

# THE SIGNIFICANCE OF KNOWLEDGE SHARING APPROACHES IN MALAYSIAN CONSTRUCTION ORGANISATIONS

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Few would argue with the principle that the sharing of relevant knowledge is important. But the significance of knowledge sharing in the Malaysian construction industries has received little or no consideration. Perceptions of Malaysian practitioners, in terms of formal and informal approaches to knowledge sharing in construction organisations are discussed in this paper. This is based on a study which combines qualitative and quantitative research methods including a literature review, semi structured interviews and questionnaire survey involving small, medium and large construction organisations in Malaysia. A total of 384 completed questionnaires were returned and 28 semi- structured interviews were conducted with practitioners at different levels of management. This paper highlights the results from the questionnaire survey only. The findings indicate that all participants are of the view that knowledge sharing makes a significant contribution towards the improvement of organisational performance. Understanding the effectiveness of formal and informal approaches to knowledge sharing may assist construction organisations in taking full advantage of the improvement in organisation performance.

Keywords: culture, HR practices, knowledge sharing, organisational structure

## INTRODUCTION

The general perception on the Malaysian construction industry as a whole is under achieving (Asia Construct, 2009) with low profitability and does not invest enough capital in training, research and development. Many of the industry's clients are dissatisfied with its overall performance. The problems with poor performance faced by construction industry have opened the possibility of various initiatives or more solutions within the industry. Numerous attempts have been made by governments around the worlds, including Malaysia which is aimed at improving the performance of the industry (CIDB, 2006; 9th Malaysian Plan, 2006-2010).

Malaysian government has realised that it is necessary to adopt knowledge management strategies to improve its management and for the purpose of survival in competition competitive environment. It is therefore imperative that the construction industry start to pay more attention to knowledge management strategies. As a result, the used of knowledge sharing approaches to improve performance of construction organisations and, hence industry was highlighted. Ultimately, it is a great opportunity for analysing formal and informal approaches to knowledge sharing. Understanding

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the effectiveness of formal and informal approaches to knowledge sharing may assist construction organisations in taking full advantage of the improvement in the organisation.

This paper, which draws from an on-going doctoral study focuses on the knowledge sharing approaches in construction organisations. The aim of the on-going doctoral study is to improve knowledge sharing approaches in construction organisations in Malaysia for improved organisational performance. It is argued that formal and informal approaches to knowledge sharing have the potential to improve organisational performance.

The research is organised into four broad sections: The first section begins with basic concepts of knowledge and knowledge sharing, and then discusses the formal and informal approaches to knowledge sharing. The second section describes the research methodology used in the present study. The third section presents selected findings from the study on formal and informal approaches to knowledge sharing employed by Malaysian construction organisations. The fourth section reports on the significance of knowledge sharing approaches to improve the performance of construction organisations. The paper concludes with a summary, outlining the implications of the findings and the limitations of this study.

## **LITERATURE REVIEW ON KNOWLEDGE, KNOWLEDGE SHARING, FORMAL AND INFORMAL APPROACHES TO KNOWLEDGE SHARING**

Currently there is no consensus on what the definition of knowledge should be. The dominant philosophy in some decades merely added more definitions of knowledge to the existing ones. Most definitions given by writers in this field surround the concept of knowledge as data and information (Wiig, 2000). There are various opinions of what is meant by knowledge. One of the most referenced definitions in the literature is provided by Nonaka and Takeuchi (1995) as 'justified true beliefs'. Knowledge is also defined as a "fluid mix of framed experiences, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knower's". In organisations, it often becomes embedded not only in documents or repositories but also in organisational routines, processes, practices, and norms" (Davenport and Prusak, 1998). It is necessary to recognise the different types of knowledge in order to expose potential contributions to the performance of the organisation and to determine the appropriate channels to share it (Pemberton and Stonehouse, 2000). Wide-based knowledge definitions highlight the presence of several forms of knowledge; tacit, explicit, implicit and systemic knowledge on the individual, group and organisational levels (Davenport and Prusak, 1998; Nonaka and Takeuchi, 1995).

