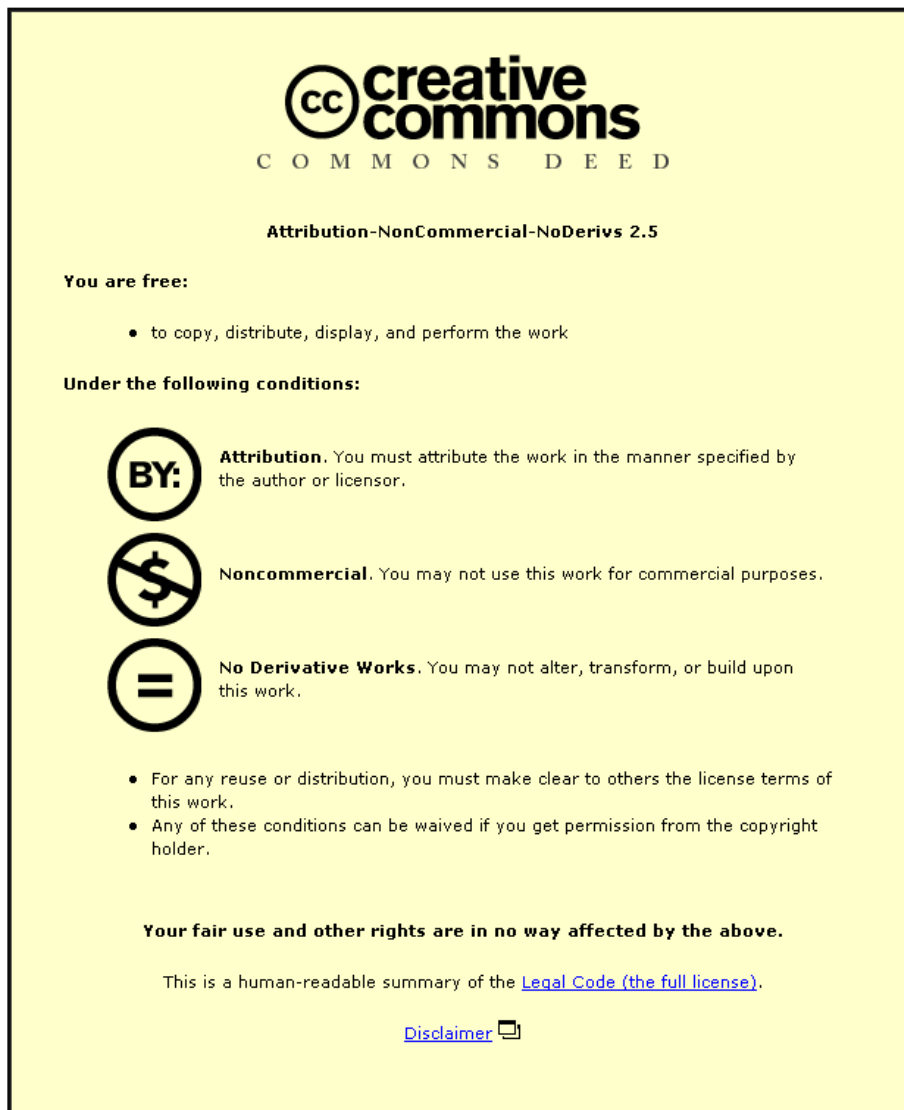




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
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Communities of Practice in Construction Case Study Organisations: Questions and Insights

K Ruikar, L Koskela, and M Sexton

Introduction

The strategic importance of knowledge is widely acknowledged, especially since it is a key asset for organisational competitiveness (Egbu, 2005; Quintas, 2005; Ofek and Sarvary, 2001; and Gann, 2000). The question to consider is, how can the knowledge be leveraged in practice? Traditional knowledge management approaches attempt to capture existing knowledge using different techniques and tools to some degree of success. In spite of these efforts, systematically addressing the kind of dynamic "knowing" that has an effect on practice requires active participation of people who are fully engaged in the process of creating, refining, communicating, and using knowledge (Wenger, 1998a). BP Group's Chief Executive, Sir John Browne's quote (in Prokesch, 1997), "Most activities or tasks are not one-time events... Our philosophy is fairly simple: Every time we do something again, we should do it better than the last time" encapsulates 'learning', which is an important component of knowledge management (KM). Actually, this idea of learning as an intrinsic part of production goes back to Shewhart ^[1] (Shewhart and Deming, 1939). This ethos of learning is embedded in the 'Toyota Way', which recognises the importance of learning, applying, reflecting and continuously improving in order to strengthen the organisation for the long-term (Liker and Meier, 2006). This learning element can be embedded in the 'culture' and hence the people, who are at the heart of knowledge management and an organisation's important knowledge asset. Although this is widely acknowledged, businesses seldom understand this axiom in terms of the communities through which individuals develop and share the capacity to create and use knowledge. It is the 'collective' learning (and knowledge) that takes place within the 'social systems' i.e. communities of practice, that is of particular

