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Construction Management and Economics

ISSN: 0144-6193 (Print) 1466-433X (Online) Journal homepage: https://www.tandfonline.com/loi/rcme20

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Paul Chan , Rachel Cooper & Patricia Tzortzopoulos

To cite this article: Paul Chan , Rachel Cooper & Patricia Tzortzopoulos (2005) Organizational learning: conceptual challenges from a project perspective, Construction Management and Economics, 23:7, 747-756, DOI: 10.1080/01446190500127021

To link to this article: https://doi.org/10.1080/01446190500127021

Construction Management and Economics (September 2005) **23**, 747–756

Organizational learning: conceptual challenges from a project perspective

PAUL CHAN[1]*, RACHEL COOPER[2] and PATRICIA TZORTZOPOULOS[2]

[1]*School of the Built Environment, Northumbria University, Newcastle upon Tyne, UK*
[2]*Salford Centre for Research and Innovation (SCRI) in the Built and Human Environment, University of Salford, Salford, UK*

Received 13 May 2004; accepted 26 January 2005

Organizational learning has been widely acknowledged as holding the key for companies to survive and prosper and has, in recent years, gained currency in construction management research. Much research centred upon the study of organizational learning as a process, as well as the view and understanding of companies as learning organizations. However, non-construction management researchers have recently begun to recognize the incoherence of the concepts presented in the literature and identified a lack of a solid theoretical and empirical foundation. To further exacerbate the challenge of embracing organizational learning in construction, the industry is largely project-based, thus increasing the difficulties for organizational learning to occur. Past research into organizational learning has also mainly concentrated on an intra-organizational perspective and where construction is specifically concerned, on project partnering. However, we regard such a focus to be myopic as a means of exploring organizational learning at the construction project level. As such, a number of research challenges are recommended including the need to examine organizational learning beyond project partnering; an emphasis on the inter-organizational dynamics involved in both the process and outcomes of organizational learning and the investigation of construction projects as learning networks.

Keywords: Conceptual review, construction projects, learning organization, organizational learning

Introduction

Over the last decade, there has been a blossoming interest shown in the area of organizational learning (e.g. Barlow and Jashapara, 1998; Holt *et al.*, 2000; Kululanga *et al.*, 2001) within construction management research. It has been widely recognised that knowledge holds the key to success and that learning is vital for organizational survival and prosperity (e.g. Argyris, 1991; Nonaka, 1991). Matching this rising interest in organizational learning, however, is a growing dissatisfaction with the lack of clarity of the concept of organizational learning and its often-confusing association (and synonymy) with that of learning organization (e.g. Huysman, 2000; Lähteenmäki *et al.* 2001; Lipshitz *et al.*, 2002). Furthermore, as the discussion of this paper unfolds, it is felt that the research effort into organizational learning had hitherto focused on the study of companies, without paying attention to the project-based nature of the industry. Groák (1994) describes this inherent weakness as a 'failure to recognise that the site was the defining locus of production organization (p. 288)' and argued that analytic frameworks should appreciate that construction is 'essentially organized around the project, not the firm', and embrace the legitimately '*ad hoc*' nature of construction projects as 'temporary coalitions in a turbulent environment requiring unpredictable (but inventable) configurations of supply industries and technical skills (p. 291)'. Yet, by suggesting that 'in aggregating projects up to 'the sector'… a technology paradigm may emerge, in which concepts of… organizational learning take their rightful place in our analyses', Groák (1994) had inadvertently raised the question as to whether organizational learning at the construction project level is applicable. The fundamental aim of this paper, therefore, is to review the salient points of the literature on

*Author for correspondence. E-mail: paul.chan@unn.ac.uk

Construction Management and Economics
ISSN 0144-6193 print/ISSN 1466-433X online © 2005 Taylor & Francis
http://www.tandf.co.uk/journals
DOI: 10.1080/01446190500127021

organizational learning, identify the gaps and seek to address the relevant issues surrounding the nature of construction projects.

