Abstract

Learning is seen as important both within and between projects so that the whole organization can benefit from the lessons learned, and achieve competitive success. Also, projects are seen as suitable organizational units for stimulating learning and creating knowledge. However, organizations have difficulties in dissemination, and applications of lessons learned fail to deliver the intended results. Therefore the purpose of this paper is to explore the complexity surrounding barriers of learning in a project environment, and to present suggestions of how to overcome them in practice. That is, to give examples of means that can support learning in a project environment. Findings are based on a literature review, and findings from a longitudinal case study within a project-based organization.

We argue, in accordance with Duffield and Whitty (2015) that there is a need of a new paradigm for organizational learning in the project management field that conceptualises and articulates how projects are interlinked and generate value to a higher order learning purpose. Especially in project-based organizations (PBOs) where the main part of business is conducted in project form. This paper aims to explore the complexity surrounding barriers of learning, which exist between different levels of learning in organizations, but also in relation to different approaches to learning, e.g. hard focusing on control and quantitative measurement or soft focusing on social processes and qualitative aspects.

The tentative results, based on a case study, show that even though learning is brought up on the agenda and discussed as important in the PBO, learning is often marginalized, and treated as a separate activity. Also, results from a literature review reveals that the view of learning can be described from different perspectives and approaches, either scientific/hard with a focus on capturing and storing learning, or social/soft with a focus on disseminating and unleashing learning. The first could be regarded as rigid, while the latter could be seen as vague. We adopt a push/pull analogy of learning in project environments, suggesting the increased need to foster a pull approach, in which a demand for learning is facilitated, and hence supporting value creation.
Introduction

In order to gather accumulated information and knowledge about how to utilize projects, the theoretical field of project management (PM) have emerged, and can be described as a set of models and techniques for the planning and control of complex undertakings in a project context (Packendorff, 1995). But for some time now the use of projects and programs in order to achieve strategic objectives within organizations have increased (Bredillet, 2010), as well as the application of project-based forms of organizing (Söderlund, 2005). When organizations reach a point, where the majority of products and services are produced through projects for either internal or external customers, they become what can be defined as project-based organizations (PBOs) (Turner and Keegan, 2000). One success factor concerning PM is effective learning (e.g., Ayas, 1996; Cooke-Davies, 2002; Schindler and Eppler, 2003; Williams, 2004), relevant for all who apply projects, and especially in PBOs, since PM then is of primary importance.

Literature shows that learning is of importance, both within and between projects (e.g. Kotnour, 2000; Swan et al., 2010), with the purpose of obtaining benefits from lessons learned (Torres & Gati, 2011; Weldy and Gillis, 2010) that can be of use for the whole organization. Since (effective) learning is a success factor of PM it is important that organizations (not limited to PBOs) can find ways to manage and support project learning (Adjaye, 1994; Julian, 2008; Newell et al., 2006; Swan et al., 2010). However, learning from projects will only occasionally lead to more institutionalized levels of organizational learning, even within highly project-oriented organizations (e.g. PBOs) (Swan et al., 2010). According to Fuller, Dainty and Thorpe (2011), it is commonly acknowledged as difficult for PBOs to learn from previous projects, as well as to actually implement the lessons in future projects. Overall reasons, for problems associated with managing learning in project settings, are seen to be the temporary nature and complexity of projects (Bourne et al., 2004; Keegan and Turner, 2001; Williams, 2003). Swan et al. (2010) for example point out that there are difficulties in capturing and translating learning into new routines and practices, so that the organization can benefit from the learning. Other issues pointed out are for example the lack of (working) project-review processes (Julian, 2008; Schindler and Eppler, 2003), and that PM tools are not used to their full extent, in order to benefit learning and systematic improvement work (Gieskes and ten Broeke, 2000).

As shown, learning is advocated, both in academia and in practice, as an important component of project operations, but it seems hard to achieve. This is however nothing new, as shown by Fuller et al. (2011), the difficulties with learning in PBOs has been acknowledged before (cites references between 2002 and 2008). The topic of interest in this paper is thus to examine the reasons to why research and practice have not yet managed to move beyond these difficulties, in order to achieve learning, and benefit from it (as advocated by Torres and Gati, 2011, and Weldy and Gillis, 2010). In order to do this a literature review has been utilized to scrutinize what is emphasized considering learning and projects/PBOs, as well as findings from a single, in-depth, case study at the projects department (a PBO) of the Swedish mining company.
Luossavaara-Kiirunavaara AB (LKAB). Hartmann and Dorée (2015) provide some insight into learning related to project, especially between them, and that projects are treated as island, with a dominant sender/receiver approach.

