Knowledge Management and Human Resource Management (HRM): The Role of the Project Manager

Dr. Charles O. Egbu
Reader in Construction and Project Management, School of the Built Environment, Leeds Metropolitan University, Leeds LS2, 8BU, UK. Email: C.EGBU@LMU.AC.UK

Abstract

Effective knowledge management involves the creation, capturing, sharing, implementing and exploitation of knowledge. In this context too, individual knowledge would have to be transferred to project and/or organisational knowledge base to improve project and organisational goals. An examination of the knowledge management literature highlights an overwhelming bias towards articles on the role of information technology (IT), with relatively few considering the role of people. There are different typologies of knowledge such as tacit and explicit knowledge. It is argued that it is the tacit knowledge, which cannot be easily communicated and understood, which will typically be of more value to innovation processes within projects and organisations. It is this knowledge asset, possessed by project and organisational staff members 'that can varnish overnight'. Through a combination of recently completed empirical research on innovation and knowledge management in diverse project environments and a thorough review of the relevant literature on knowledge management, intellectual capital and organisational learning, this paper reviews the role of the project manager in knowledge management. From a 'disciplined' project management perspective, it is generally accepted that some of the functions of the project manager are leadership, communication, motivation, decision-making, team-building, reward and performance management. The paper articulates how the project manager could employ these important functions for effective knowledge management. It focuses on such issues as reward (individual and team-based), recognition and performance management and how the project manager might employ the use of communities of practice (CoP), job-rotation, coaching, mentoring, shadowing, quality circles, project meetings, reports and project summaries to improve knowledge sharing and transfer in project environments. The paper concludes that there is a need for a concerted effort to be levelled at the important role of human resources and how it impacts upon the creation of knowledge sharing culture. The project manager has an important role to play in this regard.

Keywords: Human resource management, innovation, intellectual capital, knowledge management

Introduction

There is now a general acceptance in competitive business environments and project-based industries that knowledge is a vital organisational and project resource that gives market leverage and contributes to project success (Nonaka and Takeuchi, 1995; Egbu, 1999a). Few will also argue that an organisation's capacity to innovate depend to a very considerable extent upon the knowledge and expertise possessed by its staff. It follows that, for project managers, the processes by which knowledge is created or acquired, communicated, applied and utilised must be effectively managed. However, It has been raised elsewhere (Egbu *et al*, 2001) that our understanding of the important role of tacit knowledge in project innovations is limited, and so is the role a project manager plays in knowledge management processes.

A thorough review of the knowledge management literature highlights an overwhelming emphasis on information technology (IT), and less about people (Scaborough, 1999; Egbu et al, 2001). Similarly, few empirical studies have been conducted that address the role of project managers in knowledge management. Grant (1996) and Hall (1993) have also argued that it is tacit rather than explicit knowledge, which will typically be of more value to innovation processes. Yet, tacit knowledge is knowledge, which cannot be easily communicated, understood or used without the 'knowing subject'. The implication of the above discourse is that knowledge management that focuses on creating network structures to transfer only explicit knowledge will be severely limited in terms of its contribution to innovation and project success.

Methodology

Much of the information presented in this paper has come from three main sources. Firstly, some of the writings are based on experiences drawn from a two-year research project funded by the United Kingdom Economic and Social Research Council (ESRC) under its Innovation Programme. The study (Egbu, 1999b), which was completed in 1998, was aimed at developing a prototype-training simulator that will capture experiential learning of the cultural aspects of the innovation processes in organisations. The study involved four case studies from four different innovative construction organisations; over 50 ethnographic interviews, company archive documentation and video capture of innovative processes and products. The second source is a recently completed study (KME Partnership, 2000) – Knowledge Management Exchange, sponsored by the European Social Fund (ESF) under the ESF Objective 4 bid and which the author was involved. The study addressed the exchange of knowledge and the auditing of knowledge assets in small and medium enterprises (SMEs). The study adopted different research strategies, including interviews, questionnaires and workshops in the elicitation of relevant research information. Finally, a thorough review of the relevant literature on creativity, innovation, knowledge management, intellectual capital and organisational learning has also informed this paper.

Knowledge Management in Project Environments – Some of the challenges

It could be argued that the nature of projects does not lend itself to knowledge management practices. For a start, projects are temporary events whereas knowledge management programmes are almost always seen as long term investments. Projects are also seen as temporary coalitions of individuals and teams who come together for the duration of the project and then disband after the end of the project. This latter characteristic of a project poses some challenges in terms of knowledge management. These include the difficulty of building trust among project team members, motivating project staff and operatives during the project period. These are important issues for knowledge management. The project culture is also likely to be different from an organisational culture. The project manager also has the project objectives (e.g. cost, time, quality, safety, and environmental issues) as the overriding project concerns as it is on the fulfilment of these objectives that he/she is normally judged. There is also the added complication in project environment, which is the fact that there may be members of the wider project team (i.e. those involved in the project supply chains) who, for many reasons, may not have the interest, drive and commitment towards knowledge management. There are also those who are committed to the project for a very short period (e.g. a week or two or even less) and who are bound to ask the question - 'what is there for me (WITFM) in knowledge management anyway?