Organizational learning and/or learning organization

Organizational learning research has been taking two main streams. The first views organizations as anthropomorphic entities that actually integrate individual learning and translate it into action for the organization's benefit; the second is concerned with the identification of behaviours which inhibit or disable individual learning (Phillips, 2003). Examples of work dealing with the former include Kolb (1984) who developed the oft-quoted experiential learning model; Schön (1983/1991) who proposed moving from technical rationality to reflection-in-action; Argyris (1991) who examined the way professionals learn as individuals and subsequently distinguished between espoused theory of action and theory-in-use; and Dixon (1994) who charted the five categories of organizational learning, namely information acquisition, information distribution and interpretation, making meaning out of information, organizational memory and retrieval. On the other hand, contributors towards understanding the conditions that influence learning include Senge (1990) whose five disciplines of mental models, team learning, systems thinking, shared vision and personal mastery elevated the field of organizational learning both in the industrial and academic world; and Garvin (1993) who suggested that fostering a conducive learning environment meant that time was needed for reflection and analysis, and that boundaries should be opened up to establish a supportive environment strengthened by core learning skills.

According to Lähteenmäki *et al.* (2001), therefore, 'the emphasis on organizational learning and learning organization research has clearly been based on either individual process research or on the organizational conditions for learning (p. 114)'. They, however, postulated, 'the aim of making a clear-cut separation between an organizational learning process and the elements of a learning organization (and vice versa), and thus studying them whilst disconnected from each other has not… furthered the building of a holistic picture. Instead it has only led to the oversimplification of a complex phenomenon (p. 115)'. This oversimplication, we believe, represents the underlying assumption that organizational learning should lead to the creation of a learning organization. Thus, we strive to debate this link so as to put forward a number of conceptual challenges particularly where construction projects are concerned.

Our frustration stems from three areas: the abstract and ambiguous nature of organizational learning, a lack of empirical evidence and the impetus of learning as suggested by the literature.

Nature of the concept

Lipshitz *et al.* (2002) acknowledged that 'literature on organizational learning has not necessarily led to a clearer understanding of what it means to be a learning organization' and suggested that 'as with many issues in the social sciences, the more closely the phenomenon of organizational learning has been observed and studied, the more complex and ambiguous it has become (p. 79)'. Indeed, metaphors (e.g. organizational *memory*) and analogies (e.g. Argyris's (1991) use of *a thermostat* to explain the idea of single and double-loop learning) are commonly used in the ever-increasing quest to expand the definition of the concept. While this may be necessary in developing the concept in the abstract sense, Armstrong (2000) feared that by concentrating on the abstract written language, we take ourselves away from the 'sensual collaboration with our world, essentially, and to our detriment, letting the most of it fall out of focus (or 'pincushioned') (p. 355)'.

Unsurprisingly, several commentators from the non-construction field have recently called for conceptual clarifications. Huysman (2000), for instance, indicated, 'in order to create a learning organization that is good in organizational learning, we first need to have more conceptual understandings about processes of organizational learning', but accused the literature for being too conceptual and insights 'scattered and unordered'. She went on to stress that 'despite the growing number of process-related publications, it still seems to be difficult to gain a solid understanding of the details of learning processes (p. 134)'. Armstrong (2000) supports this view by stating that 'before we lobby for such an organization and begin construction… it would be good to know just what it is we are building (ibid.)'. Sun (2003) lamented, 'unfortunately, in theory as well as in practice, some people… are rather careless in using the concepts of 'organizational learning', 'learning organizations' and 'a learning organization''. Sun's (2003) interesting methodology used language to seek clarifications as he concluded 'organizational learning refers to the learning process of an organization and by the organization in a collective (organizational) way'. In this sense, Lähteenmäki *et al.* (2001) were appropriate in identifying their first conceptual gap by stating 'too much emphasis on the learning of individuals instead of on the learning of organizations'. Lipshitz *et al.* (2002)

share this criticism as they recognised that there is still a gap to be reconciled, that of attributing 'a human capacity (i.e. learning) to a non-human entity (i.e. an organization)', for 'while individual learning is primarily a cognitive process that occurs 'inside people's heads' and can be fairly well understood through cognitive conceptual lenses, organization learning is a complex interpersonal process occurring through structural mechanisms in a social arena'. Put another way, both Lähteenmäki's *et al.* (2001) and Lipshitz's *et al.* (2002) concerns indicate the fact that research has not yet achieved Sun's (2003) clarification of organizational learning as a collective learning process.