The PM research field - evolution

As stated in the introduction, the theoretical field of project management (PM) can be described as a set of models and techniques for the planning and control of complex undertakings in a project context (Packendorff, 1995). In the 1990’s three main shortcomings of PM research and theory were identified by Packendorff (1995) as: (1) PM is seen as a general theory and a theoretical field in its own right, (2) research on PM is not sufficiently empirical, and (3) projects are seen as “tools.” More recently, authors have begun to criticize the traditional approach to project management, with an overemphasis on planning, design and development, and its ineffectiveness for managing projects, which entail high levels of complexity and uncertainty (Kapsali, 2011, Shenhar and Dvir, 2007). Today, PM can be regarded a mature academic discipline of some diversity and complexity containing different perspectives (Bredillet, 2010; Söderlund, 2002).

Reviewing the PM research field, it shows a development of different orientations and perspectives (e.g. Anbari, 1985; Bredillet, 2010; Söderlund, 2002); Optimization, Modeling, Governance, Behavior, Process, Contingency, Success, Decision, and Marketing School. Still, PM has a predominantly rational focus in organizations (Blomquist et al., 2010). Cicmil et al. (2006) emphasize that conventional methods in PM can be inappropriate and potentially disadvantageous for projects that are structurally complex, uncertain, and heavily time-limited. In other words, planning and structuring is inadequate in order to succeed when complexity and uncertainty increase, and traditional PM variables (time/cost/scope) are challenged. In a review of research directives concerning PM practices, several researchers (cf. Crawford et al., 2006; Kwak and Anbari, 2009; Söderlund, 2004) pinpoint the need to changing the view of PM and its practices, e.g. there is a need to look beyond “single project” perspective and talk about various levels of analysis in “project research” (Söderlund, 2004).

For instance, Jacobsson and Söderholm (2011) discuss a shift towards viewing “projects as a social system” and, Pollack (2007) states that there is a growing acceptance of the so-called “soft paradigm”, which emphasizes learning, participation, and an interest in underlying social process. This indicates a need of a new way of thinking in the PM field. Also, Sauer and Reich (2009, p.182) pinpoint that there is need for a “fundamental re-appraisal of project management research”. They suggest the idea of projects as a knowledge process, i.e. a conceptualization of projects and project management in knowledge terms, and exploring how performance can be improved by focusing on management of projects as knowledge and learning process (Sauer and Reich, 2009).

Sauer and Reich (2009) also discuss a study, Rethinking Project Management, which primary aim has been to develop a research agenda aimed at extending and enriching mainstream project management ideas in relation to the
developing practice (cf. Winter et al., 2006). The study identified five directions for advancing PM research (Sauer and Reich, 2009): complexity, social process, value creation, broader conceptualisation of projects, and reflective practice. In sum, ‘Rethinking Project Management’ emphasizes that one of the main directions for the PM research field would be to move from “product creation” to “value creation” (Winter et al., 2006).

Models and methodologies

Since the problems concerning organizational learning related to projects is nothing new, there are of course developed suggestions of how to manage and overcome these problems to be found. In project management, there exist several types of PM models. Eskerod and Riis (2009) have highlighted some of the characteristics of these project management models in the following way:

1. They cover only the project life cycle and ignore the post project phase.

2. They build on well-known phase models such as that described by the PMBOK® Guide (PMI, 2008), hence the project management process.

3. They contain a substantial number of templates, but only a moderate number of them are mandatory.

Though, the models referred to above do not emphasize learning. There are however some attempts of models and methodologies for the dissemination of lessons learned (Gillian et al., 2015), e.g. process methodologies in which the knowledge is reflected in an organization’s policies, processes and procedures and social based methodologies. Other methodologies have been proposed to correctly identify what the customer wants (e.g. Functional Analysis, System Techniques, Quality Function Deployment), to eliminate all unnecessary costs (e.g., cost analysis methodologies) or to compare several alternatives with multicriteria analysis methodologies (Gillian et al., 2015).

