Recognising the importance of "Tacit" skills of the construction worker in a knowledge environment

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RECOGNISING THE IMPORTANCE OF "TACIT" SKILLS OF THE CONSTRUCTION WORKER IN A KNOWLEDGE ENVIRONMENT

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Construction knowledge workers and their tacit knowledge skills in particular are still considered to be relatively unexplored. Hence, proper understanding and management of this resource is of immense importance for better performance of the industry as a whole. The paper stresses the value of the knowledge worker and their tacit knowledge skills in construction and highlights the importance of skills, training and development of construction workers. Selecting right human resource policies and ensuring knowledge supportive culture are highlighted as two dimensions in construction knowledge worker development. This paper argues that this provides a valid basis to embrace the concept of knowledge worker and the importance of tacit knowledge skills at all levels within construction organisations.

Keywords: construction industry, knowledge worker, tacit knowledge skills

INTRODUCTION

As highlighted through a number of government and academic reports (Latham, 1994; Egan, 1998; Fairclough, 2002), the construction industry is a sector of the economy which faces many challenges, especially in terms of performance. Yet, with the shift of businesses from an asset-centric to a knowledge-centric environment, it is increasingly being acknowledged that Knowledge Management (KM) can bring about the much needed innovation and improved performance the construction industry requires (Webb, 1998; Egbu *et al*., 1999, Carrillo *et al*., 2000; Kamara *et al*., 2003). Against this background of the knowledge economy, what people do with their knowledge, termed as tacit knowledge, is considered to be the real driver for the performance of the industry. Therefore, as a labour-intensive industry, the construction worker and their tacit knowledge has become more relevant to sustaining business performance than traditional physical capital (Drucker, 1992; Scarbrough & Swan, 1999), and is considered as a critical factor in determining a construction organisation's ability to remain competitive.

The importance of the construction worker and their tacit knowledge is highlighted through the industry's reliance on skills and the capacity to bring different skills together effectively (Druker & White, 1996). Accordingly, the concept of the knowledge worker has long been important to construction organisations (Green *et al*., 2004). Further, due to the intrinsic characteristics of the industry, construction employs an extremely diverse range of people from a wide range of occupational cultures and backgrounds, including unskilled people, managerial and professional positions, and carries the challenge in managing people effectively to ensure

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organisational success. In this context and in order for the Construction Industry (CI) to achieve best value, there is an emerging importance placed on effectively developing the knowledge worker and their tacit knowledge skill base. Accordingly, this paper aims to explore the importance of managing and developing the construction knowledge worker and their skill base in view of enhancing the performance of construction organisations.

KNOWLEDGE WORKER IN CONSTRUCTION

It is argued (Robinson *et al*., 2001; Egbu & Robinson, 2005) that the CI, although known for its highly tangible products such as buildings and other structures, is increasingly now recognised as a provider of services, placing more emphasis on knowledge. Hence, CI has already entered to a knowledge economy where it is perceived as one of the knowledge based value creating sectors of the economy. Moreover, people are known to be the key to success in a knowledge economy, whom termed as knowledge workers. There are a wide range of professionals involved in CI, working as an inter-disciplinary team in delivering the construction products. People are recognised as possessing knowledge, skills and know-how, having the ability to create knowledge and value, and collectively retaining organisational memory. What people do with their knowledge is the real driver for competitive advantage in the knowledge economy (Quintas, 2005). As highlighted by the UK Government's Competitiveness White Paper (DTI, 1998), one of the two distinct tasks envisaged for organisations within the knowledge driven economy is to encourage and support employees in developing their skills and qualifications on a continuous basis. The UK CI employed 19,130 workers per £1 billion output (total of 1,599,000 workers) in 2003 (Green *et al*., 2004), hence considered to be one of the labour intensive sectors of the economy. People are an organisation's most valuable asset and this is especially true in relatively low-tech, labour intensive industries such as construction (Green *et al*., 2004).