^[1] To understand the concept of learning as an intrinsic part of production, let us recall Shewhart and Deming's (1939) three steps in quality control: specification, production, and judgement of quality. It may be helpful to think of the three steps in the mass production process as steps in the scientific method. In this sense, specification, production, and inspection correspond respectively to making a hypothesis, carrying out an experiment, and testing the hypothesis. These three steps constitute a dynamic scientific process of acquiring knowledge."

significance to an organisation from a KM perspective. This, in the context of construction case study organisations, forms the prime focus of this paper.

A Case for Communities of Practice in Construction

Compared to the implementation of KM in other industries, it can be argued that the nature of the construction industry i.e. fragmentation, one-off nature of its projects, disparate project teams and the requirement for specialised skills, together make it a difficult obstacle to address. KM in construction projects is a challenging task. The construction project consists of numerous people from different companies with different professional backgrounds such as client, architects, project managers, designers, site managers, and workers. Furthermore, the project organisation is unstable over time and often becomes completely exchanged from phase to phase during the project. At an inter-organisational level project-related problems that occur and are collectively resolved through shared experiences can be permanently lost if not properly captured. There is therefore, the danger of not learning from past experiences. The same applies at an intra-organisational level, where individuals learn through shared experiences, communication and participation in communities comprising of people with whom they interact on a regular basis. Thus, the core of any KM initiative is in fostering a culture that is conducive to build, develop and nurture relationships between people, both by facilitating an environment and that encourages knowledge creation and sharing, by providing adequate mechanisms to capture, store, and share the knowledge (Dawson, 2000) within the context of the social dimension of knowledge.

Organisations increasingly rely on the networking of resources and competencies (Scarso and Bolisani, 2008). Often knowledge is created within communities of practice who share experiences and understandings that are not easily transferable to those outside the community (Quintas, 2005). Such communities of practice (CoPs) are an organisation's most versatile and dynamic knowledge resource and form the basis of an organisation's ability to know and learn (Wenger, 1998b). To stay competitive it is fundamental for the construction organisations (and indeed the industry) to differentiate from competitors. Creating and maintaining better methods for managing organisational knowledge is fundamental for future survival and success (Sheehan et al, 2005). It is essential that the industry differentiates itself by adding value to its projects and indeed the organisation as a whole – and communities of practice offer that potential. To understand how this is possible, it is important to review, critique and question some

of the underlying principal's of CoPs, and in doing so we will be better equipped to make informed judgements on how (if at all) can these be applied in an construction organisation's context.

Communities of Practice – A Critical Review

A CoP is defined as a system of relationships between people, activities and the world; developing with time, and in relation to other tangential and overlapping communities of practice (Lave and Wenger, 1991). Usually, there are many communities of practice within a single organisation and most people normally belong to more than one. CoPs emerge among people who have mutual engagement in a joint practice around which they share a common repertoire of knowledge (Brown and Duguid, 1991). CoPs exist in any organisation. Because membership is based on participation rather than on official status, these communities are not bound by rigid organisational affiliations; they can span institutional structures and hierarchies. What holds them together is a common sense of purpose and a real need to know what each other knows (Egbu, et al, 2003). CoPs can be found within businesses, across business units and across organisational boundaries (Zboralski and Gemunden, 2006). *Within businesses*, communities of practice emerge as people address recurring sets of problems together. By participating in such a communal memory, they can execute the work without having to remember everything themselves. When CoPs cut *across business units*, they can develop strategic perspectives that transcend the fragmentation of product lines. For instance, a CoP may propose the development of CAD standards for the production of drawings that no one business unit could have developed on its own as these need to be developed at an organisational level. In some cases, CoPs become useful by crossing organisational boundaries. For instance, in fast-moving industries, engineers who work for suppliers and buyers may form a CoP to keep up with constant technological changes.