Sun's (2003) further clarification on 'learning organization' is to unveil yet a more useful revelation. Accordingly, the term 'learning organization' can be viewed as either dynamic or static: the former being an organization that is continually learning and the latter being an organization that is for learning. This claim is in congruence with Lipshitz's *et al.* (2002) distinction between learning *by* the organization and learning *in* the organization as they propose a multifacet model of organizational learning to marry the two (see Figure 1). Lipshitz *et al.* (2002) posit that '*learning by* organizations occurs when individual *learning in* occurs within the context of Organizational Learning Mechanisms (OLMs)[1] that ensure that people get the information they need and that the products of their reflections are stored and disseminated throughout an organization… consequently, organizational learning cannot be properly understood without using social, political and cultural lenses in addition to cognitive lenses (p. 93; *emphasis* added)'. Through synthesising organizational learning literature, practitioner accounts and past experiences, Lipshitz *et al.* (2002) came up with the five facets of organizational learning, namely contextual, policy, psychological, cultural and structural facets, which are briefly explained below:

- Contextual facet – refers to exogenous factors that management either control indirectly or have no control at all. This includes what Lipshitz *et al.* (2002) term as error criticality (i.e. the immediacy and seriousness of the effects of errors), environmental uncertainty (i.e. the rate of change), task structure that is linked to the feasibility of obtaining valid information and people's motivation to cooperate with colleagues in learning, proximity to the organization's core mission, and leadership commitment to change resulting from learning.
- Policy facet – distinguishes between formal and informal steps taken by senior management to promote organizational learning, and include such measures as recognition and reward and the installation of OLMs.

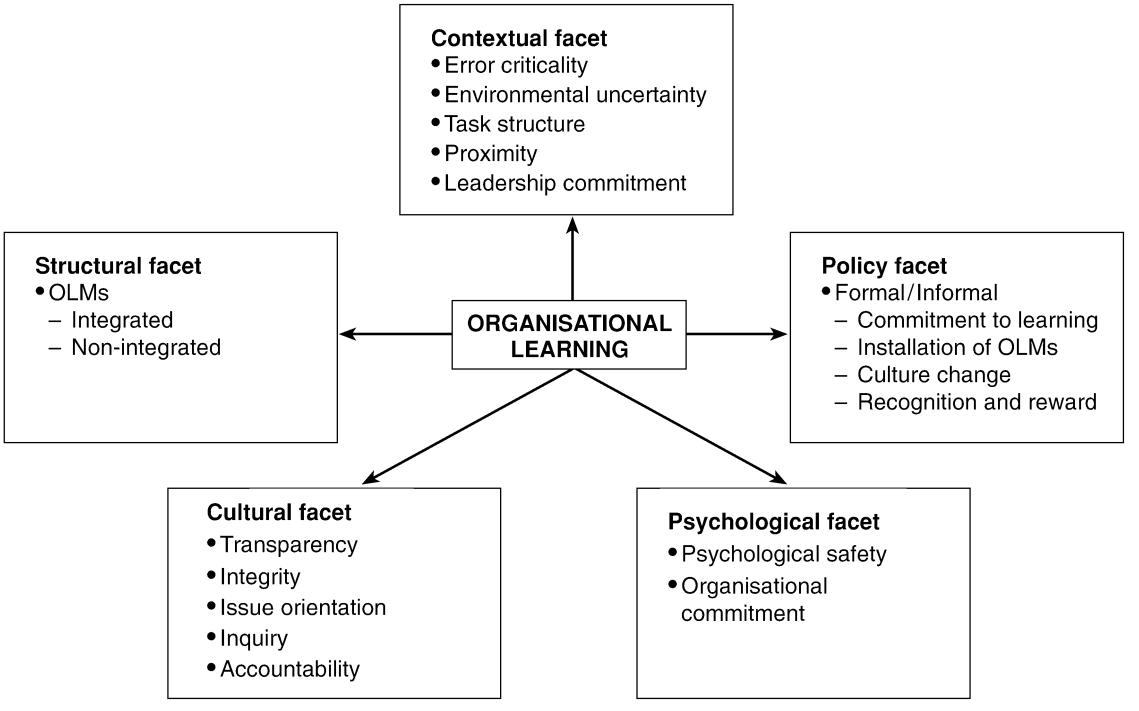

Figure 1 Multifacet model of organisational learning (adapted from Lipshitz *et al.*, 2002)

