A Conceptual Framework to Improve Project Team Learning in Major Projects

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ABSTRACT

Organizational learning within project teams is a phenomenon that is gaining considerable attention lately by both researchers and professionals. Review and analysis of lessons-learned documents from major projects, indicates that mistakes are repeated and lessons might not be learnt. This leads us to question whether project teams are truly learning the lessons. The purpose of this paper was to present a framework to improve project team learning in major projects. The research used a focus group methodology to investigate issues related to: learning barriers and enablers, individual and group aspects of learning as well as the mechanism of learning itself. The findings were, to say the least, very surprising as they reveal a lack of incentive for learning, lack of documentation of learning, and absence of collaborative learning within project teams.

Keywords: Barriers, Enablers, Group Learning, Individual Learning, Learning Barriers, Learning Culture, Learning Process, Lessons-Learned, Organizational Learning, Project Teams

INTRODUCTION

The concept of organizational learning and learning organization started to evolve in the early 1990s, with an increasing focus on human and intellectual capital as the primary resource for business organizations, as opposed to financial and tangible resources. A learning organization is defined as “the one that facilitates the learning of all its members and continuously transfers itself” (Senge, 1990, p. 14).

Senge (1994, p.49) defined learning in an organization as: “the continuous testing of experience and the transformation of that experience into knowledge that is accessible to the whole organization and relevant to its core purposes”. Mezirow (1997) highlight the impact of critical reflection on what we experience to extract learning. Reflection and learning within projects takes palace with the team. Learning is not about collecting knowledge and storing it, but most importantly the generation of new knowledge through the process of socialization (Gherardi, Nicolini and Odella, 1998).

According to Senge (1990, p. 64), “the rate at which individuals and organizations learn may become the only sustainable advantage”. This is particularly important in the engineering
and construction industry, due to the uniqueness of each project. As each project is different, successful organizations must be able to adapt quickly to new situations and circumstances. Project organizations need to be innovative in delivering their projects, in order to remain in a highly competitive business environment, so they must be proactive rather than reactive, and engage in organizational learning. Sense (2007).

Ayas and Zeniuk (2001) on the other hand, discussed promoting projects as learning vehicles and developing communities of practice. Similarly, Sense (2007) discusses the importance of managing learning in project teams and describes project teams as “embryonic communities of practice” as they provide a focused environment to foster learning across groups and project teams.

Kim (1993) also stresses the importance of making the distinction between the organization and the individual, and developed a model showing the links between individual and organizational learning by means of “shared mental models”. In order to move from the individual learning to the organizational learning level, we must understand the link between these two. DeFillipp and Aurther (2002) show how workplace learning happens in four contexts: individual, company, community and industry; and while these are usually studied in isolation, they argue that they are strongly interrelated so it’s important to understand the connections between them.

**Why Project Team Learning?**

The whole purpose of learning is to be able to expand learning from one project to another and from one organization to another. Abramovici (1999) for example considers that “lessons learned” as a good thing to implement on a project, and explains how it should be done. Pinto (1999) states that: information system projects have a poor success record. He describes evidence supporting this and reasons for it, and then goes on to stress the need to pass lessons learned through post-project review meetings. Moreover, Kerzner (2000) places continuous learning and improvement as the highest level of project management maturity in an organization, and states that “without discounted lessons learned, a company can quickly revert from maturity to immaturity in project management. Knowledge is lost and past mistakes are repeated”, Kerzner (2000, p.445).

Engineering and construction organizations are becoming increasingly project oriented, and their revenues are structured around projects. Such organizations are called “project-based organizations”. In project-based organizations, a significant portion of the learning happens within project teams. Senge (1990, p. 60) defines team learning as “the process of aligning and developing the capability of the team to create the results its members truly desire.” Therefore, organizational learning must include individuals, teams and the overall organizational system. While learning within an organization starts at the individual level, Individual learning by itself is not sufficient. An essential component of learning is group learning, which is the one that happens within project teams (Baker and Neailey, 1999).

**The Problem**

In his research around the architecture for learning in projects, Senge (2004) highlights the importance of reaching a better understanding of the learning process within project teams, by focusing on the individual and organizational aspects of learning, and how organizations could improve an individual’s skills to become creative and achieve organizational goals. “There is an extremely limited and shallow coverage of learning and its challenges within project teams environments” (Sense, 2007, p. 405).

Moreover, there is a problem with the existing views on project learning in the literature. Although the literature about learning emphasizes the potential for learning in projects, it also highlights the difficulty in archiving that learning (Ayas and Zeniuk, 2001). While there may be a significant amount of learning happening within a project, this can be difficult to capture and share across projects (i.e. from one
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