Managing knowledge in organisations requires managing several processes of knowledge (Probst et al, 2000; Davenport and Prusak, 1998) such as creation, storage, sharing, evaluating. Among these processes, sharing is crucial for a knowledge organisation as it is very much a sign of the atmosphere of social interactions in the organisation. It requires individuals to share what they know. The interesting characteristic of knowledge is that it is not depleted when shared (Egbu et al, 2005). Indeed, it is expended and open to further growth, refinement and marketability. The way of effectively managing knowledge is to translate individual and group knowledge to organisational knowledge (Van den Hooff and de Ridder, 2004: 117).

Knowledge sharing is often viewed as a multitude of processes (Fong, 2005) between individuals (Ryu et al, 2003). Storey (2001) defines knowledge sharing as the exchange of ideas and information between people who share a common purpose and have experienced similar problems. Knowledge sharing is also defined as processes where individuals exchange knowledge (tacit or explicit) and together create new knowledge (Van den Hoof *et al.*, 2003). In a broader perspective, knowledge sharing refers to the communication of all types of knowledge including explicit knowledge (information, know-how and know-who) and tacit knowledge (skills and competency) (Al-Hawamdeh, 2003). Knowledge sharing happens when an individual is really interested in helping others to develop a new capability for action (Senge, 1990). Thus knowledge sharing refers to the willingness of individuals in an organisation to share whatever they have, or have created (Gibbert and Krause, 2002).

Knowledge sharing is an important factor affecting organisational development and performance (Hsu, 2008; Bhatti, 2011). The critical output from knowledge sharing is new knowledge and innovation that will increase organisational performance (Al-Hawamdeh, 2003). At the organisational level, knowledge sharing gives two significant benefits (Agus *et al*, 2007) improved organisational performance through increasing efficiency, productivity, quality and innovation; and (Alavi and Leidner, 1999) better decision making, improving processes, data integration and broad collaboration. Since the construction industry relies on professional knowledge or expertise (Egbu and Robinson, 2005) and on its use of human intervention and technology (Egbu and Robinson, 2005; Carrillo *et al*, 2000), effective knowledge sharing amongst employees is a significant in providing excellent services to the industry at all levels. Knowledge sharing is necessary to achieve a shared understanding that can minimise misunderstanding and misinterpretation among project actors (i.e, designers, project managers, advisors and clients).

In order to create an environment conducive to improving organisational performance, it could be argued that there needs to be an effective management of organisational knowledge. Thus, increased attention is focused on formal and informal approaches to knowledge sharing as a possible pre-requisite in improving organisational performance.

### **Formal and informal approaches to knowledge sharing**

Managing knowledge in organisations can be both formal and informal in nature. In term of definition, Hutchinson and Quintas (2008) state that formal knowledge management is deliberate and that formal knowledge management concerns policies, plans, structures, initiatives, projects and practices that are named and governed by the concepts of knowledge management. In contrast, the informal management of knowledge refers to practices that are concerned with knowledge processes, but are not so rigid or constituted. Taminiou *et al* (2009) define formal knowledge sharing as all the forms of knowledge sharing that are institutionalised by management. These include resources, services and activities, which are designed by the company or organised with the aim of knowledge sharing or of learning from each other (organisational learning). According to Nonaka (1994), formal exchange mechanisms, such as procedure, formal language, and the exchange of handbooks will ensure that people will exchange and combine their explicit knowledge.

With regard to informal knowledge sharing, the literature often refers to informal networks and informal communication (Awazu, 2004; Bresnen *et al.*, 2003). There seems to be an overlap between informal knowledge sharing, informal communication

and the conceptualisation of an informal network (Taminiau *et al*, 2009). Sturdy *et al.*, (2006) emphasise the importance of informal settings such as lunches, drinks and dinners. These informal meetings have proven to facilitate smooth knowledge exchange between consultants and their clients (Taminiau *et al*, 2009).

