Chapter VIII
Lessons Learned as Organizational Project Memories

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ABSTRACT

This chapter suggests established research approaches to capture and validate project lessons learned. Past research indicates that due to the temporal nature of projects, improper management of knowledge, especially lessons learned, constitutes a risk for present and future projects. The authors argue that case study research is appropriate for developing lessons learned and that an inductive methodology can be used to generate hypotheses. These hypotheses are validated through an analysis of their Goodness of Fit into learning related business questions. Quality assurance in a lessons learned process should include a formalism to avoid loosing knowledge in the coding process, a formalism to avoid equivocality in the knowledge transfer to third parties, and validation techniques for the identified knowledge items. Furthermore, the authors argue that a common understanding should be achieved before organizational learning influences decisions and/or actions.

INTRODUCTION

Projects are intrinsically of temporal nature, they exist for a limited period of time and are characterized by frequent change of team members, depending on the skills needed at any particular point in time in the project (Turner & Müller, 2003*)*. Continuous dispersion and re-formation of project teams causes brain-drain problems through people leaving projects and simultaneously integration problems by people joining projects. Improper management of knowledge, especially lessons learned, constitutes a risk for present and future projects (Reich, 2007).

Under the term "organizational project memories" we include any organization that is project

driven including its higher order organizational structures like programs and portfolios. Therefore, for the purpose of this chapter, when we talk on organizational memories, we also consider organizational program memories and organizational portfolio memories.

Project lessons learned demand two sets of knowledge to be externalized in order to reduce equivocality (i.e. different understandings after reading them). These are (1) knowledge of the *ex-post mortem* project life cycle like knowledge about the performance, deliverables and resources (e.g. Kasvi, Vartiainen & Hailikari, 2003), and (2) knowledge of the *ex-ante* contract like knowledge on the situation and context (e.g. Abril, 2005). Project lessons learned are thereby a subset of the organizational memory. This, in its most basic and traditional sense, can be defined as stored information from an organizations' history that can be brought to bear on present decisions and/or actions (e.g. Huber, 1991; Walsh & Ungson, 1991).

Anecdotal experience (e.g. Senge, Kleiner, Roberts, Ross, Roth, & Smith, 1999) and past research (e.g. Darr, Argote & Epple, 1995; Eskerod & Skriver, 2007) indicates that if action is not taken then knowledge from experiential learning (e.g. Kolb, 1984) is not preserved in the organizational memory (e.g. Cooper, Lyneis & Bryant, 2002). On the other hand, capturing lessons learned and reusing them has a positive impact (e.g. avoiding known mistakes) on the performance of other projects (e.g. Gulliver, 1987; Kotnour & Kurstedt, 2000; Karlsen & Gottschalk, 2003). An important limitation has to be noted here that exceeds the scope of this chapter, knowledge will only be considered successfully transferred when it is reused (e.g. shaping or guiding subsequent behavior). Unfortunately, you can have an excellent organizational memory that is not being used (e.g. Newell, Bresnen, Edelman, Scarbrough & Swan, 2006).

This last observation brings up an interesting debate about the term "learned" from the behavioral and cognitive perspectives of the organizational learning literature. In the behavior perspective of the organizational learning literature (e.g. Huber, 1991) an entity learns if, through its processing of information, the range of behaviors is changed. This means that the members involved in the project influence their decisions and/or actions influenced by others' prior knowledge captured in lessons learned. On the other hand, in the cognitive perspective of the organizational literature (e.g. Weick, 1995) an entity learns if, through a sense making process which is an attempt to reduce multiple meanings, it reaches a common interpretation of a state of affairs. This means that the members involved in the project have reached a common understanding on the whereabouts of the project which can be externalized (in the sense of Nonaka & Takeuchi, 1995) in the form of lessons learned.

We argue that for an organization there is no conflict between both perspectives in organizational project memories and, furthermore, that a common understanding should be achieved before organizational learning influences decisions and/or actions.

BACKGROUND

The economic and cognitive impacts are frequently neglected in the traditional literature on lessons learned. Traditional literature frequently targets practitioners. It describes the utilitarian value of lessons learned as being overwhelmingly associated with the reuse of knowledge (e.g. risk reduction by avoiding known issues). However, rarely it is mentioned that the utilitarian value of lessons learned enhances common understanding and project performance. For example, Ball, Evans, Dennis & Ormerod (1997) provided empirical evidence supporting the hypothesis that the time engineers spend understanding information is highly correlated with the time they spend acquiring it. They follow monotonically decreasing

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