There are attempts to illustrate learning in a project context. One model is proposed by Duffield and Whitty (2015) that propose an adaptation of the ‘Swiss cheese model’ (referring to Reason, 1997) to enable project organizations to conceptualise how they learn from past project experiences and distribute successful project know-how across an organizational network of elements such as individual learning, culture, social, technology, process and infrastructure. Also related to system thinking, Kapsali (2011) states that systems thinking methods provide the flexibility to manage innovativeness, complexity and uncertainty in (innovation) projects more successfully.

Further, Eskerod and Riis (2009) have examined the value contributed by the models, identifying the following: efficiency, legitimacy, and power and control, as well as stakeholder satisfaction. But in order to harvest the values, an important precondition is investment in both the human and technical dimensions of a project management model. They highlight that value is best created if the organization makes sure that the project management model has
only relatively few mandatory requirements but a well-developed governance structure.

Further, Thomas and Mullaly (2007) describe a conceptual model underlying a major international research project designed to yield a broad perspective on the value of project management. This model and research design will be of interest to researchers, project managers, professional organizations, and senior executives. They state that we must go beyond too simplistic measures to examine the real value of project management. Also, there is a need to consider the many and varied levels and types of value project management provides to organizations. Considering value in project management, and to understand what it brings to organizations, require grasping a breadth of data, before more precise questions or measures can be understood. Without understanding the context, it is impossible to know what other organizational or environmental activities may be influencing the resulting value (Thomas and Mullaly, 2007).

Value

The literature on Project Management (PM) shows that, in spite of advancement in PM processes, tools and systems, project success has not significantly improved (Andersen, 2014). As stated by Andersen (2014, p.885), “the modern project manager should focus more on the future value creation of the company, and the various ways in which projects can make their strongest contributions to this endeavor”. But what is needed to make value happen in PM? PM needs adjusted tools that focus on how to create value (Couillard et al., 2009), e.g. Mission Breakdown Structure tools (Andersen, 2014). But even if there exists capability building approaches that clearly identifies the importance of so called learning cycle occurrence from one project to another, it is far from being used in the concrete value management toolbox in PM (Maniak et al., 2014). There is evidence that project control concerns have shifted from cost control (e.g. cost/time/scope) and traditional value management—such as earned value—to a deeper understanding of the strategic value generated through the projects (Brady and Davies, 2004; Shenhar and Dvir, 2007).

The root of VM is found in the development of value analysis (also called value engineering). In the VM literature, this philosophy is often referred as the “hard” VM paradigm (Gillier et al., 2015). Thus, the VM literature has advanced beyond the hard engineering product development focus toward a more holistic approach that could be compared to strategic project management (Thiry, 2002). Accordingly, Gillier et al. (2015) highlight one definition: “Value management is concerned with defining what ‘value’ means to a client within a particular context. This is achieved by bringing the project stakeholders together, producing a clear statement of the project’s objectives. Value for money can then be achieved by ensuring that design solutions evolve in accordance with the agreed objectives. In essence, value management is concerned with the ‘what’, rather than the ‘how’”.

As shown above, learning in a project management context is advocated and there exist models that depict how learning is achieved, but still learning rarely happens, or is perceived as difficult. Based on this, there seem to exist (both
implicit and explicit) barriers hindering PBO from achieving learning in a project context. This raises the question of how PBOs approach learning in practice, how they strive to achieve it, and what barriers they encounter in practice.

**Method**

This study discusses the underlying problems affecting organizational learning related to projects, based on a literature review and empirical findings from a case study. The origin of the study is findings accumulated, and partly presented, in a longitudinal case study in progress at the projects department of the mining company Luossavaara-Kiirunavaara AB (LKAB), published in the licentiate thesis *Exploring a Project-Based Organization through the eyes of Continuous Improvement and Learning* (Sundqvist, 2015). Additional data, gathered using a questionnaire and focus group interviews, from 5 other PBOs, involved in construction and engineering projects, has also been included in order to add breadth the empirical material. All PBOs included are primarily involved in construction and engineering projects in Sweden.