Formal approaches to knowledge sharing provide individuals with a structured environment in which to share knowledge. Okhuysen and Eisenhardt (2002) identify some formal interventions that encourage knowledge sharing in organisations, from basic instructions to share knowledge, to more complex interventions. Formal approaches to knowledge sharing provide the advantage of being able to connect to large numbers of individuals and they allow for the speedy dissemination of shared knowledge, especially through electronic networks and other technology based systems. Constant, Sproull and Keisler (1996) and Hickins (1999) have all presented empirical evidence for successful knowledge sharing through formal approaches.

Although formal approaches to knowledge sharing play an important role in facilitating knowledge sharing, research indicates that knowledge is mostly shared in informal settings – through informal approaches (e.g. Jones and Jordan 1998; Pan and Scarborough, 1999; Truran, 1998). Informal approaches to knowledge sharing include face to face communication, which encourage the building up of trust, which in turn develops into the sharing of knowledge. These informal opportunities to interact with other people help individuals develop respect and friendship, which influence their behaviour (Nahapiet and Ghoshal, 1998). Granovetter (1992) call this ‘relational embeddedness’ – the kind of personal relationship that people develop when they interact with each other over a period of time.

For the purpose of this study, formal approaches to knowledge sharing can be defined as initiatives that are well defined, structured, systematically organised and usually presented in written forms. Such initiatives often embody policies transpiring the life span of an organisation and should ideally not be rigid so as to accommodate changes that may occur in tandem with the organisational environments. Informal approaches to knowledge sharing, however, can be defined as initiatives that are unstructured, not organised in form, occurring in an ad hoc fashion and often undocumented or ‘labelled’ as knowledge sharing. It reflects internal networking knowledge and occasionally results from external communications with the aim of improving internal knowledge sharing. Informal knowledge sharing may occur spontaneously without any official assistance from the management.

## **RESEARCH METHODOLOGY**

This research is a part of an on-going PhD research on small, medium, and large Malaysian construction organisations, focusing on knowledge sharing approaches for improving organisational performance. The research employed a combination of qualitative and quantitative research methods. This paper, however, reports only on findings resulting from the analysis of the questionnaire survey.

Postal questionnaires were distributed to construction organisations in Malaysia. A total of 1000 questionnaires were sent out and a total of 384 usable questionnaires were received, resulting in a response rate of 38.4%. A survey questionnaire is a very helpful in gathering information from a large number of a sample population, and to obtain a conclusion from a big group.

In this research, the size of an organisation is defined according to European Commission definitions. The European Commission (2009) clarifies that the size of an

organisation can be measured in terms of number of employees, annual turnover and the balance sheet. The number of employees was adopted in this study as the organisational size measure due to the relatively easy access to this information. The questionnaires were analysed using the SPSS 16 software package.

## **FINDINGS AND DISCUSSION**

### **Formal and informal approaches to knowledge sharing employed by Malaysian construction organisations: Some tentative findings.**

The results of the study, presented below, provide an indication of the typical formal and informal approaches to knowledge sharing employed by construction organisations.

From a list of formal and informal approaches to knowledge sharing, respondents were asked to rank, on a 5-point scale, the extent to which the formal and informal approaches for knowledge sharing are currently used by their organisation. Table 1 and 2 present the mean score for each formal and informal approach to knowledge sharing listed according to their usage in the construction organisation. As a mean score increases, the level of formal and informal approaches to knowledge sharing employed decreases. The mean values for the usage were: 1 (Highly used), 2 (Used), 3 (Fairly used), 4 (Less used), 5 (Not used at all).

From the data it is evident that the most frequently used formal approaches to knowledge sharing in Malaysian construction organisations are internet technologies to encourage staff members to interact and share knowledge with each other and the rest of the organisation; mentoring for experienced employees to share their knowledge, experience and expertise with less experienced colleagues, and open and conducive environment for employees to share ideas and concepts. These are closely followed by training to improve coaching in enhancing knowledge sharing initiatives, and intranet technologies. The knowledge sharing policy was ranked lowest in terms of the mean values.

With regard to informal approaches to knowledge sharing, face-to-face social interactions, personal relationships and social events are seen as the most frequently used methods by Malaysian construction organisations. Story telling was ranked as the lowest.