CoPs exist in most organisations, quite often they remain unrecognised, ignored or even taken for granted (Quintas, 2005). Different terms are often used to describe a CoP. Some common terms include, knowledge communities, knowledge networks, learning communities, communities of interest, skills networks and thematic groups. Examples of communities of practice can be found in many organisations and each referring to CoPs differently. For example, 'learning communities' at Hewlett Packard, 'family groups' at Xerox Corporation, 'thematic groups' at the World Bank, 'peer' groups at British Petroleum, and 'Knowledge

Networks' at IBM Global Services (Por, 2004, Gongla and Rizzuto, 2001). Although there are subtle differences in the terminology used to describe CoPs, they remain similar in general intent. In essence, CoPs are communities comprising of a group of individuals with different skill sets, development histories, and experience backgrounds, who work together to achieve commonly shared goals (Ruggles, 1997). CoPs are closely knit groups or teams with a long history of practicing or collaborating together, long enough to develop into a cohesive community with relationships of mutuality and shared understandings (Lindkvist, 2005). A CoP exists because it produces a shared practice as members engage in a collective process of learning. People in CoPs can perform the same job or collaborate on a shared task (software developers) or work together on a product (engineers, marketers, and manufacturing specialists). They are peers in the execution of 'real work'.

Wenger (1998b) stresses that communities of practice are not a new kind of organisational unit; but in fact a different *cut* on the organisation's structure—one that emphasises collective learning rather than the unit they report to, the project they are working on, or the people they know. People belong to CoPs at the same time as they belong to other organisational structures. In their business units, they shape the organisation. In their teams, they support projects. In their networks, they form relationships; and in their communities of practice, people develop the knowledge that enables them to carry out the other tasks. It is this informal fabric of communities and shared practices that makes the official organisation effective and, indeed, possible (Wenger, 1998b). Figure 1 illustrates the contribution of communities of practice towards collective organisational intelligence. To understand this let us take the hypothetical example of a bridge engineering unit that has been tasked with a project to design a long-span, cable-suspended bridge in an area known for seismic activity. The core team of engineers (community 1) have collective expertise in bridge design of long-span, cable-suspended bridges, but very little know-how of designing in a seismic zone. Community 1 seeks this knowledge through discussions and collaboration with a team of geophysicists and seismologists (community 2) working within the organisation many of who have international links (external networks) with experts specialising in this area. Collectively, the two communities, share knowledge and ideas, discuss problems and probable risks and develop strategies to manage potential risks. This new knowledge is aggregated and contextualised, so that all future projects of similar intent can develop a shared understanding of the potential risks and benefits. Collectively, this knowledge contributes to the 'organisational intelligence'.

Take in Figure 1

The example and scholarly literature (Wenger, 1998a&b and 1999) suggest that organisations can truly benefit from the collective shared knowledge of CoPs and certainly there are benefits to be incurred. Such assertions, however, can often be simplistic or positivist assumptions blinded by the 'glitter' that surrounds the reality. Then there some are fundamental issues and questions that need to be considered and addressed. Those which challenge the quintessential meaning of what makes and binds the community. This research raises some pertinent and provocative questions which challenge these assertions. Doing so can shed some light, and therefore assist in better distinguishing between prescription and reality. Lindkvist (2005) describes CoPs as tightly knit groups that have been practicing together long enough to develop into a cohesive community with relationships of mutuality and shared understandings. Hildreth and Kimble (2004) consider a CoP as an important vehicle for breaking through intra- and inter-organisational barriers to share knowledge by enabling knowledge to flow more effectively within and between organisations. Trust is considered as an essential ingredient for effective knowledge transfer (Ford, 2003). The foundation of a CoP is built around trust and face-to-face interactions and close inter-personal relationships contribute to trust (Zarraga-Oberty and Saa-Perez, 2006; Preece, 2004). How successful or not a community of practice is often depends on the willingness of members to share knowledge and their trust in one another. But, how is the issue of trust addressed when members of the community belong to organisations that are business competitors? How can, or indeed are, such intra-organisational (and inter-organisational) barriers to sharing knowledge overcome in practice (Constant et. al., 1994) ? Such barriers can prevent individuals who seek knowledge from connecting with those who possess it; and in doing so challenge the very 'meaning' of a community.

