

# The unlearning dimension of organizational learning in construction projects

Peter S.P. Wong <sup>a,\*</sup>, Sai On Cheung <sup>b</sup>, Regina L.Y. Yiu <sup>b</sup>, Mary Hardie <sup>c</sup>

<sup>a</sup> School of Property Construction & Project Management, RMIT University, Australia

<sup>b</sup> Construction Dispute Resolution Research Unit, Department of Building and Construction City, University of Hong Kong, Hong Kong

<sup>c</sup> School of Engineering, University of Western Sydney, Australia

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## Abstract

It has been suggested that contracting organizations in construction projects do not seem to adapt resiliently under changing market conditions. Interestingly, recent organizational management literature reveals the essential role of practicing unlearning for generating more resilient performance improvement actions. This paper reports on a study that aims to test empirically the contingent effect of unlearning on the relationship between organizational learning (OL) and organizational success. A conceptual model which depicts the hypothesized relationship among OL, unlearning and organizational success is presented. Data were obtained from a questionnaire survey. To test the conceptual model, Pearson Correlation Analysis and Multiple Moderated Regression Analysis were employed. The study hypothesized that interaction between the practice of OL and unlearning have a moderating effect on organizational success. The hypothesis was only partially supported by the results of the MMR analysis. Only the practice of double-loop learning was found to be symbiotic with the practice of unlearning for achieving organizational success. The effect was found to be more significant when organizational success was evaluated in terms of meeting the client's expectations on project cost.

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## 1. Introduction

Organizational learning (OL) is recognized as vital for a contracting organization's<sup>1</sup> enhanced performance. Therefore, it is hardly surprising that OL has become topical in the project management literature (Jashapara, 2003; Kululanga et al., 1999; Wong and Cheung, 2008). One focus of attention in the research area is the effect of OL on project outcomes (Love and Josephson, 2004; Murray and Chapman, 2003). Based on case

studies of construction projects in Sweden, Love and Josephson (2004) found that project cost savings can be attained by those contractors who are able to actively learn from experience. Research findings derived from a questionnaire survey conducted by Murray and Chapman (2003) in Australia indicate that an organization's performance in construction projects is positively linked to its learning competencies.

Nevertheless, some scholars have argued about whether contracting organizations, under the current project environment, can be 'prudent' learners (Chan et al., 2005; Love et al., 2004). Based on a literature review, Chan et al. (2005) observed that few contracting organizations are able to systematically convert their lessons learned into improvement actions. However, possible reasons that disengaged contracting organizations from learning were not discussed. In this regard, Love et al. (2004) reported that the transient nature of construction projects offers no guarantee of future dealing among team members and, consequently, contracting organizations thus often lack the necessary degree

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\* Corresponding author at: School of Property Construction & Project Management, RMIT University, City Campus, 360 Swanston Street (Bldg 8, Lvl 8), PO Box 2476, Melbourne, 3001 VIC, Australia. Tel.: +613 99253978; fax: +613 99251939.

E-mail address: [peterspwong@rmit.edu.au](mailto:peterspwong@rmit.edu.au) (P.S.P. Wong).

<sup>1</sup> Contracting organization in this study refers to the organizations collaborating in a construction project. This includes the architect, engineering and surveying consultants employed by the developers, the main contractors and the sub-contractors.

