

DYNAMICS OF LEARNING FOR ADVANCING IMPROVEMENT IN ORGANISATIONS WITHIN CONSTRUCTION INDUSTRY

Dynamics of learning for organisations

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Abstract

Continuous improvement has become an ever present reality to construction organisations in their quest for improved performance and sustained competitive advantage. One major issue that infers great consequence in a changing business environment is the styles organisations employ to address improvement in their enterprises. This is becoming significantly important as one of the factors driving continuous improvement. As a result, calls have been made to adopt a culture of learning as part of an organisation's core competence for all improvement schemes. Today's highly successful companies are differentiated from others not so much by any single set of their knowledge, but equally, by their ability to learn as corporate entities. This paper explores the dynamics of learning by examining the styles organisations engage to address their improvement. The paradigms involved in the styles of organisational learning provide useful lessons for understanding and undertaking continuous improvement schemes in construction organisations. The paper adopts these lessons to evolve a framework within which continuous improvement schemes desired in construction industry should take place.

Keywords: Changing business environment, continuous improvement, learning dynamics.

1 Introduction

The business environment has been evolving and will continue to do so into the twenty-first century. As part of this changing process, construction organisations must from time to time take an introspective look at their scope and assumptions that underpin their construction practices in order to generate effective methods of working in quest of customer satisfaction, increased safety, reduced cost and environmentally sustainable construction. However, organisations in construction industry are widely perceived as being slow to innovate and have trailed many manufacturing firms in implementing management and technology innovations [1]. As such, the need for reform within the industry is acute with a growing pressure for organisational, operational, structural and cultural transformations [2].

One approach by which organisations attain improvement in the business environment is through learning [3]. For instance, highly successful companies in today's dynamic business environment are renowned by their ability to learn as corporate entities [4]. Furthermore, the contrasting performances between firms is a result of a company's ability to learn from its internal and external environments and make suitable choices and amount the necessary alterations [5]. Therefore,



learning as a corporate entity is becoming one of the essential tools for addressing improvement of corporate establishments and may soon turn out to be one of the key sources of competitive advantage [6]. Companies that stop learning, also stop improving and run the risk of eventually going out of business. Consequently, construction enterprises need to make learning a prominent feature of their corporate activities that should be deeply imbedded in their organisational routines in order to meet the extreme challenges of the business environment [7].

A number of years ago, firms hardly needed any new learning to sustain their competitiveness as a result of an unchanging business environment. However, such static business environments are a feature of the past for many industries and particularly so, for the construction industry. The way forward for construction enterprises should be to seek new knowledge and to engage in learning generative processes that sustain continuous improvement in order to cope with their evolving business environment. Otherwise, construction organisations can be caricatured as climbing the down escalator, if their ascent is as fast as the steps descend, they will remain in the same position or maintain the status quo, if they want to go higher they must climb faster than the speed of the descent or allow to question principles that govern the way they do things as a result of the challenges in their business environment. Every time they take a breath or if they forsake issues of the wider business community, they move down a few steps. Modern business history shows that those organisations capable of adapting to the changes have survived and the perception that construction practices will remain the same is a dead end [8].

This paper argues that continuous improvement has become an ever present reality to construction organisations in their quest for improved performance and sustained competitive advantage. One major issue that infers great consequence in a dynamic business environment is the styles organisations employ to address improvement in their enterprises. This is becoming significantly important as one of the factors driving continuous improvement. As a result, calls have been made to adopt a culture of learning as part of an organisation's core competence for all improvement schemes.

The paper explores the dynamics of learning by examining the styles organisations engage to address improvement. The paradigms involved in the styles of learning provide useful lessons for understanding and undertaking continuous improvement schemes in construction organisations. The paper adopts these lessons to evolve a framework within which continuous improvement schemes desired in construction industry should take place.

2 Changing business environment

The evidence of the changing business environment that demands a disciplined and structured learning is reflected in various issues impacting on construction organisations as depicted in Figure 1. Some of these issues are briefly discussed in the section that follow.

Construction business management practices are under pressure with a growing recognition that some of their practices are obsolete and require major reforms [9]. Such reforms will require modifying or changing current practices with radically new ways of working. Organisational learning has been associated with overcoming endemic business management practices that characterise low performance.