The rediscovery of the importance of employees' knowledge coincided also with a popularisation of the idea of the 'knowledge worker'. The importance of the construction worker is highlighted by the fact that industry relies on skill and on the capacity to bring different skills together effectively (Druker & White, 1996), thereby the concept of the knowledge worker has long been important to construction organisations (Green *et al*., 2004). In recent years, with the growth of the service sector, this emphasis placed on the construction knowledge worker has gradually increased. Further, construction employs extremely diverse range of people from a wide range of occupational cultures and backgrounds, including people in unskilled, craft, managerial and professional positions, challenging to manage knowledge worker effectively to ensure organisational success. Much of this individual knowledge is unknown to others and unmapped and unrecorded. As Sheehan *et al*. (2005) asserts in construction,

"Some 80% of the useful knowledge is tacit and cannot be written down".

The CI is characterised by a wealth of experiential knowledge, yet employees retire or leave the organisation, potentially taking tacit knowledge and a potential source of competitive advantage with them.

As Rezgui (2001) cited, there are few key reasons that limit current approaches of KM in the CI. Among the key factors for these limitations are:

- Much construction knowledge, by necessity, resides in the minds of the individual working within the domain.
- The intent behind the decisions is often not recorded or documented.
- The individuals who have knowledge about the project are likely to leave for another project at the end of the construction stage; hence their input is not captured.

All these three limitations indicate the direct correlation with the human factor in the CI and stress the importance of the concept of knowledge worker which has long been central to CI performance. Further, both Sheehan *et al*. (2005) and Rezgui (2001) stress the point that much knowledge possessed by knowledge workers being tacit in nature particularly in CI. Accordingly, the following section outlines the nature and the importance of the tacit knowledge skills and its presence in construction as a knowledge based industry.

TACIT KNOWLEDGE & ITS IMPORTANCE IN CONSTRUCTION

Within the last few decades, there has been an increasing interest in the tacit dimension of knowledge, which is perhaps hardest to manage, as it cannot be formally communicated and is often embedded within human beings. As Herrgard (2000) suggests, tacit knowledge is obtained by internal individual processes like experience, reflection, internalisation or individual talents. While highlighting the importance of tacit knowledge, Tiwana (2000) defines it as know-how that is stored in people's heads which is personal, acquired mainly through education, training and experience. In a similar sense, Saint-Onge (1996) describes tacit knowledge as an individual's intuition, beliefs, assumptions and values, formed as a result of experience. It is from these beliefs and assumptions, which make up an individual mindset that decisions are made and patterns of behaviour developed. Thereby, in working life one can easily find many examples of tacit knowledge such as intuition, rule-of-thumb, gut feeling and personal skills, all based on individual experiences.

Within construction, the type of knowledge varies considerably, yet gains increase concern on tacit knowledge as a labour intensive industry. In the context of construction, examples of tacit knowledge skills include estimating and tendering skills acquired over time through hands-on experience of preparing bids, understanding the construction process, interaction with clients/ customers and project team members in the construction supply chain, as well as understanding tender markets (Egbu & Robinson, 2005). Tacit knowledge of the workers has been clearly highlighted in many research carried out in the CI. A research carried out within structural design firms (Al-Ghassani, 2003) showed that about 80% of knowledge used during concept design stage is tacit compared to about 20% of explicit knowledge. Specially, Engineers, Architects and other professionals within the CI are not in a position to 'cut and paste' best practice (Kamara *et al*., 2003) from the past due to the unique and the complex nature of the construction projects. They have to draw on the past to find solutions for the future. Tacit skills evolve from these shared practices and experience which need to be developed and managed for the project and the organisational success. As such, developing and managing tacit skills more effectively offers construction organisations a possible mechanism for improving their performance in times of greater competition.

As Grant (1996) asserts, the source of competitive advantage in dynamic environments is not knowledge that is proprietary to the organisation, because the value of such knowledge erodes quickly due to obsolescence and imitation. Rather, sustained superior performance is determined by non-proprietary knowledge in the form of tacit individual knowledge. Tacit knowledge can form the basis of competitive advantage because it is both unique and relatively immobile. Yet, because that knowledge is possessed by individuals and not the organisation, a critical element of sustained competitive advantage is the ability to integrate the specialised and tacit skills of the individuals. As such, this highlights the importance of tacit knowledge towards organisational performance when developed and managed properly. Having established the importance of the knowledge worker, tacit skills and it relationship to the performance, succeeding section discusses development and the management of knowledge worker and their tacit knowledge.