of proximity to derive learning from each other. They contended that the way of coupling organizations in construction projects can be one of the barriers of learning and thus organizational success. Nonetheless, the work of Love et al. (2004) falls short of empirical evidence to unveil how the barriers are affecting the effect of learning on success. Ruuska and Vartiainen (2005) suggest that learning from feedback is vital for a contracting organization's performance improvement. Nevertheless, they noted that many project monitoring systems are not well designed to provide useful feedback in order to facilitate learning from mistakes. Jashapara (2003), in extending the work of Argyris and Schön (1978), identified the fact that contractors typically exhibit two types of OL: single-loop learning (SLL) and double-loop learning (DLL). SLL refers to a detection and correction of errors without scrutinizing the organizational basic premises and norms that had led to the divergence between the expected and the actual outcomes (Argyris and Schön, 1978). DLL is attained when organizations detect and correct errors by inquiring into, and modifying if necessary, their underlying norms and assumptions (Argyris and Schön, 1978). Based on a questionnaire survey conducted in the U.K. with 181 valid responses collected from the contracting organizations, Jashapara (2003) found that practicing DLL has a more significant effect on organizational performance than practicing SLL. Nevertheless, he criticized contracting organizations as generally not competent at generating improvement through practicing DLL. Similar findings were also reported by Kululanga et al. (1999) who found that contracting organizations in construction mainly practice SLL only. The authors argued that without moving to DLL, performance improvement actions generated by contracting organizations may no longer be effective when market needs change. However, the reasoning behind the organizations' incompetence in DLL practice was not discussed in these studies. Based on a questionnaire survey conducted in Hong Kong, Wong et al. (2009) reported that contracting organizations often improve performance through detecting and correcting errors (i.e. practicing SLL) and yet rarely look into the root causes of these errors or identify the new behaviors needed to prevent reoccurrences (i.e. practicing DLL). Despite supporting the contention that the practices of SLL and DLL are both imperative for performance improvement, Wong et al. (2009) argued that practicing SLL only is not sufficient for contracting organizations to sustain performance in response to the changes of market demands. What has caused hindrance to the practice of DLL, and thus success was then described as valuable for further research.

The above review indicates that contracting organizations do not seem to learn in a manner that fosters organizational resilience in coping with changes of market demand. However, while drawing a conclusion that contracting organizations should learn more effectively, the possible conditions that are detrimental to the practice of OL were rarely delved into in previous studies.

From the non-construction field, McGill and Slocum (1993) argued that not many organizations are capable of learning in an introspective manner. Supported by a literature review, they noted that organizations rarely accept an operational change that does not fit their core values. Such organizations are often prone to limit themselves to acquiring knowledge that fits for achieving their

pre-determined goals and pre-defined 'best performance'. Nevertheless, the organization's understanding about the client's requirements may no longer be valid when the market environment changes. Thus, if knowledge was processed under rigid sets of beliefs and core values, the possible improvement actions derived may have outlived their effectiveness to meet changing market demand. Akgün et al. (2006) pinpointed the fact that with cumulative experience, organizations often develop a set of beliefs and routines in their operations. Performance change may become difficult if the required response to the environmental change clashes with their core values. As such, the rigidities of attitude formed in acquiring new knowledge hinder the organization's adaptation to changing conditions.

The above studies found from the non-construction field collectively support the idea that OL is not merely a detection and correction of errors system for attaining a pre-determined performance standard. Instead, OL involves a process of identifying and discarding obsolete beliefs and routines (Akgün et al., 2006). Hedberg (1981) used the term 'unlearning' to describe such processes and emphasized that organizations may not learn effectively without first unlearning irrelevant ideas from the past. Researchers have also pointed out that it may be an uncomfortable process to unlearn those beliefs and routines that may have taken years to establish (Akgün et al., 2006; Mezas et al., 2001). In particular, the established beliefs and routines may have led the organizations to business success in the past and the organizations may also have invested a lot of effort in developing these routines (Akgün et al., 2006; Mezas et al., 2001). This reluctance may help to explain why the inability to unlearn has been highlighted as a critical weakness of many organizations (Akgün et al., 2007a, b). While OL has emerged as a popular research topic in construction project management, the above literature review reveals that previous studies about the concept of OL were rarely addressed from an unlearning perspective (Love et al., 2000; Wong and Cheung, 2008). This paper reports a study that aims to examine the effect of learning on the contracting organization's success in an unlearning perspective. It seeks to investigate if effective learning is contingent on the contracting organization's practice of discarding obsolete beliefs and routines (i.e. unlearning). From an academic point of view, this study contributes to a deeper understanding of the underlying dynamics of OL. Furthermore, it complements existing research on factors fostering and supporting OL (Schilling and Kluge, 2009). For practitioners, it is believed that a better understanding of the inter-relationship among OL, unlearning and organizational success can provide valuable insights for management wishing to devise ways and means of enhancing a contracting organization's performance.

To accomplish the research objective, the following hypotheses are tested in this study:

- H1.** The practice of OL is contingent on the contracting organizations' practice of unlearning;
- H2.** The interactions between the practice of OL and unlearning have moderating effect on organizational success.

This paper is organized as follows: Firstly, a conceptual model which depicts the hypothesized relationships among learning,

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