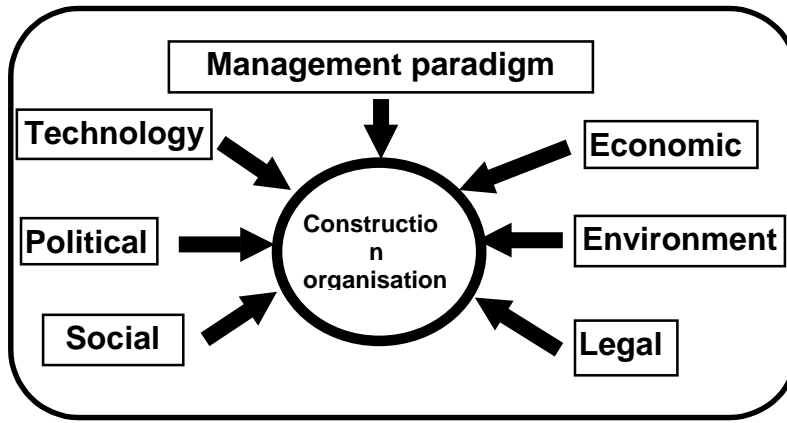


Fig. 1. Issues impacting on construction organisations.

Equally, the construction market is altering from local to borderless status, where local enterprises are competing with many foreign firms [10]. As a result, the construction organisations will need to become innovative if they are to remain competitive in globalised type of businesses of today's world and tomorrow.

Parallel to the market changes, the industry is under pressure for information and technology transformation [11]. The increasing potential for both business multimedia applications is occurring at a point where the traditionally inhibitive attitudes to using such technology have to be overcome within construction organisations.

Until the past couple of decades, the environmental consequences of construction activities went largely unnoticed. However, as the environment movement matures construction organisations require new paradigms for sustainable environmental construction [12]. Construction firms should be prepared to meet the new challenge this will entail in terms of their practices for satisfying customer needs.

3 Need for continuous improvement of construction practices

The perspectives outlined in the previous section provide miniature images of the sort of environment construction organisations will operate. It is generally argued that the rate of improvement in manufacturing and other white goods industries far outstrips that of construction in business process improvement. An important reason often put forward by construction executives has been that of one-off nature of business or unique products of construction industry. While this may be true, the one-off and unique products are not common in the business community. For example, aerospace [13] and shipbuilding [14] industries are characterised by similar factors yet their rate of improvement is often more systematic.

Equally, construction companies have traditionally equated learning with training schemes for individuals. Most training has been directed exclusively towards the enhancement of individual knowledge where learning has focused on standards of operation derived from business successes of the past [15]. The experience they gain are at an individual level, rather than the corporate level [16]. This has been appropriate when the speed of change within the business environment has been relatively moderate. But as change shifts from incremental to rapid or from continuous to discontinuous, past performances become irrelevant to future success.



Many construction organisations are currently attempting to re-engineer their business processes to improve the performance and productivity of construction projects. However, many questions endure regarding the kind of styles that have been adopted for implementing such improvement. The idea of learning is not new or controversial yet, it is surprising that this ability to learn which is so widely regarded important for improvement, receives so little attention in construction industry [17].

To continuously improve in today's business environment and the future, construction organisations must be able to adapt to the changing conditions by adopting appropriate learning styles. Learning and continuous improvement are inextricably linked such that learning is the most compelling reason for pursuing any continuous improvement programme [18]. Thus, organisational learning offers a dimension that can drive continuous improvement agenda of construction practices in order to meet the extreme challenges of their business environment.

4 Dynamics of organisational learning

The notion about organisational learning has its genesis in theories of individual learning. Just as learning is crucial for individual capability improvement as a result of the challenges they experience in their environments it is equally important for improvement of practices of corporate establishments. However, organisational learning is not the same as individual learning. Learning organisations do not only depend on the single set of competencies of their individual employees but also significantly by the ability to learn as corporate entities [19]. There are cases where organisations know less than the totality of their individuals' competencies, a situation where the whole becomes less than the sum of its parts. Organisational learning can be described as a situation where there is a continuous expansion in the capacity of an establishment to create desirable outcomes of its practices [20]. Therefore, it relates to how an enterprise imbibes information, knowledge and other stimuli from its internal and external environments, and how the acquired knowledge is applied to ensure continued improvement.