- Psychological facet – encompasses psychological safety, without which it would inhibit personnel from taking the risk of learning; and organizational commitment, without which it would lead to reluctance of personnel to share information and knowledge.
- Cultural facet –defined as the norms that are likely to produce valid information and a commitment to corrective action. This includes transparency (i.e. openness of one's thoughts and actions in order to receive feedback), integrity (i.e. collecting and providing information regardless of implications), issue orientation (i.e. focussing on relevance of information regardless of the social standing or rank of the recipient or the source), inquiry (i.e. persistence of investigation until full understanding is achieved) and accountability (i.e. assuming responsibility of learning and implementation of lessons learnt).
- Structural facet – refers to the organizational learning mechanisms that could either be integrative (i.e. the person learning is also the person performing the task) or non-integrative (i.e. the person learning is not the person performing a particular task).

It is worth emphasising that the structural facet has been intentionally placed as the last of the five, not because it is not important, but rather to follow the way Lipshitz *et al.* (2002) mapped the five facets in their original model, which was presented as a linear path (somewhat similar to a process map) starting with the contextual facet, connected by the policy, psychological and cultural facets and culminating in the structural facet. We have, however abandoned the 'process' approach in favour of the one depicted in Figure 1 above since, in our opinion, it is more useful to use the conceptual framework to understand the attributes that result in the ideals of learning organization as opposed to defining and proving the causal links between the facets. Moreover, Lipshitz's *et al.* (2002) conclusions appear to support this point as they qualified that although 'the cultural, psychological, policy and contextual facets mapped represent a step toward an integrative theory of organizational learning, they do not denote a set of necessary conditions for learning; that is, we do not hypothesise that all causal links in the map must be realised in order for learning to occur. Rather, we assume that represents an ideal whereby each positive link increases the likelihood of organizational learning (p. 93)'. They went on to suggest 'different organizations can manage to learn productively while enacting very different configurations of the facets'. We therefore recommend that an understanding of what these configurations might be more useful in analysing organization learning at the construction project level. This would also be in line with Groák's (1994) remarks that 'different sectors of construction use fundamentally distinct resource and skill bases' as he reinforced the need to move away from 'the idea of 'one technology, one industry' (p. 291)'.

Furthermore, placing the structural facet as the ends as compared to the means is thought to be appropriate since it is noticed that much emphasis has thus far been focussed on the 'systems-structured approach' (noted by Holt, 2000). Following Lipshitz's *et al.* (2002) line of argument, this is deemed to be myopic. We incidentally observe that the academic discourse in knowledge management, which is often associated with organizational learning, tends to accentuate a structured approach. For instance, Stiles and Kulvisaechana (2003), when reviewing the link between human capital and performance, began by stating that organizations have 'to leverage the skills and capabilities of its employees by encouraging individual and organizational learning and creating a supportive environment in which *knowledge can be created, shared and applied* (*emphasis* added)'. The distinction between organizational learning and knowledge management is even less clear in a recent skills review by Bloom *et al.* (2004), where they enmeshed 'organizational learning, and *knowledge creation, sharing, retention and management* (*emphasis* added)' when discussing knowledge management systems. We prefer to take the view that knowledge management is a subset of the holy grail of organizational learning. By this token, the study of organizational learning should encompass much more than the structural underpinnings of knowledge management. Indeed, we share Wild's (forthcoming) insight that 'the diffuseness of construction requires a *significant* tacit order (*emphasis* added)', but questions the assumption of knowledge management that 'this is (only) accessible to structured inquiry'. Therefore, it is believed the Lipshitz's *et al.* (2002) Model offers, for the first time, a holistic conceptual framework that could potentially explicate the links between organizational learning and learning organization beyond the dominance of the structural approach.

