Chapter 45
An Integrated Approach to Collaborative Learning in Projects

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ABSTRACT

Information Technologies 2.0 (IT 2.0) is transforming the project management by improving communication and collaboration. It provides better experience than the traditional software package allowing document sharing, integrated task tracking, enforcing team processes and agile planning. Despite the benefits brought by IT 2.0, their use to promote lessons learned (LL) remains unexplored. For many project managers to obtain and integrate information from different tools of previous similar projects remains a challenge. This chapter emphasizes the need of combining traditional LL processes and methods with IT 2.0. It describes the IT 2.0 uses and how these technologies can support LL processes and methods in project settings. It delivers a proposal focusing on both IT 2.0-centered LL processes and an updating of traditional LL methods with IT 2.0. This proposal aims to help project managers to improve the management of LL and, as a result, the project learning.

INTRODUCTION

Projects are executed in the organization to produce and develop goods and services and present challenges during their lifecycle including contractual problems, inaccurate estimation, low team performance, lack of knowledge of providers and turnover of professionals. Identify each challenge and act proactively looking for solutions to each specific situation that occurs is crucial to achieve the projects objectives. The use of processes, methods and techniques that allow to document and distribute the knowledge obtained in each experience during the projects lifecycle is a valuable tool for organizations ensuring to reduce costs and risks and to increment productivity and competitive edge.

Lessons learned (LL) is a well-known project management tool and can be defined as the learning gained during the process of performing a project. This learning should be usefully applied on future projects to promote the recurrence of desirable outcomes and to avoid or mitigate possible problems. Project managers used to have difficulties to manage LL during the project. Schindler and Eppler (2003) found that the main causes of the lack of documentation of LL on projects are time, motivation, discipline and skills. On the other hand, nine percent of the respondents were willing to contribute to the documentation due to the time and level of effort required. In this same vein, Petter and Vaishnavi (2008) found that 64% of participants in an experiment reported having learned from the documents filed by his peers. These data are encouraging to raise awareness about the management of LL in the project team.

To minimize the time and effort, web 2.0 tools (IT 2.0, henceforward, e.g. microblogs, blogs and wikis) can be an alternative to be explored. Emerging IT 2.0 and applications start to gain visibility and use by project managers to better support daily tasks and processes (Grace, 2009; Shang, Li, Wu, & Hou, 2011). Despite the use of IT 2.0 be broad in Project Management (PM) (e.g. creation of deliverables, status reports, 'great ideas' saved for later, standards and practices), this chapter focuses on their use to cope with LL. IT 2.0 need to be better grasped to store, capture, share and disseminate LL in a project. Although some projects successfully deal with LL, this subject remains being an appellant challenge to project managers, since as Polanyi (1966) stated 'we can know more than we can tell.' One of the issues approached in this chapter is to provide facilities to capture LL from the project team. The aim of this chapter is to present theoretical background about LL processes and methods and discuss how to use IT 2.0 to support LL in PM. Instead of using commercial and legacy LL systems such those listed by Weber et al. (2001), free IT 2.0 can provide a simple, easy and more efficient way to deal with LL.

USING INFORMATION TECHNOLOGY 2.0 IN PROJECTS

The uses of IT 2.0 include supporting knowledge management, collaboration and communication, training, and innovation (Andriole, 2010). IT 2.0 have also the potential to complement, enhance, and add new collaborative dimensions to the processes of storing, capturing, sharing, disseminating and applying LL. Further, these technologies afford the advantage of reducing the technical skill required to use their features, allowing users to focus on the exchange of LL and collaborative tasks themselves without the distraction of a complex technological environment. The main IT 2.0 to be applied to PM and LL include wikis, blogs and microblogs, which are described in the following.

A *wiki* is a web application which allows people to edit content in collaboration with others. Wikis has been used to support creation and sharing of knowledge within communities in projects and organizations since at least ten years ago (Bean & Hott, 2005, Majchrzak, Wagner, & Yates, 2006, Wiewiora & Murphy, 2015). Wikis have unique features such as collaborative authorship, instant publication, versioning and simplicity of authorship. Grace (2009) highlights other advantages in the usage of wikis, including ease of use, central repository for information, tracking and revision feature, collaboration among organizations and solve information overload by e-mail. Parker and Chao (2007) emphasize their use to enhance the learning process. Wikis have been also used to support the following organizational processes: knowledge codification, communities of practice, interaction with third parties, information systems development and maintenance, management activities and organizational response in crisis situation (Lykourentzou, Dagka, Papadaki, Lepouras, & Vassilakis, 2012). One type of wiki widely used internally in a corporate context is Corporate Wiki (Grace, 2009). Majchrzak, Wagner and Yates

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