The approach pursued by organisations in addressing improvement can be described as problem solving [21]. Learning occurs if there is a match or an awareness of a mismatch between intentions to outcomes of an enterprise. Organisations encounter problems or challenges in their business environments and take corrective actions to address them. The degree to which improvement is attained depends on the issues that are changed, altered, modified or adapted by any organisation which is often reflected by their style of learning. A learning style is a characteristic that an organisation exhibits in addressing its improvement. To facilitate the learning culture required for improving construction practices, three styles of addressing improvement are presented, namely: single loop; double loop; and deuterio.

4.1 Single loop actions for addressing improvement

The first approach of addressing improvement involves merely modifying actions or strategies and techniques employed by an enterprise to deliver its services by the single loop approach modelled in Figure 2. An organisation does not attend to any of the root causes, in a sense, that its values remain unquestioned although they could be flawed or obsolete. It is also termed lower level learning that merely focuses on addressing symptoms and usually benefit organisations in the short term. In very many cases, the obstacle recurs demanding even more resources to resolve it. For example, addressing adversarial problems which are characteristic of most construction project businesses by means of increasing financial budget allocations without paradigms that eliminates adversarial relationships is an example of a single loop action. Single loop actions are only suitable in business environments that are unchanging [22]. Construction organisations in the past were able



to cope with is style of addressing improvement exclusively due to a stable or a slow changing business environment in which they have operated. Clearly, such a slow-changing or a static construction business condition that enabled construction organisations to thrive without the need to learn at a level demanded in today's dynamic business environment is only a feature of the past. In today's changing business environment construction organisations need to act beyond the immediate symptoms for systemic solutions of the challenges they experience in the business environment.