Lack of empirical evidence

Huysman (2000) emphasised 'despite its popularity, the ideas concerning the learning organization more often than not lack a solid theoretical as well as empirical foundation (p. 133)'. Yet, the shortage of empirical evidence seems only natural. Lähteenmäki *et al.* (2001: 114) exuded 'the feeling that little has been done to develop valid measures for organizational learning' and ascribed this to be 'the reason for a striking lack of comprehensive empirical research in

this area (see also Huber, 1991)'. They suggested that since 'the very concept itself still is vague… it is of course impossible to measure the phenomenon without knowing what is'.

Indeed, much empirical research really represents the conduct of surveys (questionnaires, interviews) that are constructed to confirm a specific aspect of the researcher's chosen terms to understand the real world. For instance, Martin (2001) used results from a series of interviews to show that female-owned/managed firms are better at organizational learning than their male counterparts; Hodgkinson (2002) explored the existence of shared strategic vision through focus group discussions with sixty middle managers over three years; and Phillips (2003) utilised a questionnaire survey, administered to four functional employee levels, to investigate his ideal learning organization model comprising ten key characteristics, and so on. In spite of the value of these results in challenging the frontier of existing knowledge, it can surely be argued that without a grounded conceptual framework, these observations merely contribute to the increased ambiguity and pincushioning mentioned earlier.

Studies that appear to delve deeply into the concept within organizations bear yet another major weakness – the study of organizations as singletons. Sun (2003), in distinguishing between 'learning organization' and 'a learning organization', construed the former 'as a subject of scientific study and research' and the latter being 'a 'living' representative of the image of 'learning organization' (p. 158)' and established that of the eleven principal definitions available on the concepts, he could not find any that categorically fall into the 'learning organization' group. He rightly argued that researchers have merely paid attention to 'a learning organization'. Henderson and McAdam (2003), for example, focussed on the internal communication process through an organizational learning perspective of a large electrical utility company in Northern Ireland. Whilst their research acknowledged the importance of change in the view of the external competitive environment, and consequent need for organizational learning, it is regrettable that the researchers did not observe the effect the external environment had on the learning and communication process. Despite having clearly identified such external stakeholder relationships as the link between power-generating bodies and the company's power procurement business unit, Henderson and McAdam (2003) went no further than to stick closely to an intra-organizational perspective. This approach, we argue, is not appropriate for the research challenge of looking at construction projects.

It would, however, be naïve to think that project-based organizational learning has never taken a foothold in organizational learning research. Examples abound and include Barlow and Jashapara (1998) who explored the role of partnering in fostering organizational learning on construction projects; while Prencipe and Tell (2001) investigated inter-project learning processes and outcomes in project-based firms. Szymczak and Walker (2003) also focussed on organizational learning from a project perspective by studying the impact and potential of the Boeing Company to better leverage knowledge from their portfolio of projects. However, these studies have largely been based on looking at organizational learning from an intra-organizational perspective. With the exception of Barlow and Jashapara (1998), the other two studies were merely extending the study of an organization as a singleton to investigate learning at the project level. Again, while the recommendations of Prencipe's and Tell's (2001) learning landscape (or the mix of project-to-project learning mechanisms that a firm can adopt and implement) and Szymczak's and Walker's (2003) call for an enterprise project management culture may be insightful, they do not address the temporary multi-organizational nature of construction projects since the focus was on a particular firm in the design of their studies.