If, for one moment, we ignore the fact that in some industrial and organisational settings, many of the project team members can be involved in many different projects, the idea of creating knowledge databases, yellow pages for projects may be questioned in some quarters. The questions may be directed at the relevance of such 'knowledge management tools' to the current projects as well as other projects (as the nature of projects differ), the life span of the databases and their economic justification.

It is however worthy of note that that project knowledge is not just made up of the explicit type which is easily documented and archived. There is also the tacit or implicit Knowledge. It is equally important to remind us that projects are made up of people, many of whom have requisite skills, knowledge, competencies and wisdom. Some will also bring with them knowledge dimensions from previous jobs, which could provide innovative solutions to their new projects.

Knowledge management from a project perspective is about harnessing individual and project knowledge to the benefit of the project. The challenges, therefore, for project managers and leaders of projects are, firstly, to recognise the particular constraints imposed on knowledge management processes by the project environments. Secondly, to find the means of creating, transferring, sharing, implementing and exploiting individual and project knowledge in such a way that they lead to project success and provide benefits to project clients.

The Project Manager and Knowledge Management – A consideration of the Human Resource Management Issues

From a 'disciplined' project management perspective, few would argue that some of the functions of an 'effective' project manager include leadership, communication, motivation, decision making, teambuilding, reward and performance management. The issues of motivation, reward and performance management are vital to effective human resource management. The project manager needs to exploit these functions in managing knowledge at the project level. The author argues that the ability to create an environment where there is a culture of sharing of intuitive and tacit knowledge should be seen as an essential ingredient in project strategy and should be given due recognition in the project environment. It calls for project leadership and vision, effective communication, motivation and teamwork. Tacit knowledge is difficult to articulate and transfer. Its transfer demands that the parties involved in the transfer share cognitive frames and hold common heuristics. The receiver of tacit knowledge should hold the absorptive capacity needed to use and benefit from the knowledge transferred. The lack of absorptive capacity of the receiver is a potential obstacle to tacit knowledge transfer. In the ESRC study mentioned earlier, which involved four innovative construction organisations, certain characteristics associated with organisational culture and climate that were shown to be favourable to innovation, creativity and knowledge management includes:

- Support from top management and the presence of a strong 'innovative champion'
- Flexibility in the lines of communication allowing top-down, bottom up and lateral communications within organisations
- A risk tolerant climate, where it is accepted that lessons could be learned through mistakes.
- A climate where people feel valued and maintain form of 'ownership' or involvement with the innovation or idea
- A sharing culture where there is openness and willingness to share information, experience and knowledge across project teams and across organisation
- A climate where people feel secure in their jobs

The author suggests that the above characteristics are also applicable at the project level in managing individual and project knowledge. The individual's sense of being valued by the project manager and team members will encourage them to contribute to the team wholeheartedly. If on the other hand they feel undervalued, their resentment will block their own imagination, intuition and fresh ideas and they will not be so willing to really contribute. This resistance will block the potential for innovation. It is important to build into the project's strategy and the project structure that people's wisdom and intuition are assets, which can be accessed as sources for ideas, inspiration, creativity and originality. By not doing so, many opportunities to innovate in projects could be lost.

Some aspects of tacit or implicit knowledge are held in non-verbal forms, and therefore, the holder cannot provide a useful verbal explanation to another individual. Instead, tacit knowledge typically becomes embedded in, for example, routines and cultures and can only be obtained from direct experience in a given domain. However, discussions in workshops organised as part of the ESF sponsored project on Knowledge Management Exchange (KME, 2000) mentioned earlier, revealed some interesting issues with regard to the mechanisms that promote the sharing of tacit knowledge. The mechanisms perceived to be most effective include:

- Communities of Practice (CoP)
- Story telling
- Quality circles
- Mentoring and shadowing
- Coaching and job rotation
- Networking
- Project audits and team member interviews
- Regular project meetings, reports and project summaries
- Project seminars and workshops

- De-briefing after end of projects/Post-mortem (end of project review analysis and documentation)

Networking, communities of Practice (CoP), story telling, coaching, mentoring and quality circles are important mechanisms for sharing and transferring tacit knowledge in project environments. These should be encouraged and considered by the project manager and project leaders. Communities of practices are needed to encourage individuals to think of themselves as members of 'professional families with a strong sense of reciprocity. The human networking processes, which can encourage sharing and the use of knowledge for project innovations are important. The project manager should also espouse 'the law of increasing returns to knowledge' as a positive way of encouraging knowledge sharing. Shared knowledge stays with the giver while enriching the receiver.