Knowledge is a sensitive issue. In an organisation where knowledge is the main asset that differentiates it (or an individual) from competition, what is the incentive to 'share' that core asset and risk loosing the competitive edge? In short, what are the implications of taking the 'expertise' away from the expert? Besides, competitive intra-organisational environments, which employ 'up or out' policies, can further inhibit knowledge sharing. The sensitivity issue extends beyond rigid organisational boundaries. How are sensitivity issues managed in communities that operate beyond an organisation's formal boundaries? Also, how do issues related to Intellectual Property Rights (IPR) and commercial sensitivity stifle or even challenge

the core meaning of the community and its purpose? Then there are assertions that focus on the 'learning' element (Wenger, 1998a&b). For example, Wenger (2008) assert that communities of practice exist because they produce a shared practice as members engage in a collective process of learning. This, however, assumes that the people (and therefore the organisation) are enthused to learn and therefore motivated to join or remain in a community. Thus, although the theoretical underpinning of communities of practice is sound, there are some fundamental issues that need reconciliation. For example, reconciling the espoused 'linear', 'rational', and 'quantitative' ethos of decision support models, formal organisational structures and reward systems with the 'social', 'organic', and 'qualitative' ethos of communities of practice. There lies the biggest challenge. Equipped with this new knowledge, the next stage of the research progressed to case studies that aim to explicate some of the questions raised.

Research Method

Background

After critically reviewing the literature on CoPs and querying some core assertions this research set out to seek answers. The next step of the research was to establish how the issues are addressed in practice, if at all. For this purpose a case study approach was adopted, given the potential this method allows, where investigators can retain the holistic and meaningful characteristics of real-life events (Yin, 1984), whilst providing a better understanding of complex issues or objects (Soy, 1997). Additionally, this method can extend experience or add strength to what is *already known* through previous research. Considering this, case studies were conducted with the aim of establishing the role of CoP in facilitating KM strategies of construction organisations. Three organisations operating in the construction sector were selected for the purpose of this research and selection was on the basis that each considered knowledge management to be of strategic importance and each had a team dedicated to strategic knowledge management. To maintain anonymity, the case study organisations are identified as Organisations 1, 2 and 3 (see Table 1).

Table 1. Background of Case Study Organisation and Interviewee Roles

Taken in Table 1

The case study data was collected through semi-structured interviews with knowledge managers, follow-up discussions with interviewees and additional documentary evidence such as company information from company Web sites,

relevant reports and procedural notes. The interviewees were requested to elaborate on their role as knowledge managers to better understand the skills and competence requirements for those roles. Typically, each interview lasted for an hour and a half. The interviews were semi-structured in nature and the interviewees were provided with a copy of the questionnaire. Questions asked were within the parameters of the guideline questionnaire. When deemed necessary, interviewees were asked to elaborate on specific aspects for further clarity. The questions focused on the following three areas in order to:

- Capture the role of CoPs within construction organisations and their contribution to organisational knowledge;
- Establish the motivation factors for participating in CoPs; and
- Determine the effectiveness of the communities for KM.

All interviews were recorded with consent from the interviewees and then verbatim transcribed. The transcripts were then analysed qualitatively with a view to bring clarity to some of the issues raised, i.e. role of CoPs, effectiveness of CoPs and motivation factors for participation. Doing so can provide an insight into how companies currently manage knowledge. Given how intertwined the three issues are, the discussion on findings and analysis does not attempt to separate these. The findings of the case studies or indeed the paper are not intended to be prescriptive in nature, but are intentionally descriptive to provide contextual data that allows readers to draw inferences in the context of their organisations. Using this new knowledge it can be possible to inform practices about the key aspects of effective knowledge management with particular focus on CoPs.

Case Study Findings and Analysis

Given that the focus of this research was on the role of CoPs, the case study organisations were asked to elaborate on the exact role of CoPs and their contribution towards KM. It was seen that in two (Organisations 1 and 2) out of the three case study organisations, the exact meaning of a CoP was not known, therefore the interviewees were unable to isolate the role of these communities in their organisations. To overcome this problem, Wenger's (2008) table of activity-centred communities was used as a guideline to identify the type of communities that existed in Organisations 1 and 2 (see Table 2). Some hypothetical, construction-specific examples and scenarios were used to describe the scope of the communities.

