

Organizational improvement methods: A comparison between lessons learned processes and work processes

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Abstract

Through the years different methods have been designed to improve project performance. Two in particular are work process and lessons learned processes, which both utilize past experience to improve future organizational performance. The article evaluates and compares both methods, by formulating the definitions and characteristics of each method. The result of this article shows that both methods can be used simultaneously to improve organizational methods as key aspects of the methods complement each other. The possible future step could be to further conceptualize a framework that integrates both methods using the identified characteristics within this article.

Keywords: Lessons learned process, Organizational performance, Project-based organization, Work processes

1. Introduction

In the last century hierarchical organizations operating in the knowledge based economy struggled to keep their market position in innovation and competitiveness (Sawhney & Prandelli, 2000; Chasbrough, 2003; Haour, 2004). These organizations transformed into flatter, speedier, more flexible and horizontally oriented structures around teams and projects (Child & McGrath, 2001; Child & Rodrigues, 2003). These project-based organizations (PBOs) are better suited to deal with changing markets and technologies than hierarchical structured organizations (Lundin & Midler, 1998; Hobday, 2000; DeFillipi, 2002; Lindqvist, 2004). The business model of a PBO is to “generate results in response to specific client demands by structuring projects around temporary assemblies of in-house specialist staff and executing business within a fixed time limit” while working in projects (Kodama, 2007, p. 3).

Projects are defined as “a temporary organization to which resources are assigned to undertake a unique, novel and transient endeavor that involves managing the inherent uncertainty and need for integration in order to deliver beneficial objectives of change” (Turner and Miller, 2003, p. 7).

As each project is unique it will encounter new (un)foreseen barriers that will need solving. This experience, this knowledge on how to deal with that particular barrier, is a key element for establishing and maintaining a competitive advantage (Mintzberg, 2007; Argote & Ingram, 2000). Capturing knowledge from past projects can positively influence future projects (Fitzek, 2002; Milton, 2010). PBOs can save time and money on a project as well as improve the projects quality when avoiding reinventing the wheel in each project (Shell, 2010). Project-teams of PBOs are enable to react faster and more flexible to new problems (Seningen, 2005).

The need to capture valuable experiences was identified and successful execution of work was captured into work flows. Through the decades the terms of work processes and lessons learned processes have been used to define the process of transforming experience into usable knowledge for new projects to come. This article aims to provide an overview of the processes and how they relate to one another, to create a clear distinction between them. Firstly, the definitions of each term and its function for organizations is clarified. Secondly, a comparison is made based on the definitions, by using literature and interviews held with experts in the field.

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2. Clarification of the definitions

Literature has written for several decades on the question how past experiences can be used for future work. Ackoff (1989) notes the What, Why, Where, When and How of knowledge. Brown (1991) argues how organizations and communities should combine work with learning and innovating. The importance of not merely the experience, but also the community in which the experience occurred is stressed by McDermott (1998). Both Barney (2011) and Jasimuddin (2011) independently argued that to successfully utilize the knowledge a culture that promotes the use of the captured knowledge needs to be created by the organization, referring to the institutionalization of Selznick (1976) that such learning processes are a continuous process.

In the following part of this section the characteristics of work processes and lessons learned processes are elaborated. Once a clear understanding of the principles has been created, a comparison is performed in section 3.

Work processes

In the last decade of the previous century, both work processes and business processes have been used simultaneously. For clarity purposes, both definitions are discussed here.

Business processes have not one clear definition. Davenport (1993) defines it as a “structured, measured set of activities designed to produce a specified output for a particular customer or market.” Another – broader – definition is given by Rummler & Brache (1995). They state that a business process is “a series of steps designed to produce a product or service”. Finally the Workflow Management Coalition (WFMC, 2011); a group containing vendors, users and consultants of workflow management technology, define business processes as a “set of one or more linked procedures or activities which collectively realize a business objective or policy goal, normally within the context of an organizational structure”.

The general perception is that a business process contains actions, steps or procedures, but the relation between these smaller elements differ per definition. In real terms, Workflow Management (WFMC, 2011) focuses on recurrent processes on the operative level. Theißen et al. (2010) concludes therefore that “in consequence, common usage of the term business process is narrowed to highly

structured processes as indicated in the definition by Rummler and Brache”.

Work processes, closely related to business processes, are defined as “a collection of interrelated actions in response to an event that achieves a specific result” (Sharp & McDermott, 2001). The term actions is a broad one, which embeds the previous named activities, steps and procedures of the business process. Therefore, business processes in the colloquial meaning is a specific, higher level, type of a work process, focusing on organizational structures.

Given the value of a good work process for project-based organizations, diverse procedures have been developed that guide the process (e. g. Davis, 2001; Phalp, 1998, Sharp & McDermott, 2001). These procedures share some common steps that need to be used iteratively:

- 1) Identifying modeling goals and scope
- 2a) Capture the process as currently performed with its strengths and limitations
- 2b) Make a first draft of how the desired work process should look like
- 3) Analyze the process and specify an improved version.
- 4) Implement the improved version

Given the broad nature of the definition of work processes, a work process can entail a large variety of actions to achieve a defined specific result. Ranging from a sequence of engineering tasks to design an engineering project to a work process on organizational structure of the project team. To match the goal of the work process and its applicability, four dimensions have been constructed on which a work process can be categorized (Theißen et al., 2010): level of detail, level of formalization, level of generality and level of quality.