In the longitudinal case study, respondents were selected based on involvement in, and knowledge of, the PBO. This included project coordinators, project, program, and portfolio managers, as well as the head of the project department. Also included were respondents from the business development function, responsible for support systems, routines and so on. Semi-structured interviews with open-ended questions were used due to the exploratory approach, which allowed respondents to discuss in an open manner, allowing for alternative use of the data, as in this case. Direct observations have also been applied, in order to scrutinize the views and opinions of respondents, allowing for the comparison of what respondents say, and what they actually do.

The PBO in the case study operates as a subsidiary to (or department of) its parent company, with no external customers. They are however operating on the open market, meaning that their customers are free to commission projects from other firms, with the exception of projects of considerate strategic importance (decided by senior company management). The PBO operates over a larger geographical area, with offices in different cities, and with various types of projects, related to mining, processing, logistics (railway and harbours), and municipal transformation (moving cities due to environmental impact/effect of mining operations). Approximately 100 employees make up the PBO, divided between 5 project portfolios and one business development function (including administrative staff).

**Insights of learning in practice**

This section provides an insight into how a PBO approach, and strive to achieve, learning. Presented findings are primarily sourced from the case PBO, while data from additional PBOs have been used for comparison. Findings are based on PBO members’ view of learning, together with direct observations for reference.

*Views of learning*
As shown, learning is advocated as important in project environments throughout literature. Not surprisingly, this was also found in the case (and focus group interviews), since several respondents described learning as something desirable and important in order to improve and to avoid making the same mistakes twice. The importance of learning was discussed as essential in PBOs, but at the same time troublesome to achieve. It was described as natural for the individual project manager to continuously learn, both within and between, projects. One respondent also mentioned that the learning period for a newly employed project manager, in order to become more or less independent, was around 2-3 years. During a 2-3 year period a project manager would have had time to participate in at least one (larger) project from start to finish, and thus learn in and from all phases of a project. The troublesome part was instead described as how the organization could exploit the lessons learned (by individuals), in order to be of use to the collective.

Following the division of organizational levels of learning (e.g. Scarbrough et al., 2004), the occurrence of learning was described as natural on the individual level, occurring but limited on the project/team level, and infrequent and rare at the organizational level. Several respondents stated that, from a learning, and knowledge sharing, point of view the PBO could be portrayed as divided, with little or no occurrence of knowledge sharing (especially formal sharing) between programs or portfolios. In general, learning was regarded and discussed as part of an idealized picture of PM, of course desirable, but often hard to achieve.

Means for learning

When discussing activities and approaches to achieve learning, and how learning was encouraged, several PBOs described formal routines and templates for the capturing of learning. The utilization of these routines and templates were however described as problematic, since they were not always used, and when used, the quality of the content varied. Examples given was that meeting agendas always contained a section for lessons learned, in order to continuously document lessons in projects, and that project report templates contained a section for lessons learned, in which the project manager was supposed to document important lessons. The described problem was that these items often were given low priority, in favour of matters regarding time, cost, and scope. This meant that lessons learned were given the lowest priority in meetings and in project reports. During project meetings, which were described as usually cramped with issues that needed to be addressed, the lessons learned section of the agenda most often was assigned the lowest priority, since it did not directly contribute to finishing the current project. For project reports, respondents described that if the section for lessons learned was filled in, it often only contained success stories, and lessons from mistakes and failures were often left out. On one hand, the respondents in the case often stated (in interviews) that their organization was forgiving towards mistakes, and wanted to learn from them, but on the other hand, they described the project managers’ as reluctant to document mistakes.

The dominant way of managing learning seems to be through efforts of capturing and disseminating lessons learned, throughout organizations. This was
illustrated by the use of “lessons learned” sections in agendas and project reports, as well as different types of “suggestion boxes” where employees could submit improvement ideas. In some cases there was also a specific department for business development, responsible for gathering, evaluating, and implementing improvements. The approach to learning was thus one with focus on structure and control, with a specific department working with identification, evaluation, and implementation of lessons learned. This indicates that the PBO had employed an expert, or specialist, approach to manage learning in the organization, an approach in line with the hard paradigm of PM (e.g. Karrbom Gustavsson and Hallin, 2014; Pollack, 2007)

Informal learning

Informal knowledge sharing was addressed by some of the respondents, stating that it was not unusual that employees shared lessons learned and experience in an informal manner. This was usually confined to friends and family, but since the PBO was active in relatively small municipalities (population below 20,000) chances were that employees had these kinds of informal connections between projects, programs, and portfolios, as well as organizations. It was known that lessons learned were shared this way, and it was described as positive but somewhat problematic. Issues that could arise from informal sharing of lessons learned was described as loss of control over how PM practice evolved in the PBO, that the PBO did not know which lessons were shared, and to whom.