Table 2. Activity-centred Communities of Practice in Organisations 1 and 2

Take in Table 2

Equipped with this information it was possible to tease-out the type of communities that existed within Organisations 1 and 2. For example, from discussions with the KM director at Organisation 1, it was clear their business was split into sectors; and formal and informal communities existed within each sector (e.g. public, private, infrastructure and industry sectors). Each sector comprised 'speciality' sub-sectors such as housing, education, and so on. Groups of experts belonging to a speciality formed informal communities to share experiences and develop a shared catalogue of resources (e.g. tools and ways of addressing recurring problems) for mutual benefit. Thus, the presence of CoPs, although not formally recognised was still evident. From the interview it was clear, that while most members would willingly share knowledge with peers, there were no formalised, proactive arrangements to get members together and collectively discuss ideas, address issues and contextualise, share and document knowledge for future reference. The main inhibiting factor was the conflict of interests at organisational and individual levels. This was partially due to the lack of incentives for employees to want to assess the effectiveness of their personal working methods, which can be a complex inter- and intra-organisational process involving a range of people, processes and procedures that are controlled by policies and strategies of not just the organisation, but the environment that it operates in. Besides, the reward and promotions process within Organisation 1, assessed individuals on their performance against pre-set targets, as opposed to the effectiveness of their approaches. Thus, a culture that is driven by efficiency through learning as opposed to the current output-driven culture is desirable to incentivise employees. Currently, the task of capturing (i.e. mapping) knowledge is down to the KM team and this is a long-drawn, arduous process of establishing what is done, how it is done (processes), who is/are involved (people, networks and links), what is required (resources), when (project or through lifecycle), what are the controls (procedures, policies, regulations) and so on. This is a mammoth and a complex process. As the KM director described it, 'capturing this work is only the tip of the ice-berg, the real work begins after this information is captured which then needs to be assessed and rationalised till an efficient alternative is developed. This process enables organisations to exploit their intellectual capital.'

This example of Organisation 1 clearly demonstrates that it was not a case of whether communities of practice existed in these organisations, but in fact they remained unrecognised and often undervalued. The same was observed for

Organisation 2 where the presence of the CoP was obscure and latent. In Organisation 3, however, innovative methods were used to incentivise staff to participate in a CoP and derive benefits from it. In Organisation 3 (in contrast to organisations 1 and 2), CoPs were formally recognised, supported with a budget and formed an active component of their KM strategy. Given this fact, this paper discusses, in detail, the role of CoPs in Organisation 3. Doing so will enable other organisations with similar intent to better understand (and learn about) the role of a CoP from an organisational perspective.

Lessons To Learn from Organisation 3

Organisation 3 demonstrates a strong commitment to knowledge management. It uses several different techniques to incentivise employees to better manage their and the organisation's knowledge. CoPs, employee assessments, and remuneration are the key techniques that are used and which contribute most to KM practices in Organisation 3.

Communities of Practice in Organisation 3

CoPs have different relationships with the official organisation (Wenger, 1998b). In Organisation 3 CoPs are of strategic importance and are considered as the foremost contributor to organisational knowledge. Given that Organisation 3 operates on a global scale, it comes as no surprise that it has communities spread internationally. There are approximately 80-90 global communities across the organisation, which are subject or topical communities, focusing on different aspects of engineering (e.g. bridge design, seismic design, etc), human resources (HR), finance and strategy, among several others. Knowledge is categorised according to its value and quality ranging from best practice to 'trash'. Best practice is knowledge validated by the CoP. Knowledge that is related to company strategies such as financial and HR, is standardised across the organisation. Standardisation of *all* knowledge is not entirely desirable or even possible, given that what may be standard practice in one business unit, may not be standard practice in another business unit. For example, a solution which works in UK may not be applicable in USA. This is why knowledge, which does not relate to company strategies, has to be validated by the CoPs.