DISCUSSION

As Harman and Brelade (2000) contended, KM to be effective, must encapsulate the idea that it is through the acquisition of knowledge by individuals and their willingness to apply their knowledge for the benefit of the organisation that competitive advantage is achieved. Davenport (1998) further highlights this issue by asserting “the most dramatic improvements in KM capability in the next ten years will be human and managerial”. Invariably, the management of tacit knowledge is intrinsically linked to the development of people (Egbu *et al.*, 2001) and to the processes that facilitate knowledge generation, distribution and sharing between related individuals and workgroups. This stresses two aspects or dimensions in tacit knowledge management:

- Developing people or the knowledge workers with the right human resource policies
- Ensuring knowledge supportive and conducive environment or culture within the organisation

An increasing number of individuals do work which is knowledge based and the concept of knowledge worker needs to embrace these individuals who can be found at the all levels within organisations. A major aspect of managing tacit knowledge in a knowledge-based economy is giving to knowledge worker the power that arises from the ability to solve the critical contingencies facing the organisation. It means that knowledge worker will increasingly be able to determine that they are developed and managed in ways acceptable to them. This highlights the necessity of managing knowledge worker with flexible, employee centred approaches based on consensual models (Harman and Brelade, 2000). Yet, Construction as an industry which has a reputation for its dominant culture of command and controls consistently emphasises and correlates with the hard model of human resource management. Also the culture of subcontracting and self employment marginalises the importance of people management and thereby reflects and reinforces the dominant industry receipt of hard human resource management. As such it is an urgent matter for the CI to move towards the softer approach based teamwork from hard model of human resource management to enhance the collective efforts. Further, the ignorance of the knowledge worker and their skills within the construction context has contributed to a great extent for the under performance of the industry as lamented by many authors. As Egan (1998) asserted;

"….much of construction does not yet recognise that its people are its greatest asset and treat them as such. Too much talent is simply wasted, particularly through failure to recognise the significant contribution …… We understand the difficulties posed by the fragmented structure of the industry, but construction cannot afford not to get the best from the people ……" (para 17: p14).

As contended by Nesan & Holt (1999), the issue of the critical role that employees play in fostering an effective construction business has often been overlooked. According to Cooke-Davies (2001: 185), "*it is people who deliver the projects and not processes and systems*", which gains increased validity in the context of construction, as a labour intensive industry.

As the second dimension, the KM environment needs to reinforce the acquisition, use and sharing of individual tacit knowledge. Therefore, significant effort should be directed towards exploiting non-IT techniques such as communities of practice to facilitate person-to-person and person-to-organisation interactions (Robinson *et al*., 2001). Communities of practice within which individuals share common work experiences and problem agendas provide a social context within which knowledge may be created and effectively shared. Several authors (for Eg, Augier and Vendelo, 1999; Koskinen, 2003), have repeatedly highlighted the importance of interaction, integration and involvement of knowledge workers through social networking within an organisation. Social interaction of employees cultivates a knowledge sharing culture based on shared interest, thus encouraging continuous knowledge generation through the evolution of a community of practice. This will involve an understanding of individuals and teams and a willingness to be open to new ideas and personal development. As such managing tacit knowledge in a knowledge environment, corporately through human resource policies and procedures will be judged by its ability to develop knowledge workers to enable them to apply their knowledge for the benefit of the organisation.

CONCLUSIONS

The construction is a knowledge based industry, where knowledge has become the driving force to bring critical competitive advantage. For the CI to perform successfully with the challenges of the knowledge economy it has to embrace the concept of knowledge worker and a knowledge culture at all levels within organisations. The paper stressed the importance of knowledge worker and their tacit knowledge skills in construction, examined the development and management of knowledge worker. This provides a valid basis for more empirical studies centred on knowledge worker and their tacit skills in the CI.

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