The iterative characteristic of work processes, work processes require to be evaluated on a regular basis. As new experiences arises, interrelated actions might require modification to further improve the robustness of the preferred outcome.

Summarizing, work processes entail procedures, rules which provide the organization to deal with events in a structural way. Work processes are constructed by the management, with input from

staff with operational experience, and distributed to be followed. In that sense, work processes are rigid processes that elaborate how or when actions need to be performed.

Lessons Learned Process

Lessons learned is a term that is used with different meanings while holding a common principle. The term lessons learned reflects on past experience in which something new has been encountered and from which a lesson can be drawn. The following definition is used when referred to lessons learned:

“Lessons learned are documented project knowledge gained from both successful and unsuccessful projects that once re-used can impact the organization by improving the cross-project learning, and with that positively impact the performance of the current, and future projects.” (Barney, 2011, p. 18)

This definition states that only knowledge obtained in a project and documented for future use can be shared as a lesson learned. Knowledge that is within a person and thus not documented – tacit knowledge – cannot be defined as a lesson learned. Lessons learned are thus explicit knowledge. To enable knowledge to be applied on other projects, it needs to be taken outside its context, the project in which it occurred, and where possible be formulated generic. The value of the lesson learned is, however, that it occurred for the first time in a project that is unique and that the setting of that project is part of the reason it occurred. The context in which it took place is therefore part of the lesson. A continuous balance is required between the depth of the unique context to give the lesson learned its quality and the re-usability of the lesson learned through standardization to increase its applicability.

Looking at the type of knowledge that is obtained during a project, a distinction can be made between two types of lessons learned: Process lessons and product lessons (interview Wardall, 2011). Process lessons are lessons that deal with how projects are executed, such as (1) communication during a project, (2) structuring the project team and (3) utilization of resources.

The second type of lessons learned, product lessons, are focused on the product the project team is constructing. These lessons are focused around the premises of projects such as: (1) quality of the product, (2) keeping within cost and time estimates

and (3) delivering product according to technical requirements

Product lessons are easier to make explicit as they are focused on a product that is within the expertise of the organization (e. g., building a boiler). These lessons can be extracted from its context as quality, cost and time are tangible criteria. Process lessons are softer and depend quite a lot on the time and place it occurred. This makes these lessons more depending on the context and therefore harder to convert into explicit knowledge.

Using the above, the focus of lessons learned is on the reuse of the knowledge in other projects. The principle of lessons learned requires a system in which the knowledge is captured, stored and later retrieved by others to utilize the captured knowledge. This system enables the lessons learned to go through a process: lessons learned process. Lessons learned processes facilitate the capture, storage and retrieval of lessons learned, see figure 1. Each step will shortly be explained.

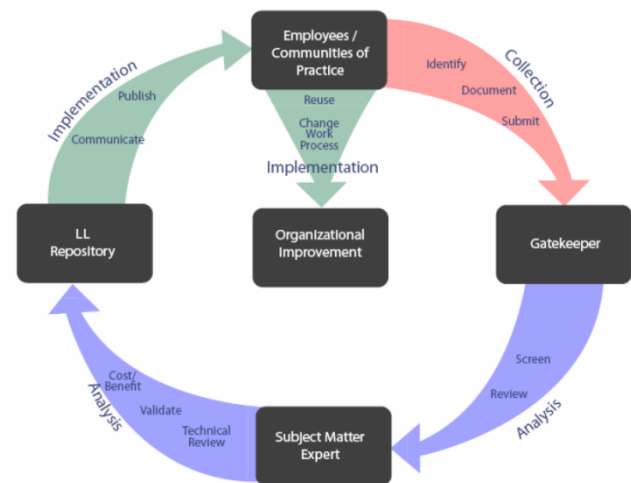


Figure 1 - Lessons learned process (from CII, p. 79, 2007)

The first step of a lessons learned process is the collection of the lesson learned (Milton, 2010). This requires some skill of the individual that experienced the lesson as he needs to transform his tacit knowledge – the experience – into explicit knowledge. There are quite some different methods that aid the capturer with this step such as the use of project reviews (Newell, 2004), management initiatives (Koch, 2004), weblogs (Ras et al, 2005) and learning-based project reviews (Kotnour & Vergopia, 2005).

The second step is analyzing the lesson learned. This step contains two important elements: the first one is to screen whether the lesson is already recorded earlier. This is to prevent placing the same lesson multiple times in the database creating double query hits while representing the same lesson. The second part is the validation of the quality of the lesson. If too little knowledge is captured the transformation from tacit knowledge to explicit knowledge will not succeed, resulting that the retrieval of the lesson is done partly and successful learning is not guaranteed without the capturer filling the gap each time.