Organisation 3 encourages its employees to use CoPs irrespective of the projects they are involved in and in doing so manages to blur the project boundaries through the communities. As shown in Figure 2, each project (identified as projects 1, 2 and 3) has a typical do, learn and share cycle. Lessons learnt from these projects can be shared via the CoP, which in turn promotes innovative practices such as

cross-project knowledge sharing. This is an important lesson learnt, given that such operational silos can be counterproductive and affect the performance of the community. Also, such 'insular' (or project-based) practices have benefits and drawbacks. On the plus side a more focused, project-based, contextualised, and insular approach can contribute towards developing and enriching the organisation's 'core expertise', hence the knowledge base. On the minus side, however, as Wegner (1998) cautions, there is a danger that these communities can become liabilities if their own expertise becomes blinkered and insular. Thus, Organisation 3's current practice of focusing on both, the boundaries of CoPs and development of the 'core', accommodates flexibility and ensures that there is sufficient permeability across boundaries to renew learning and facilitate innovation.

Take in Figure 2

In spite of its effort to encourage cross-boundary knowledge sharing, there are a few examples in Organisation 3, where members have reverted to operating within traditional project boundaries, discouraging cross-project discussions and challenging the fundamental principal of sharing. In such cases, however, there is a risk of missing the opportunity to learn from new insights which often occur at the boundary between communities. From the case study it is evident that motivation, or indeed the lack of it, is a factor that can weaken the fabric of a community which relies on the willingness of the individuals to share knowledge. So the question is how do organisations motivate or encourage member participation? Almost echoing the findings of Geiger and Antonacopoulou (2007), in Organisation 3 CoPs were self-organising and participation although voluntary, was actively encouraged. This is a reflection of the culture harboured within Organisation 3 where employees participate in CoPs for the following reasons:

1. The need to find answers to questions and get help and guidance from peers (i.e. active and collective learning); and
2. The organisational culture which encourages participation, disapproves repeat mistakes and supports active learning.

Together, these aspects drive members to join a community. For example, the practice of 'voluntary with active encouragement' (as opposed to 'imposed') participation in CoPs means that members are willing to share their knowledge and experiences and learn from each others' experiences. This practice is mutually beneficial to both the 'giver' and the 'taker'. Or as Scarso and Bolisani (2008) describe it, knowledge flows are bi-directional, i.e. CoP members have to play the

roles of knowledge contributor (source) and user (recipient). The factors that motivate to contribute are, however, different from those that encourage using it. In Organisation 3, the organisational culture approves of members who are actively involved in a CoP which helps to avoid repeating past mistakes. So here the motivation comes from the desire to enhance and safeguard ones' reputation as opposed to share *per se*. This practice has been useful in managing specific examples, where staff have been less engaging. In Organisation 3, a financially valuable member of staff was not willing to participate in and contribute to communities. In this case, the strategic decision-makers faced a dilemma when deciding on what action to take. The concerned member of staff had a successful track-record of bringing revenue into the company, which had been particularly valuable at times of economic downturn. Their non-cooperative practices, however, contradicted the open, transparent culture that Organisation 3 strived to achieve. Thus, there was a conflict of measures - KM versus financial- the end decision was driven by the potential financial implications, had they been penalised. Although, this decision may seem inequitable in retrospect, it was the best decision (in business terms) at the time. Besides, the concerned member of staff was made fully aware of the disapproval of conduct. The fact that their conduct had tainted their reputation resulted in significant improvements in conduct since. This is an important lesson learnt as, more often than not, organisations focus on the 'action' capabilities, in preference to, cognitive capabilities of individuals. A simplistic assumption in this case may be to consider the member of staff to be condescending and egotistical, however, this may not necessarily be the case. A part of the problem may stem from the individual's inability to innovate or their lack of receptiveness to change. Individuals need to be adept at 'switching cognitive gears' and knowing when to switch gears or 'manage attention' (Sexton and Barrett, 2003). This is difficult to manage, because as individuals gradually adapt to an environment their awareness of need deteriorates and their action thresholds reach a level where only crisis can stimulate action. To manage such a situation the challenge (as identified by Sexton and Barrett, 2003) for organisations is to get people to pay attention to the creation of new ideas instead of protecting or safe-guarding existing practices.