Another source of informal sharing of lessons learned described was that between colleagues located in close vicinity to each other. It was described as common praxis to help each other out with practical problems, for example where to find specific routines and templates, or how to save time when working with the purchasing department. Respondents indicated that they wished that the type of knowledge shared between colleagues in close vicinity to each other also could be shared between different office buildings as well as geographically dispersed locations. Lack of time, and that it was not relevant, was given as the reason to why the informal sharing of knowledge did not reach beyond “the room next door". The management of the PBO described managing project throughout the organization as relatively similar, although the output could differ (e.g. ore train, mining level, production plant, and production equipment renovation). Despite the emphasis on similarities in PM practice, they described portfolios (e.g. mining, logistics) and programs as separate, with very limited knowledge sharing.

In the situations where lessons learned and knowledge seem to be shared, it was made based on an active decision among those involved, they saw value in sharing, which helped them carry out their job. The informal sharing of lessons learned seems to be driven by necessity, since colleagues are approached when answers could not be found elsewhere. Also, mutual trust, and social aspects (to feel safe), seems to play a part, since PBO members appeared to be more open towards sharing experiences with those that, besides being colleagues, was considered friends or family. In no way was the environment described as hostile, instead everyone knew that tight deadlines was a characteristic of PM,
and thus respected each other’s schedules, trying to avoid what could be considered “unnecessary” questions.

Customer focus

Another topic that often emerged in discussions about learning was customers, and a customer focus. In the main case PBO the respondents described that a shift of focus in PM had taken place over some time: from a focus on planning and structuring, to discussing the customer and customer needs, assigning the customer a more central role in the management of projects. In relation to learning, they stated that it was important to learn, and to share lessons learned and knowledge in order to create value for the customer. In the case PBO all customers belonged to the same parent company, meaning that the PBO had to balance customer needs and requirements against those of the parent company. Often they converged, but from time to time divergences emerged, when customer requirements diverged from those of the parent company. Such situations were described in relation to what customer value was, to illustrate that the PBO sometimes had to balance the needs and requirement of different stakeholders.

Customer value was described as the primary focus of the PBO’s operations; however, this was to some extent limited to time, cost, and scope. Respondents pointed out the need, and desire, to include variables of more long-term effect (post project delivery) in order to both secure, and be able to increase, customer value.

Barriers for learning

When discussing learning, the respondents implicitly identified several areas of barriers for learning in the PBO case. These were: time pressure, governing, and post project phase.

Several descriptions, concerning managing projects, mention time pressure and tight deadlines as a dominant characteristic (e.g. Fuller et al., 2011). Limited time seem to influence what project managers prioritize, since the majority of project managers mentioned that they had to prioritize their current projects. This was done at the expense of, for example, meetings with colleagues, or other activities not directly related to delivering projects. If the dominant focus on on-going projects was a result of choice, or if it was the result of PBO governance, was not explored among the individual project managers. However, governance through project-specific variables, such as time and cost, was indicated, as well as described as the dominant performance measures. Another reason given to why several respondents would have liked more time, especially in the planning phase, was to be able to explore alternative solutions to achieve the desired project outcome. Due to time constraints, the current practice was described as implementing the suggested solution, or to pursue the first viable solution found, that would achieve the project goal(s). The need to pursue alternative solutions was based on the notion that the delivered projects many times could potentially have contributed more, i.e. if the customer needs could be balanced more against parent company strategy, it might have been possible to deliver more long-term
solutions. One example could be that synergies could be identified, allowing more than one issue to be solved in one project (one project – several problems, instead of one project – one problem).