Barlow and Jashapara (1998), on the other hand, identified four key characteristics of construction partnering projects that make organizational learning difficult to occur. They include (i) the inherent tensions and conflicts between clients and suppliers; (ii) the ability to codify knowledge dependent on how long-term the partnering relationships are; (iii) the way knowledge is retained and distributed; and (iv) internal political and cultural environments that enable or inhibit communication structures. It is, however, disappointing that they did not go beyond this identification to analyse the interorganizational perspective that is most needed in construction projects. Rather, the manner of their reporting seem to place a greater emphasis on the portrayal of the client's role in organizational learning, as they observed 'in the case studies, it was clear that most individual interviewees claimed they had learned substantially from their experiences' and noted 'arguably, however, this was not always harnessed, especially in the smaller contractors and suppliers (p. 94)'. It is noticeable that their analysis has leaned towards the view of clients spearheading organizational learning. However, it is felt that the danger of such conclusions, without necessarily exploring much deeper into the issue of leadership of learning (i.e. who, if any, is responsible?) on construction projects, is to deny construction firms the opportunity to aspire to become learning organizations. As far as it is known, Holmqvist (2003) is the only one who has compared empirically the unique dynamics of interorganizational learning

processes, although not specifically directed at a project level that is similar to that of construction.

Thus, having recognised the lack of thorough empirical research into organizational learning, we are convinced that the Lipshitz's *et al.* (2002) Model is again potentially valuable in providing the necessary solid theoretical underpinning. Moreover, it is crucial that the pursuit of empirical evidence should transcend the current prevalence of the intra-organizational perspective to take into account the interorganizational dynamics that is highly appropriate in the study of organizational learning at the construction project level.

Impetus for organizational learning

The aspiration of organizational learning originates chiefly from change, particularly on strategic change, as Burnes *et al.* (2003) illustrate that the four common propositions of organizational learning relate to change and degree of instability of the environment and the need for, and ability of, the organization to cope with such change. As Burnes *et al.* (2003) summarise 'these propositions are based on arguments put forward by proponents of organizational learning that change is now so fast and so prevalent that if organizations fail to keep pace with it they will not survive, and the speed and prevalence of change is such that it cannot be managed in the traditional manner by a few senior managers, but must become the responsibility of everyone in the organization (p. 453)'. Indeed, we observe the abundance of research aimed at learning to cope with change, so-called adaptive learning. However, several writers, e.g. Bennett (1998) have noted that 'learning can be adaptive or generative' and defined the former as 'that which enables the organization to do better what the organization is currently doing' and the latter as that which 'challenges and redefines the basic requirements of the tasks and how they should be undertaken (p. 7)'. See also Senge (1990), Argyris (1991) and Huemer and Östergren (2000) among others. Murray (2002) went further to suggest that there is currently an incomplete cycle of organizational learning as he coined the term 'unbounded learning' and demanded that 'the culture of the business will need to change from one that is established purely on adaptive learning to one accommodating both adaptive and generative learning (p. 242)'. Nonetheless, it is felt that the focus placed on adaptive learning could lead to two detrimental outcomes.

First, because the perceived cause for the need to learn comes mainly from strategic change, much of the focus has inevitably been targeted on managers with very little studies on employees at the lower levels (Findlay *et al.*, 2000). This not only contradicts the earlier recommendation by Burnes *et al.* (2003) that learning should be the responsibility of everyone, but also, if Argyris's (1991) argument that professionals do not necessarily know how to learn well were to hold true, then the integration of lower-level employees, which is currently lacking, would be a worthy cause to pursue. Furthermore, it is interesting to note that whereas much of the literature seem to acknowledge the benefits of organizational learning to ensure an organization's survival and secure its competitive advantage, few have examined deeply the benefits to the individual employee. Findlay *et al.* (2000) were one of the few who accepted that the purpose of learning should be for the mutual gains of both the organization and the individuals within. More recently, Nyhan *et al.* (2004) presented a European perspective on the concept of organizational learning and blamed modern management for 'not paying a great deal of attention to ensuring personal learning benefits for employees and workers' and envisaged a repetition of the 'reality for many workers, today, is a reincarnation of Taylorism in the form of neo-Taylorism (p. 69)'. In fact, Thursfield (2001) maintained that Taylorism is still very much in existence in today's workplace and observed, through three manufacturing case studies, that while companies accept the need to develop the skills of workers (arguably a personal learning benefit), this is often merely the payment of lip service for the companies observed tend to put off training due to the pressures of meeting schedules. Indeed, it is felt that construction companies that claim to advocate organizational learning could be labelled as hypocritical given the industry's lacklustre attitude towards training in the first place.

