job Related

One respondent (R7) stated that ...things are tough. This is a private hospital but it doesn't help anyone develop their skills at all. Not even the nurses get help. We don't get to share anything. No time. Another respondent suggested that ...I'd like to learn new things but where will I find the time or the money. The company won't pay either.

The hierarchy appears to have a very important impact. Jobs are allocated with no discussions on capabilities or technical fit. For example one respondent (R5) suggested that ...this has always been here. Jobs allocated on how long you've been here. The best jobs to the longest serving person. To further compound this issue, another respondent (R12) indicated that ...competence had nothing to do with job allocation. It was about whom the manager liked or had been there the longest. This was an obvious issue as it reflected competence. As one respondent (R4) indicated ...a job is a job. When my turn I go and do whatever they ask. Sometimes it's a little crazy like outside with no safety gear. But it has to be done. Another respondent (R9) indicated that ...training is used – especially emergency training, but this has little to do with our main job. Electrician's sometimes cannot cut the electricity off to do a job and make do. That's not good.

It would appear that many respondents would like to leave, because of the hours they worked (12 hour shifts) or the monotony. As one respondent (R2) indicated ...I'd like to leave but they pay is OK and they pay you every week without fail on time. Elsewhere it might be different. It is secure here. Another respondent (R8) indicated that ...I'd like to leave but where to. There's no other place. There are no jobs.

From the evidence, it would seem that there is sometimes a lack of knowledge shown by the respondents. However, as one respondent (R14) indicated ...you can't show this because it's a sign of weakness and you can get sacked. So you never ask for help. You work it out yourself all the time – even in dangerous places. So it would appear that the sophisticated knowledge worker (Wickramasinghe, 2000) does not really exist at this hospital as each helps themselves.

#### Main Theme - Managerial related issues

In terms of hierarchy, one respondent (R5) indicated that ...I

always have to do what my boss says. there's no discussion. Another respondent (R3) suggested that ...we just do as we are told or the manager gets really angry. One other respondent (R8) determined that ...this is how it is they tell us and we do - no discussion. One respondent (R6) stated ...I am always fearing losing my job. We get paid above the minimum wage and they are always cutting our benefits and increasing the time we work. I now work a 12 hour day, whether I like it or not.

Problem solving and training issues were raised by many respondents. As one respondent (R2) indicated ...problem solves. Who problem solves. We just do what we've always done. First here does what they can. Sometimes its easy, other times it just doesn't get put right at all.

There would also be issues related to coaching and support. As one respondent (R16) suggested ...We learn on the job at least that's all I get. Sometimes it's not good, as its boring, but I would like to go to school and learn more things, but don't have the money. Another respondent (R7) stated ...If only they trained us a bit more we could easily do jobs that they send out. It's like they don't trust us or something. One respondent (R12) indicated that ...when someone leaves, someone gets promotion - only then. It's what's it's about here. Another respondent (R1) suggested that ...no one gets any coaching. Unless of course we get a young one. Then maybe. Another respondent (R5) suggested ...we often ask for help especially when it is a complex job. But we have to be careful because that means we're not good enough, so we don't ask too often. Another respondent (R4) indicated that ...we do a complex job sometimes but we get no support. It often takes longer as a consequence. Our managers know very little and don't want to interfere because it shows their lack of knowledge.

Professional networking does not appear to be on the agenda of most respondents. As one respondent (R6) indicated ...we don't network at all. Another respondent (R3) stated ...we see or talk with no-one outside of the hospital and then its only a friendly chat. Another respondent (R14) signalled ...we don't connect to anyone else in the hospital. They all look down on us. We don't connect outside the hospital either, even when contractors are brought in. They do their thing and we do ours.

#### Main Theme - ICT Issues

An array of issues were raised by respondents in this section. In terms of communication, one respondent (R7) suggested



...some of the communication technology is beyond me. We don't get enough training. We're just told what to do and when. Not good really. Another respondent (R2) indicated that ...we have problems communicating across the hospital. These handsets are too old. Another respondent suggested clearly that ...it is often dangerous what we do and sometimes we don't know whether it is safe to start work on something. However, another respondent (R8) cited ...we don't get anytime together, it's always work. We don't have the time to share what we know. We just have to go and do it. It's not like other departments. We seem to be left out.

The third research question - What Cost Issues affect engineering technicians' interests in the knowledge sharing process?

### **Main Issues - Cost issues**

Underpinning the cost issue appears to be training. As one respondent (R4) indicated ...sometimes we get it wrong and the equipment doesn't work and we need to call the manufacturer to come which adds cost and time. This is underpinned by another respondent (R15) who stated ...one factor that appears to be ignored is the negative effect of having to wait for an outside technician to come and fix something we could do, if we were trained. A further respondent (R12) indicated that ...we need to build our skills but it costs a lot but its better than just guessing which we do a lot around here. This is supported by another respondent (R1) ...I need to update my skills a little more but whose going to pay for it? and when am I going to get time off?

## **DISCUSSION**

The outcomes indicate the derived relationships between the major themes informing hospital issues related to sharing knowledge behaviour. The outcome illustrates the conceptual development and relationships perceived to correspond to the features informing hospital policy which allows hospital management to focus on how these influence their strategic perceptions and intentions regarding sharing knowledge activities.