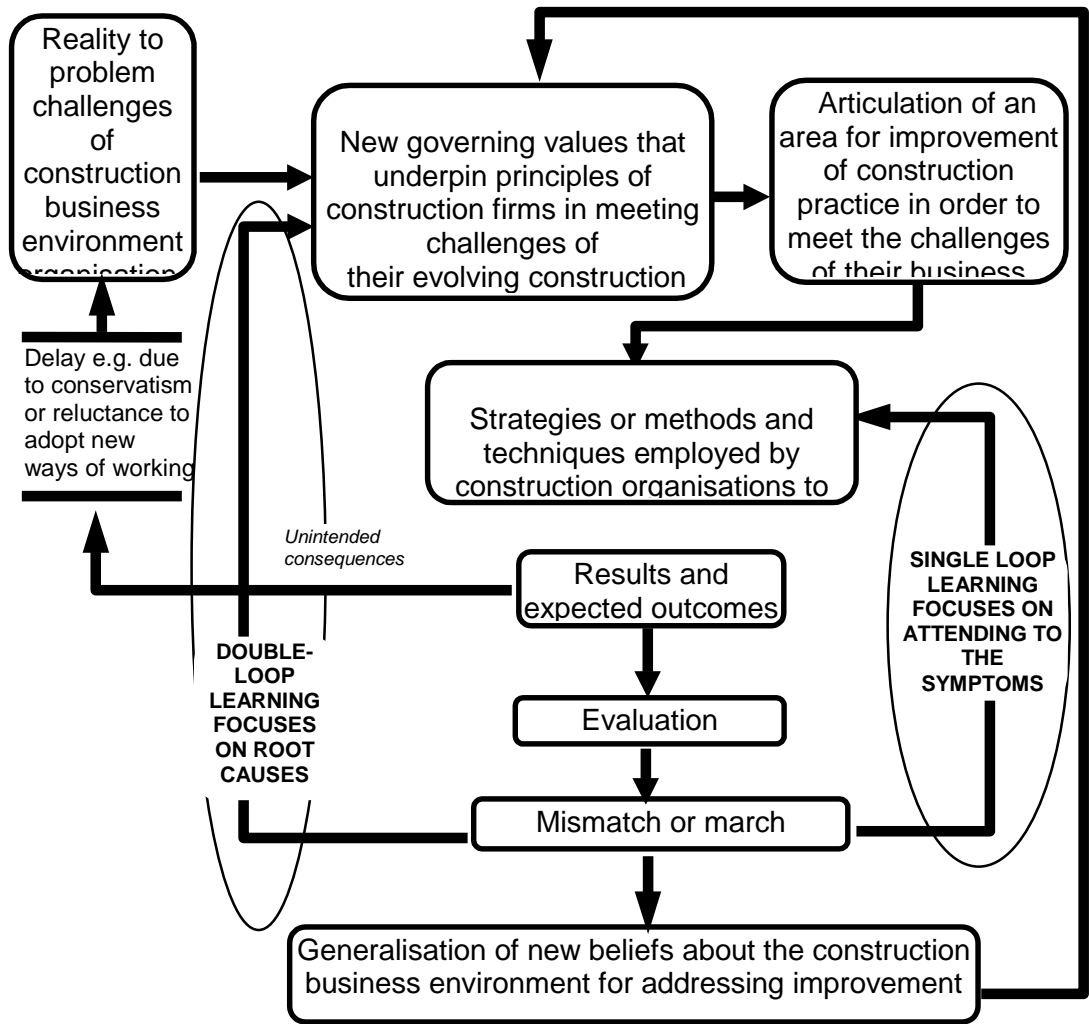


Fig. 2. Single loop and double-loop learning processes.

4.2 Double loop actions for addressing improvement

Double loop learning can be described as a process by which an organisation makes sense of the challenges in its business environment in ways that broaden the range of objectives it can pursue to address its improvement [23]. Therefore, when the business arena is going through a period of irreversible change the need for organisations to address the root causes of the challenges they face in the business environment becomes paramount and calls for addressing them by double loop actions. Double loop learning is characterised by two unique stages. First, changes are detected induced by the stimuli from their internal and external business environments, these are addressed by examining their mental models or the deep seated values of organisations or the blue prints of their practices which help to uncover the root causes as shown in Figure 2. Second, corrective



measures are undertaken by changing or modifying the blue prints of their practices which result in generating a new set of strategies to meet challenges of the business environment. As a result, an organisation can pursue alternative paradigms for increasing customer satisfaction, reducing cost and increasing safety in their operation in forms that have not been thought before. For example, the use of partnering as a solution to work arrangements that are governed by adversarial relationships presents a case of double loop action within the construction business environment.

4.3 Deutero actions for addressing improvement

The third type, deutero as shown in Figure 3, presents the pinnacle of organisational learning with considerable potential for continuous improvement in view of the extreme challenges that construction organisation face in their evolving business environment.