Time (and cost, which many times was equated with time) seems to be the dominating factor affecting learning in a PBO. The majority of respondents mentioned time, or the lack of time, as the main reason why they did not share knowledge and lessons learned with colleagues. Several respondents also pointed out that they would have liked to have the time to share experiences, but that if presented with the opportunity they many times had to prioritize other (more urgent) activities. Tests had been made where different forums were initiated in order for PBO members to discuss different topics, with the purpose of sharing experiences. The forums were described as less formal, with little or no need for documentation and no senior managers, in order to make it “easier” to participate. Most of these forums failed, since other work activities were prioritized. One forum however survived, and meetings took place once every month. That forum focused on questions regarding quality, environment, and work environment, questions often affected by legislation. The participants of this forum were described as motivated to participate, since the perceived value of participating outweighed the time it consumed, making their jobs easier.

A second area of barriers identified was related to governance. The managing director of the PBO raised the question of how a PBO should be governed. The historic (and somewhat current) way of governing the project organization was described as through the implementation of structures and routines, monitoring and evaluating projects according to plan and budget (time, scope, and cost). This approach worked, but the manager portrayed a wish, and need, to go further. Project managers were recognized as individuals, with different approaches and ways of managing their respective projects. The traditional approach presumed a uniform way of working, forcing some individuals to adapt, while others found it comforting. Thoughts of focusing more on values and guidelines were expressed, as a way of achieving a less restricted and rigid organization.

The expressed thought from the managing director showed that the traditional (hard) approach of planning and structuring was perceived as not sufficient enough, in order to keep developing the PBO. It was acknowledged that different projects could pose different challenges, and that different project managers approached these demands in different ways, instead of trying to standardize both operations (and those doing the work).

A third area of barriers was related to the so-called post project phase (Eskerod and Riis, 2009). Several respondents addressed the desire and need to be involved in, or monitor, project outcome after delivery. The respondents had identified the possibility to contribute more to the parent organizations overall performance by being involved in the operations of project deliverables, or to monitor and evaluate deliverables after delivery. They described this as an opportunity to increase the effect on operations that the projects contribute to. The current practice was described as evaluating projects during the phases of planning and executing, and at project delivery/closure, based on time, cost and
scope. By adding post-project evaluation the respondents reckoned that the project focus would be complemented with an increased importance of more long-term variables, affecting planning, execution, and evaluation of projects.

**Overcoming learning barriers**

Dividing project management into dichotomies, such as a hard and soft approach, has been criticized as an analytical construction, and that it is not as valid among the more pragmatic practitioners (Karrbom Gustavsson and Hallin, 2014). It can however, if applied with thought, be a useful construction to apply, in order to illustrate how projects and organizations are managed, and there has been a shift from the traditional hard paradigm, towards the soft (Pollack, 2007). Many of the suggested models, designed to overcome barriers for learning, such as the somewhat hard approach of capturing and disseminating learning, do so by suggesting solutions that also can be categorized as hard.

Much of the findings from practice, demonstrate the same traditional focus on planning, design, and development, as criticized in literature (Kapsali, 2011; Shenhar and Dvir, 2007), where the single project is in focus. This is exemplified by the strong focus on time for example, forcing project manager to always prioritize current projects over all other activities. In order to overcome this, a shift in focus toward future value creation of the company has been suggested (Andersen, 2014). Findings indicate that this is desired and acknowledged approach in practice, but that it seems hard to implement. An increase in customer focus might be at least one step towards this. One suggestion of how to increase value creation is to impose relatively few mandatory requirements, supported by a well-developed governance structure (Eskerod and Riis, 2009). Reasoning in line with that of the managing director of the case PBO, who mentioned the need to accommodate both diversity of projects, and project management approaches.

It seems that further steps have to be taken, in order to break free from the traditional approach of a strong project focus, prioritizing planning, design, and development, and balance the scale with an added soft approach (as endorsed by e.g. Cicmil et al., 2006; Pollack, 2007; Winter et al., 2006).

**Different approaches to learning (push/pull)**

It seems that learning to a large extent is approached in a way of capturing and disseminating lessons learned. Hartmann and Dorée (2015) describe that treating projects as islands is a dominant approach to learning in relation to projects. If projects are seen as isolated events (islands), one needs to capture the lessons from one project, and "move" them to another. The described approach in the case organization(s) was similar, with trying to capture lessons learned by use of, primarily, documentation through project reports, and meeting agendas. These documents then need to be made available to others, who in turn need to actively access the document in order to read and make use of it. This approach was described as falling short, since documentation of lessons learned was not prioritized, often limited to success stories, and few accessed the documentation in order to read the lessons learned. All documents
were described as easily accessible, yet it was only used in order to understand what had previously been done, focusing on project deliverables. Project managers also described their main priority as always being the current project(s). They acknowledged the need to learn, but described that they rarely had time for it, since there always was something more urgent to attend to.