In general sharing processes appeared to be severely restricted in this engineering environment and appear to be one of the main challenges are in the area of organizational culture and practices (Ruggles, 1998). This may be a result of the culture that has developed overtime or reflects the engineering department in general. The discussion follows the main themes developed above.

Social Issues - Wasko and Faraj (2005) indicated why people share knowledge - public good, but this did not appear to be relevant or considered in this context (Lustri, Miura and Takahashi (2007) as the technician knowledge partners appeared to think they were separate from the "client" and worked solely for the hospital because of differing epistemic cultures (Knorr-Cetina, 1999). This needed some form of change to their basic identity in the organisation (Robertson, 2002). Individuals indicated that they had little to share as the knowledge was available to everybody in their circle of work colleagues. Knowledge sharing was perhaps considered therefore not necessary or unwarranted even though sharing knowledge were unique and valuable knowledge events (Galletta et al., 2003). Since worker interaction was seen by many respondents as minimal which is often required for good KM practices to work (Oliver and Kandadi, 2006) it is no wonder sharing knowledge was seen as low on their communication agenda. This has possibly resulted out of personal respect issues reflecting past ways of sharing knowledge (Massey, Montoya-Weiss and O'Driscoll, 2002) within a KM inferior patriarch culture. This may have also had a negative effect on the group sharing capacity (Raub and Wittich, 2004). Thus a major factor of not sharing may have been the patriarchal culture as well as the need for older respondents to possibly control the work regime of younger members of the group. Workers appeared to only interact during breaks or at the beginning of a shift, but little was considered as sharing capability (Bennet and Bennet, 2008) but this still created opportunities for developing "social space" (Quinlan, 2009). However, it appeared to be more like a hierarchal interaction rather a shared interaction (Hung et al., 2005). As a group this indicated a lack of work-related adaptability (van Winkelen and McDermott, 2008), which may directly be reflected by the group culture. This suggests that that the group itself is not ready because of the present group social issues to engage with knowledge sharing practices and this does not seem to have been noticed, supported or involved by the management of the hospital (Edwards, Hall and Shaw, 2005).

Job Related – Hierarchy (Seidler-de Alwis and Hartmann, 2008) was raised here as an issue by the respondents, which appears to militate against issues such as technical capability Akhavan, Jafari and Fathian, 2006), knowledge capture (Mulder and Whiteley, 2007), job fit and perceived behavioral control (Chau, and Hu, 2001). This may underpin some respondent's statements of wanting to leave their job as a consequence of this issue. Following the hierarchal style

of the group, this has possibly to lead to a general lack of technical knowledge (Hsu, 2006) corresponding with being pigeonholed, and the lack of training or even the lack of sharing knowledge capability of the group as a whole.

Managerial related – Hierarchy (based on Pavlin, 2006) was also raised here possibility resulting from sharing through group culture (Plessis, 2007). As a culture this would have to change in order to introduce knowledge-sharing practices with much effort (Hofer-Alfeis, 2008), possibly through a trained KM facilitator (Plessis, 2007). This can be positively changed by introducing such practices as problem solving (Oliver and Kandadi, 2006) coaching (Hofer-Alfeis, 2008); support (Chan and Chau, 2005); and professional network processes (Meltzer et al., 2010) to encourage the implementation and adoption of KM initiatives (Hung et al., 2005).

ICT Related - Lack of use of communication technology appears to have had a negative effect on the efficiency of technicians carrying out their duties as the group structure affected their overall performance (Kimble and Bourdon, 2008). This is especially an issue when they are separated around the hospital on their many diverse tasks. This communication structure (Cohen and Levinthal, 1990) indicates the disparity between a cohesive (Decotiis and Koys, 1991) and sound KM operated group and a loose hierarchal structured group in terms of communication performance.

Cost Issues - However, total integration of communication technology was seen as a barrier because of cost (technologyreview.com, 2009) although the focus of many hospitals is on communication technology processes (Nicolini et al., 2008). Training was considered by many as a cost issue but also an essential component (Hung et al., 2005). As an issue, developing training (Yeh, Lai, and Ho, 2006) may help the engineering technicians share their knowledge more readily – especially if the training is completed as a full group unit (Chan and Chau, 2005).

### **CONCLUSION**

The overall knowledge-sharing environment in the engineering section did not seem to be directed at helping young and older employees obtain as much articulated experience from their peers as they can. However, there are a number of issues that prevent the process of knowledge-sharing from expanding throughout the group. The research underpins several useful indicators that have been developed to increase the level and the expansion of the sharing

processes within this technician oriented group through five (5) targeted outcomes (Figure 1).

Consequently, it can be useful for the group to conduct more introductory activities such as a specialist knowledge sharing induction programme, when each new employee is hired. This will enhance the employee's relationships more effectively with each other. Assigning team projects or team goals may also increase cooperation and trust among technicians and thus lead to more effective knowledge sharing approaches. Monetary bonuses for those who engage with knowledge sharing processes will appear to help the circulation of knowledge among staff and may also stimulate greater cooperation among them leading to an increased level of friendliness - which could be a strong indicator of further knowledge sharing process expansion. Management have a responsibility to engage in conducting more targeted training leading to positive knowledge sharing practices throughout the group and especially when affecting private hospital clientele.

This study provides insights of an engineering service provider at a private hospital in Thailand by helping to understand more effectively technical service environments, and the reactions of established personnel in contributing useful approaches to sharing knowledge in the workplace.

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