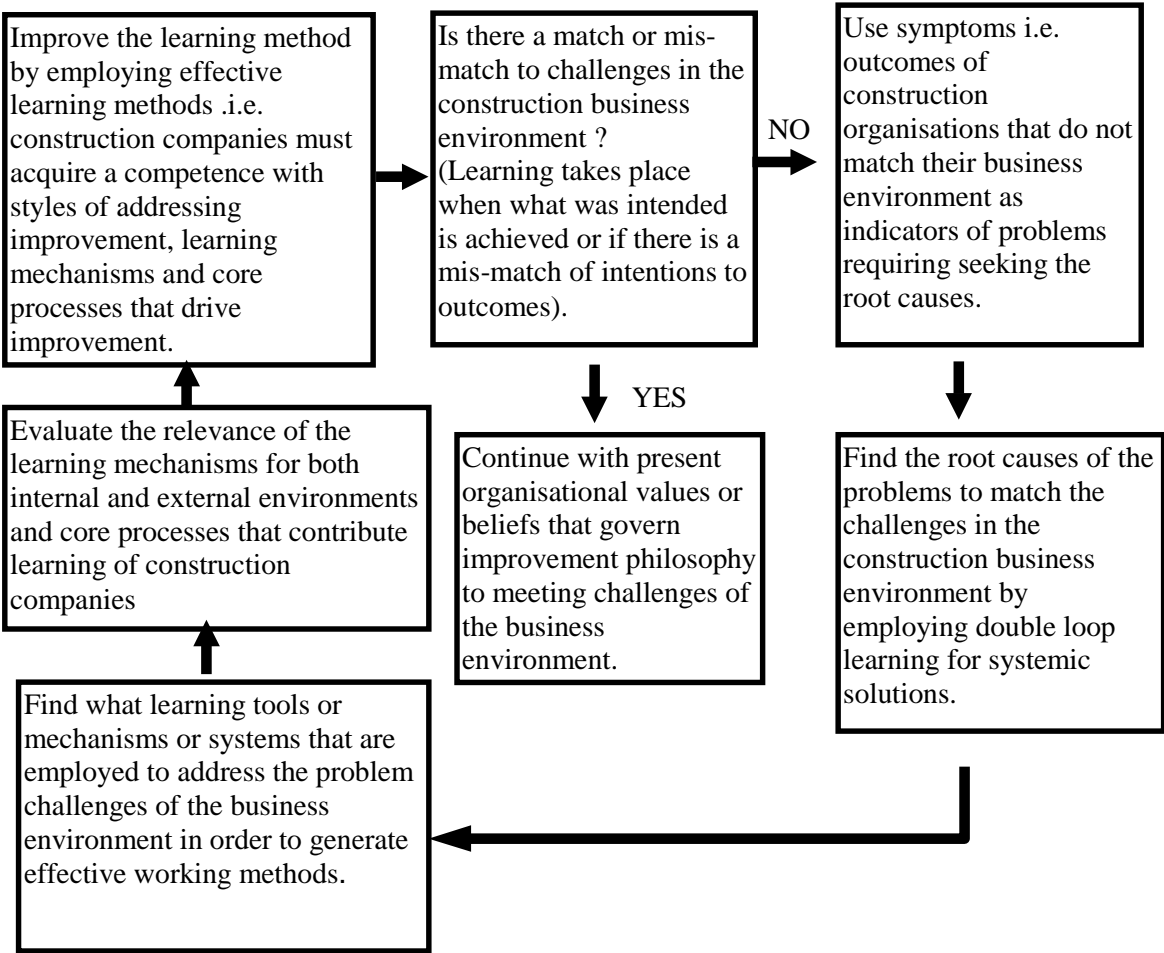


Fig. 3. Deutero learning process.

Learning as a process that can undergo improvement resulting in what is known as learning to learn or becoming skilled at learning [24]. This understanding has been employed to develop the learning process of companies. Organisations while acquainted with inadequacies of their values and practices requiring modification or adaptation can fail to improve them due to lack of competence and / or ignorance of the mechanisms employed for addressing improvement and core processes that contribute to learning of a company. Enterprises that nurture the deutero learning style, inquire



not only into root causes and outcomes of their practices which double-loop actions attempt to uncover, but also explore the relevance of their whole learning process and the mechanisms that organisations employ to address improvement in order to generate or innovate the learning process and / or employ effective learning mechanisms that are powerful in addressing improvement. Thus, organisations develop competencies in both internal and external learning mechanisms employed for learning resulting in becoming highly skilled at addressing improvement. Furthermore, with deuterio learning organisations are able to act appropriately by either double loop or single loop actions depending on the state of affairs of their internal and external business environments. This option therefore, provides the possibility for the deepest form of learning for a company and increases the inherent capacity of organisations to improve continuously.

5 Learning framework for advancing construction practices

Change has become an ever-present reality to construction industry. If continuous improvement of construction practices is to be sustained in a dynamic business environment there is the need to move forward into a new learning culture. This required culture will have to reflect a deuterio approach. Although single-loop learning strategy can result in some improvement, it does not necessarily provide the most appropriate route for improvement in today's changing business environment. The relevance of single loop actions lies in the identification of unsatisfactory construction practices. It offers a reactionary and short-term approach to improving construction practices from the challenges of the business environment. Undesirable construction practices should provide the reason for addressing the root causes. The persistence of problems in construction practices notwithstanding repeated implementation of the single loop solutions, should prompt organisations to adopt double loop actions which focuses on addressing the root causes. However, organisations hardly ever question the very basis by which knowledge of their improvement is acquired. The adoption of the deuterio learning should enable construction organisations to achieve a more comprehensive approach for improvement not only with present change but with a series of changes they will face in the future.

6 Conclusions

The paper has presented the issues impacting on construction organisations. The outlining of the various organisational methodologies for addressing improvement provide a framework for exploring improvement in construction practices to meet the extreme challenges of the business environment. The answer to continuous improvement of construction practices does not relate to single loop learning actions. It will involve a new learning paradigm shift that incorporates deuterio learning approach. This is not technologically based and can not be bought and installed within construction organisations. It involves a significant change in the collective mindset of construction organisations. Such change can be cultivated through a significant organisational re-alignment which requires an organisation to adopt a culture of learning by continuously questioning the status quo. This may be hard to achieve but is essential for continuous improvement of construction practices. Organisations will have to move from the single loop learning approach to addressing improvement to a deuterio learning culture in order to sustain their relevance to both industry and their own renewal.



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