The relationship between size of organisations and formal and informal approaches of knowledge sharing employed was investigated using Kruskal-wallis. A kruskal-wallis test revealed no statistically significant difference in formal and informal approaches to knowledge sharing employed across small, medium, and large size organisations. This means that, statistically, there is no significant relationship between size and the use of formal and informal approaches to knowledge sharing.

The relationship between size of organisations and formal and informal approaches of knowledge sharing employed was also investigated using Spearman rho. There was no significant positive correlation between formal and informal approaches to knowledge sharing and size of organisation. This means that there is no substantial evidence to suggest that the formal approaches to knowledge sharing which larger organisations perceived as highly used/used are different from those perceived as highly used/used by smaller size of organisations.

The result revealed that the size of organisation does not impact on the formality and informality of knowledge sharing approaches. Irrespectively of the size of

construction organisations, the formality and informality of the knowledge sharing approaches used is not different. This findings support the study done by Quddus and Xu in 2007, which revealed that size of organisation did not have a significant impact on knowledge sharing, in a study conducted with 5 large organisations and 10 SMEs in Australia.

Table 1: Formal approaches to knowledge sharing

Formal approaches to knowledge sharing	Overall (N=384)	
	Mean	rank
Use of <b>internet</b> technologies to encourage staff members to interact and share knowledge with each other and rest of the organisation.	2.32	1
Use of <b>mentoring</b> for experienced employees to share their knowledge, experience and expertise with less experienced colleagues.	2.45	2
Use of <b>open and conducive environment</b> for employees to share ideas and concept (e.g. environment that promote trust and cooperation, teamwork, and continuous learning)	2.48	3
Use of <b>training</b> to improve coaching in enhancing knowledge sharing initiatives.	2.51	4
Use of <b>intranet</b> technologies to encourage staff members to interact and share knowledge with each other and rest of the organisation.	2.55	5
Use of <b>recruitment and selection</b> of individuals with appropriate skills and attitudes as part of knowledge sharing initiatives.	2.63	6
Use of clear <b>communication channels</b> to promote the value and benefits of sharing knowledge (e.g. report, news bulletin, e-mail etc).	2.68	7
Use of <b>flexible organisational structures</b> to increase the level of employees' involvement in the sharing of knowledge.	2.71	8
Use of <b>performance measurement system</b> to evaluate the effectiveness and contributions of knowledge sharing initiatives.	2.80	9
Use of <b>appraisal and reward system</b> to motivate employees to share knowledge in the organisation.	2.81	10
Employ a <b>knowledge leader or champion</b> to be responsible for knowledge sharing initiatives.	2.83	11
A written <b>knowledge sharing policy</b> is in place as a part of knowledge sharing initiatives.	2.91	12

Table 2: Informal approaches to knowledge sharing

Informal approaches to knowledge sharing	Overall (N=384)	
	Mean	Rank
Use of <b>face-to-face social interaction</b> to informally share ideas and knowledge.	2.39	1
Use of personal <b>relationships</b> to build trust and strengthen employees' relationships to enhance the sharing of knowledge informally.	2.46	2
Use of <b>social events</b> such as lunches, drinks and dinners to provide informal settings to allow people to socialise, talk together and share knowledge	2.52	3
Use of <b>conducive workplace settings</b> of office layout for speaking, and sharing knowledge informally with colleagues and the meeting of people (e.g. pantry, communal area, meeting space, library and etc).	2.57	4
Use of <b>community of practice</b> to encourage work interactions and the sharing of ideas, experiences and knowledge informally.	2.58	5
Use of spontaneous <b>informal communications</b> to encourage social interaction for smooth knowledge sharing.	2.59	6
Use of <b>storytelling</b> in a workshop setting to stimulate informal knowledge sharing.	3.14	7

The size of organisation does not really provide a useful gauge as to the type or formality and informality of knowledge sharing approaches employed. This demonstrates that the use of different formal and informal approaches to knowledge sharing depends ultimately on the context of the work. It simply means that organisation should choose the approaches that are more suitable to them and that are likely to deliver dividends for them. In simple terms, for any size organisation, there are instances where formal approaches could serve them well and there are some instances where informal could serve them equally well. It is really about the appropriateness and relevance of approaches to knowledge sharing. The implication of this is that organisations of any size do not just have to rely on any one approach because they are large or small. Organisation should be open minded in the use of different approaches to knowledge sharing, and be able to consider the approaches that they have given the value that offer to the organisation.