Organisation 3 has attempted to address this issue through the use of an innovative employee assessment and remuneration cycle, where remuneration is not necessarily financial. Recognition and promotions are the means through which good KM practices are rewarded. Organisation 3 concentrates on the 'softer' issues in assessments and the assessments are not merely a box-ticking exercise. Project

success is not the only benchmark against which employees are appraised, their professional development is also assessed. Employees are asked to give an account of how they manage knowledge and provide evidence for any assertions. These are then discussed openly with peers and these discussions are assisted by the presence of a flexible and a trusting culture. Doing so, enables employees to consciously switch cognitive gears and ensures that employees 'think' about their work, career and role progression, in response to (and aligned with) the organisations' long-term strategic intent (Figure 3). Although, this appears to be a linear process, it is in fact, a dynamic proactive process that is continually re-visited to ensure sustained responsiveness to emerging organisational needs. The benefits of this approach are multi-fold. Employee's can actively progress at an individual level whilst fulfilling the organisations' strategic intent. Thus, individual aspirations and the organisation's vision are symbiotic.

Take in Figure 3

Initiatives such as these are indicative of Organisation 3's commitment to KM. Being a people-focused organisation, it provides an environment that is conducive to individual growth, hence organisational growth. This people-focused approach is evident in all aspects of Organisation 3's management, including the selection of technologies for KM. The technologies that are used are mainly there to support people and their interactions, not the processes. There is minimal use of off-the-shelf technologies. Although CoP follow the 'human-oriented' KM approach, the use of technologies and particularly KM systems is important (Scarso and Bolisani, 2008). These technologies that support the people, underpin 'a lot of what is done' in terms of KM in Organisation 3. Often, the technologies are customised to suit Organisation 3's strategic KM requirements. Some of the examples of technologies used to support communities of practice (and KM) in Organisation 3 include people finder and skills databases, Intranets and Groupware, among others.

Organisation 3 refrains from working to rigid processes and procedures and maintains a balance between processes/procedures and empowerment. It looks at processes and procedures as supporting mechanisms in the value creation process and not as the main source of value in the organisation. Organisation 3 has developed standard procedures and processes to define a framework for governance, of say, a building project in UK. These procedures do not dictate how the actual work is done (e.g. actual building design), but control the environment in which the work is carried out (i.e. definition of scope of work, work programme, and QA procedures).

Conclusions and Discussions

This research set out to reconcile some fundamental issues that potentially challenge the fabric of a CoP. It answers pertinent questions on the role of CoPs and sheds light on the 'goings-on' in practice with the help of case studies in construction organisations. It attempts to capture the role of CoPs within construction organisations, their contribution to organisational knowledge, the motivation factors for participating in CoPs and the effectiveness of these communities for KM. Findings of the research are indicative of the potential challenges and benefits of CoPs to an organisation, their role in generating and delivering value to the organisation and their contribution towards the collective organisational intelligence.

It is obvious from the case studies that the question is not whether CoPs exist within organisations, but how organisations can derive value from these communities. As seen from the case studies (Organisations 1 and 2), and indeed the literature, even in organisations where the role of the CoP is not formally encouraged or recognised, communities still exist at a latent level. From Organisation 3's example, it is clear that the challenge is to motivate individuals to participate in these communities in order to achieve organisational benefits and at the same time contribute to the individual's professional development. From an organisational perspective, therefore, the key challenge is to provide an environment that is conducive to nurturing and developing such communities as opposed to merely creating them. As discussed by Ardichvilli et al (2003), it is important to remove the barriers to individual participation, support and enrich the development of each individual's uniqueness in the context of the community and link that uniqueness with the community's purpose. This in turn can enrich the community (and therefore the organisation) in terms of the knowledge it cultivates and shares. As was evident from the example of Organisation 3, this requires commitment from the leadership to nurture a culture that values individuals, facilitates their growth, whilst fostering a sense of community. However, this practice can only be successful if traditional organisational hierarchies and methods of promotion, which reward individuals, not teams are mitigated.

Lessons learnt from the case studies provide insights into how communities operate within the organisational context and how if approached strategically can deliver added value to organisations. In the case where CoPs exist at a latent level (Organisations 1 and 2) the strategic context and the strategic benefits that CoPs can provide at the organisational level can be lost. Challenges and benefits demonstrated through the case studies, should be taken in context. These are by no

means 'one size fits all' solutions. They should, therefore, be applied in the organisation's context, taking into account its unique characteristics and differentiators, the dynamics of the environment in which it operates and the culture it harbours within. To achieve this requires commitment and a culture that is supportive and which values the role of communities of practice.

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