Retrieval of the lesson learned is the third and final step of a lesson learned process. This step utilizes the lesson in order for an individual that did not participate in the project that encountered the lesson, to learn from the lesson and make the explicit knowledge his own.

The potential added value of such a lesson learned process thus depends heavily on the quality of the step 'collection', while the effectiveness of the process depends on the rate of implementation by the community of practice. Barney (2011) suggests, therefore, that both structured as well as ad-hoc learning moments need to be embedded throughout the different phases of project execution. In these moments new lessons can be captured, while old lessons can be used to solve current barriers that the project faces. An important note that Barney makes is in order to achieve this, the culture of the organization needs to shift in which a large task is laid out for management to promote the contribution to and usage of a lessons learned process.

3. Comparison

The comparison between work processes and lessons learned process is performed based on a variety of main characteristics, discussed below.

Goal of process

As stated in the introduction, both work processes and lessons learned processes aim to improve performance of the organization by setting up a process that enables learning from past experiences. Both terms are placed in a process which uses new experiences as input and aim to further expand the knowledge base of the organization. However, looking more in-depth in this evaluation cycle, differences can be identified:

Work processes are generalized procedures that guide interrelated actions. Therefore, an evaluation of work processes is done centralized and distributed afterwards.

New lessons learned do need to go through an appointed gatekeeper that keeps already known lessons from being added again, though the input can be provided by any individual that experienced the lesson.

Type of experience captured

Work processes use a broad definition, but it always entails actions to achieve a specific result. Therefore, work processes aim to capture knowledge on how to execute a project, but also the sequence in which tasks need to be executed.

Lessons learned processes try to capture both product and process lessons of projects. Similar to work processes these contain structural lessons, but also specific requirements or characteristics which the project team needs to be aware off. Lessons learned thus contain more case-specific experiences than work processes.

Participation of employees

Individuals can contribute in a lessons learned process and allows the individual to contribute more gradually through both structured and ad-hoc moments, compared to a periodic evaluation cycle of work processes. As a lessons learned can be factual information or unique characteristics that need to be taken into account for future projects, participation of an individual is more plausible within a lessons learned process.

This also means that participation is more required for a lessons learned process, as individuals are expected to contribute to and use the database. Compared to work processes, more responsibility is required of employees to use the captured lessons as well as place new lessons themselves. Institutionalization, infusing an organization with knowledge, is therefore more beneficial for lessons learned processes, as participation is key for an successful lessons learned process (Cooper et al 2002; Soo et al 2002; Ajmal et al, 2010; Jasimuddin et al, 2011) to motivate a large group of people to contribute to a lessons learned system with their knowledge.

Concluding remarks

Over time different methods have been developed to achieve organizational improvement. While work processes and lessons learned processes look similar,

they have different characteristics to achieve a similar goal.

The first difference is the required input. Work processes aim to lay out actions to achieve a result, and everything that is related to those actions, whereas lessons learned process aims to utilize information with unique characteristics to prepare future work for similar encounters. The input therefore differs. Work processes seek experiences on the actions that the work process entail, their effectiveness to achieve the perceived result and everything that influence these actions (in)directly. Lessons learned process seek experiences that can aid other projects to deal with their unique characteristics by making lessons on both processes and products explicit.

A second difference is based on specific requirements to achieve successful utilization of the method. Work processes generally speaking do not require any additional features besides having people with experience to meet at periodically structured meetings. Lessons learned processes, however, requires participation of their employees, to build a knowledge base with unique lessons. Thus when organizations apply a lessons learned process, they need to embed institutionalization along with a technical system (Barney, 2011; Jasimuddin, 2011).

It is the conclusion of this article, that the two processes have similarities in how they are structured, but each have their own focus as the experience, the input, they utilize is different, see figure 2. In this perspective, lessons learned processes are an additional tool alongside work processes to improve organizational performance. By using both methods, a project-based organization is able to improve performance on the interrelated actions through work processes, while also improve product and process performance of project execution.

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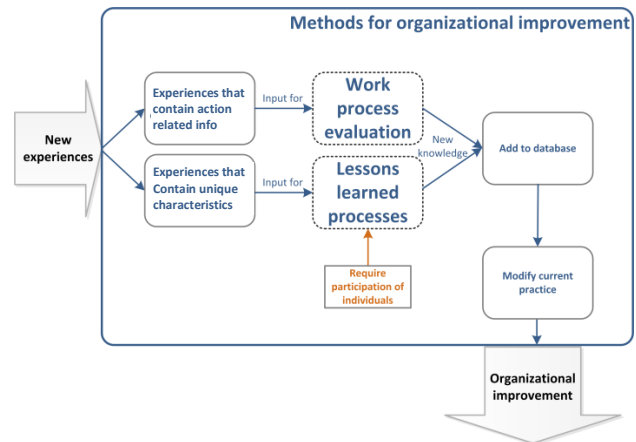


Figure 2 - Graphical conclusion of the comparison

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