**The significant contribution of knowledge sharing to organisational performance**

The study investigated the contributions of knowledge sharing to organisational performance. From a list of 10 possible contributions of knowledge sharing to organisational performance, the respondents were asked to rate the ‘degree of contributions’ based on a Likert scale ranging from 1 (A very high level of contribution), 2 (Some contribution), 3 (Little contribution), 4 (Low level of contribution), to 5 (No contribution at all). These are shown in Table 3 in order of ranking.

*Table 3: Significant of knowledge sharing*

The level of contributions of knowledge sharing to organisational performance	Micro (N=83) Mean	rank
Increases efficient operations and reduces costs by eliminating redundant or unnecessary processes.	1.97	1
Improves better decision making through opportunities for learning and skills development and consequent advancements in job responsibilities.	2.01	2
Improves project delivery and services to market faster, as lessons learned from one project can be carried on to future projects resulting in continuous improvement.	2.02	3
Improves ways of working and minimises unnecessary duplication as employees will be both more effective (adopting the most appropriate solutions) and more efficient (using less time and other resources).	2.04	4
Increases network connectivity between internal and external individuals and so improves client/customer service	2.06	5
Help with the integration of knowledge into work practices, and in so doing improves the speed and effectiveness at which key business issues are addressed.	2.14	6
Improves the identification and dissemination of best practices among employees across the organisation.	2.14	7
Enhances business development and the creation of new business opportunities as organisations can be more agile and better able to respond to organisational changes.	2.15	8
Knowledge sharing environment gives employees the opportunity to communicate effectively and comfortably, which inspires creativity and innovation.	2.21	9
Enhances employees’ retention rates as they are able to use their full potential and in so doing, recognised in term of their value of skills and knowledge.	2.21	10

Knowledge sharing may deliver a strong benefit by way of increasing efficient operations, reduction in cost, better decision making, improved project delivery and services, improved ways of working and minimisation of unnecessary duplication,

improved client/customer service, speed and effectiveness at which key business issues are addressed, improved the identification and dissemination of best practices, enhanced business development and the creation of new business opportunities, inspired creativity and innovation, and enhanced employees' retention rates.

Kruskal-wallis test shows that there is no statistically significant evidence to suggest that organisation of a particular size derives a greater level of contribution to knowledge sharing than another. All organisations, irrespective of size, can benefit from the exploitation of knowledge sharing. This offers training providers an opportunity to offer appropriate training to organisations of different sizes on the potential benefits that can accrue for them through knowledge sharing and how they can exploit this. They may then decide which benefit would be greatest for them at different periods, and in different context. Understanding the benefits of knowledge sharing may assist construction organisations in taking full advantage of the improvements in organisational performance.

However, various obstacles exist regarding the implementation of knowledge sharing in organisations. It is important to consider the type of culture within an organisation, since the cultural habits of members of an organisation could affect the way in which it shares knowledge. As a result, one could ascertain whether an organisation's culture could support or discourage the use of knowledge sharing for improved organisational performance.

## CONCLUSIONS

This paper has presented the results of a questionnaire survey, which investigated Malaysian practitioners' perceptions on knowledge sharing in Malaysian construction organisations. The study shows that formal and informal approaches to knowledge sharing are practiced differently by organisations. Organisations share their knowledge at different rates and apply different approaches (formal and informal) in managing their knowledge. It is suggested that size does not really impact on the use of formality and informality of approaches to knowledge sharing. Construction organisations are generally aware of the benefits of knowledge sharing in improving organisation performance. Knowledge sharing approaches are not likely to be implemented successfully unless an appropriate and supportive organisational culture is in place

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