Intuitive knowledge is managed by individuals being valued and not by being heavy-handed through project 'controlled processes'. It is folly to believe that any project organisation can make people have ideas and force them to reveal intuitive messages or share their knowledge in any sustained manner. An individual's intuitive knowledge cannot be manipulated in any meaningful way nor controlled without the individual being willing and privy to it. The process of trying to manipulate or control intuitive knowledge infact creates their destruction. The issues of trust, respect and reciprocity are vital elements of a conducive environment for managing tacit knowledge. It is through these that individual members of the project can be motivated to share their experiences and exploit their creativity. The project manager would need to recognise, provide incentives and reward knowledge performance and sharing behaviour patterns. He or she should also take action on poor knowledge performance. The regular communication of the benefits of knowledge management is important in sustaining the co-operation of project team members. A variety of ways exist for doing this, including regular meetings, project summaries, project memos and through project GroupWare/Intranet facilities where they exist. Any project strategy for KM should consider the training, recruitment and selection of project team members (e.g. subcontractors and suppliers). It should also pay due cognisance to the team members' competencies, requisite knowledge and their willingness and effectiveness in sharing knowledge for the benefit of the project.

If project leaders are interested in knowledge capture, sharing and exploitation, then it is necessary to consider that knowledge workers (project staff and team members) should be included in a dynamic process. This process is one that demands the support of motivation, creativity and the ability to improve an intellectual and comprehensive vision of the relationship between the project and the project team members. Simply put, individual and project knowledge should be seen as a project's intellectual capital, and an important factor in project success.

Conclusions and Recommendations

The paper has considered the importance of knowledge management in project environments and the role of the project manager in this regard. Knowledge, especially tacit knowledge, provides opportunities for project creativity and innovation. It is, however, difficult to articulate and transfer. Its transfer demands that the parties involved in the transfer share cognitive frames. The important mechanisms for sharing and transferring tacit knowledge include communities of practice (CoP), networking, story telling, coaching, mentoring and quality circles.

A favourable project culture and environment is vital if tacit knowledge is to be nurtured and exploited for the purpose of innovation. Such an environment needs to recognise that the workforce has huge reservoirs of knowledge, ideas, feelings, emotions, imagination and creativity, which can be respectfully tapped into. The issues of trust, respect and reciprocity are vital. It is through these that individuals can be motivated to share their experiences and exploit their creativity.

As leaders of projects and through their project functions, project managers have an important contribution to make towards knowledge management in project environments. In the main, from a human resource perspective, they can effect their contribution through leadership, communication, teambuilding, motivation, recruitment & selection, reward and performance management.

It is also argued that an understanding and implementation of effective knowledge management principles could play an important role in the successful outcome of a project. There is still a meagre amount of empirical studies on knowledge management in project environments, which takes a human resource perspective. For researchers, education and training providers, there is an urgent need as well as ample scope for a concerted effort to be levelled at this very important area, and for it to be exploited for the benefit of project clients.

References

Egbu, C. O. (1999a) "The Role of Knowledge Management and Innovation in Improving Construction Competitiveness". Building Technology and Management Journal, Volume 25, pp. 1 - 10.

Egbu, C. O. (1999b) " Mechanisms for exploiting construction innovations to gain competitive advantage", Proceedings of the 15th Annual Conference of the Association of Researchers in Construction Management (ARCOM), Liverpool John Moores University, UK, September 15 – 17, Vol. 1, pp. 115 – 123.

Egbu, C. O., Botterill, K and Bates, M. (2001) "A conceptual framework for studying knowledge management in project-based environments". Proceedings of the First International Conference on Postgraduate Research in the Built Environment, 15 – 16 March, University of Salford, UK, pp. 186 – 195.

Grant, R. (1996) "Towards a knowledge based theory of the firm", Strategic Management Journal, Vol. 17, pp. 109 – 122.

Hall, R. (1993) "A framework of linking intangible resources and capabilities to sustainable competitive advantage" Strategic Management Journal, No. 14, pp. 607 – 618.

Knowledge Management Exchange Partnership (2000) "Knowledge Management Exchange". A European Social Fund Objective 4 Programme. Final Report, The KME Partnership, Published by Leeds Metropolitan University, UK.

Nonaka, I. and Takeuchi, H. (1995) "The knowledge creating company", Oxford University Press.

Scaborough, H. (1999) "System error", People Management, 8 April, pp. 68 – 74.