Second, since change is accepted to be fast-paced and uncertain, the spotlight has mainly shone on the process of learning, rather than the outcomes. The resulting abstract notion of knowledge and the claim that organizations should be knowledge-centred, without saying what is that is specifically to be learnt, does little in achieving the aspiration of a learning organization. It is here that we believe that there should be a link between (generative) organizational learning and skills and competencies (as learning outcomes). Yet, where skills and competencies are concerned, Scarbrough (1998) similarly puts forward another flaw, that the resource-based view of the firm results in a weak link between competencies and performance, as he purports, 'little attempt to demonstrate the *mechanical* links, between competencies and performance, other than in the broad terms of the root and branch metaphor propounded by Prahalad and Hamel (1990) (p. 224, original *emphasis*)'. Consequently, 'theorists attempt only the sketchiest account of the nature of resources and competencies, preferring to

identify them inductively from evidence on a firm's functional outputs or competitive advantage (ibid.: 223)'. In terms of organizational learning, it has been observed that the link between learning and performance tends to manifest chiefly in the name of continuous improvement (e.g. Kululanga *et al.*, 2001; Murray and Chapman, 2003). Yet, we share Scarbrough's (1998) comment that the resultant sketchy accounts from the plethora of studies subsequently fails to gain a plausible consensus. We like to use the analogy of school education and argue that while it is important to consider continuous assessment (continuous improvement in an organizational sense), it is equally important for the student to know what s/he gets out at the end of the course (a school qualification, vocational qualification, degree, a certificate etc.). In the same fashion, to resolve Scarbrough's (1998) mechanical link or lack thereof, it seems reasonable that learning is tied to its outcomes of defining the skills and competencies base of the individual and thereby, the organization. Sadly, we identify no studies so far that attempt to tackle such definition in the understanding of organizational learning.

Perhaps Garratt (1999) was right to alert us to the fact that in his opinion, 'I have never yet met a learning organization', as he pointed out that many companies want a quick fix, 'often by the next month (p. 206)'. Armstrong (2000) resigned bluntly to the fact that 'we have pincushioned our attention on science and the intellect as that which exclusively will lead to increased performance and productivity, to organizational longevity, to the good life' and accused the learning organization for being 'a pimp, and the employees, the hapless prostitutes (p. 359)', striking a moral argument against organizational learning. It is our intention to provoke further reflection on the impetus for organizational learning and suggest that future research must place more emphasis on the fulfilment that organizational learning might accrue to individual workers. It is our firm belief that the development of individual skills and competencies exemplifies a core learning benefit.

This section has outlined organizational learning as an elusive concept that, we believe, would continue to be fuzzy without a solid theoretical basis. We accept that the Lipshitz's *et al.* (2002) Model could provide this basis. In using the model to understand the attributes of the learning organization and the extent of organizational learning, however, is insufficient to claim the applicability of the concept in construction. We have established that there needs to be more emphasis on projects as the unit of organizational analysis, and consequently, a requirement for more research focus on the interorganizational dynamics involved. Moreover, we call for future research to consider the wider benefits of organizational learning to the individual, which should extend to **all** employees, and not just the current linkages to white-collar professionals or firm performance. We recommend that a connection between learning and the definition of skills and competencies might be a plausible way forward.

Challenges from a construction project perspective

This section highlights a number of gaps that could potentially serve as drivers for further research, based on the discussion so far; and relates to the issues surrounding construction projects.

The leadership dynamics of interorganizational learning

Given the inherent interorganizational nature of construction projects, embarking on an empirical investigation raises a major issue of leadership and power. Holmqvist (2003) found that intra-organizational learning (i.e. learning within an organization) at a software company appeared to occur much quicker at the outset than interorganizational learning (i.e. learning across companies, as would be the case in construction projects). This was found to be a direct consequence of the ability and dominance of management to direct employees' working culture within a company, whereas there was a tendency for the same management personnel to avoid imposing their value system on a project team made up of members from a range of organizations other than their own. Although the study was limited to a single non-construction case study, this finding bears significance for construction companies aspiring to be learning organizations for construction projects are temporary multi-organizations (Cherns and Bryant, 1984). At face value, the issue of leadership of learning in construction projects could have implications on say, the policy facet of the model proposed above. For instance, as unlikely as it may be, would it be the client who takes the lead in laying down the policy for learning as Barlow's and Jashapara's (1998) findings seem to suggest? Or would it be a case of distributed leadership running along the entire design and construction process, which then begs the question of how such distributed leadership is going to be managed smoothly, particularly at the interfaces? Also, if the result of organizational learning were to increase an organization's competitive advantage, e.g. in terms of cost advantage through leveraging a (presumably) inimitable bundle of skills and expertise as intimated

by Walker (2002) and Walker *et al.* (2002), this raises issues as to which organization (the client, the contractor, the supply chain etc.) owns this competitive advantage? Or would it be safe to assume equal ownership, and if so, what happens to this advantage during the likely event that organizations might compete against each other for the next project? Empirical studies, therefore, would help shed light on these dynamic interactions.

Organizational learning: a *sine qua non* for partnering or vice versa?

Much of the construction-related studies into organizational learning have been centred on strategic partnering alliances (e.g. Barlow and Jashapara, 1998; Holt *et al.*, 2000; Kululanga *et al.*, 2001; Cheng *et al.*, 2004). Does this mean, therefore, that for organizational learning to take place at the project level, that partnering should be a pre-requisite? Thence, does this imply that companies that do not partner do not engage in organizational learning? If so, Kululanga's *et al.* (2001) claim that organizations that 'stop learning stop living' seem like a severe outcome, that even their recommendation to move from a state of no organizational learning to one of learning would literally imply a resurrection from the dead. Nonetheless, it is perhaps worthwhile to investigate the different degrees of organizational learning on different project configurations. This, we suggest, is what the proposed model stands to offer as a basis for comparison.

Strategic or operational change?

Earlier discussions on organizational learning research have revealed an emphasis on strategic change. However, at a project level, it is perhaps more accurate and appropriate to talk about operational change rather than strategic change. What therefore, if any, are the unique differences between strategic and operational change and so, what are the implications for learning?

Projects as 'learnt' organizations or 'learning networks'?

Last, but not least, is organizational learning sustainable from a project perspective? Or would the case be that projects become 'learnt' organizations, rather than 'learning organizations'? Also, could projects be set up as 'learning networks', similar to that of Wenger's (2000) community of practice? However, Coughlan *et al.* (2002) have observed, while reporting on such a network as the National Action Learning Programme (NALP), that to ensure success of these networks, one of the fundamental motivating purpose should be the desire to learn. Simons *et al.* (2003) added that one should distinguish between a community of practice and a community of learning. This boils down to the key question raised earlier on the output of learning. We urge practitioners, therefore, to look beyond the current emphasis on organizational performance and continuous improvement and embrace the vision of a community of learning. In so doing, we reiterate our genuine concerns that the benefits of learning to individual workers in the form of the development of skills and competencies as an outcome of learning should be pondered upon.

Conclusions

In conclusion, this paper has offered a critical review of recent literature within the area of organizational learning and found that the concept remains abstract, vague and incoherent. Further, it was discovered that empirical foundation is lacking, especially in terms of viewing from an organizational learning perspective at a construction project level. It was proposed that Lipshitz's *et al.* (2002) multifaceted model of organizational learning be adapted to seek empirical evidence of organizational learning in construction projects. Finally, the paper puts forward a number of research challenges that is to be addressed in future work. These include the need to emphasise the interorganizational dynamics involved in both the process and outcomes of organizational learning, the consideration of organizational learning beyond partnering and the shift towards viewing projects as learning networks.

Note

1. Lipshitz *et al.* (2002) locate Organizational Learning Mechanisms (OLMs) within the structural facet of their model. They believe that both individual and organizational learning involve the processing of information. However, while it is possible to study how individuals process information given the identifiable attributes of the nervous systems in living organizms, OLMs therefore are observable organizational subsystems in which members interact for the purpose of learning. A common OLM cited is the after-action or post-project review.

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