This means that learning was seen as something that one had to take time for, and actively engage in, for example accessing and reading documentation, rather than naturally occurring. As long as learning is seen as an activity that one need to set aside time for, it will most likely be treated as of lower priority than executing current projects. The described approach to learning can be analysed using the hard and soft paradigms of project management (see e.g. Karrbom Gustavsson and Hallin, 2014; Pollack, 2007), where learning then can be seen as approached primarily in a hard way, focusing on capturing and disseminating lessons learned. Learning also seems to be treated as the responsibility of senior management, and that they should govern learning in the organization. In the same way, as previously shown, much of the literature on learning in project environments focuses on capturing and disseminating learning (e.g. Gillier et al., 2015; Julian, 2008; Schindler and Eppler, 2003).

A key seems to be that learning is considered a separate activity, in need of dedicated time. The time available is however described as limited, and that current projects always get prioritized, since operations are evaluated based on time, cost, and scope. If learning instead was seen as a natural part of operations, and that everyone valued sharing lessons learned, the barriers might be overcome. As stated by Pollack (2007), the hard paradigm of PM often emphasizes control against predetermined goals and efficient, expert-led delivery, while the soft paradigm emphasizes learning, participation, and underlying social processes. Compared to how learning is described it is in much characterized as expert-led and to be managed, thus dominated by a hard approach (as PM in general has been approached traditionally).

An illustrative way to describe this is that learning is managed through a push-approach, where senior management initiate and implement learning activities and routines. Adopting a softer approach would involve greater emphasis on participation and underlying social processes, involving everyone. One way to achieve this could be by adopting a pull-approach to learning instead, where the desire to share lessons learned is initiated not by senior management, but within the organization. One example of this was described in the case organization, concerning a forum for issues related to quality, environment, and working environment. Participation in this forum was not mandatory, and no senior managers took part, unless the forum members requested so. Meetings were held on a regular basis and were characterized by a less formal agenda. What was interesting was that all members participated on the basis of own interest, since they perceived it as valuable. Also, this forum was described as initiated by the employees, since the saw the need to coordinate and share experience of these types of questions, in order to carry out the work throughout the organization. One suggested reason for why this specific forum worked (others had been tried) was that the topics (quality, environment, work environment) in much were affected by legislation, so they needed to be coordinated.
The example with the specific forum indicates that there are circumstances that can motivate employees to actively gather and share lessons learned, as well as to learn together. It could be suggested that in this case the balance between a hard and soft approach might be more equal, instead of tipping the scale towards hard as traditionally described. Pursuing an approach that is focused on creating “pull” in the organization for activities related to learning, instead of pushing activities and routines downwards, could be a key to increase organizational learning, making it a more natural part of project operations, and moving beyond individual learning.

The increasing interest for value in PM could be one facilitating factor in order to achieve a pull-effect regarding learning, especially if the broadened view of value described by e.g. Brady and Davies (2004), and Shenhar and Dvir (2007) is adopted, emphasizing the strategic contribution (value) of projects. It might also support a holistic approach in PBOs, especially those operating as a subsidiary, changing focus from the individual projects, to the organization and how it creates value and contribute to customers (and parent company).

**Summary**

The fact that learning is advocated and desirable in project environments, but that it seems hard to achieve in practice, is discussed in this study. Based on findings from a longitudinal case study at the project department of LKAB a change in approach toward learning is proposed. The proposed change can be described as moving focus from a “push” approach, in which learning is seen as a management responsibility in need of governing, to a “pull” approach, in which the role of management is to facilitate, and support, a demand (request) for learning throughout the organization. Supporting this transition, an added focus on value, and value creation in projects is suggested, in order to support a more holistic approach, focusing on strategic contribution of projects. The aim is to overcome the in-practice approach of treating learning as a separate activity, and instead making learning a natural part of project operations, on all levels (individual, team, organization).

These suggestions find support in previous studies, emphasising a move from “product creation” to “value creation" (Winter et al., 2006), that the modern project managers should focus more on future value creation of the company (Andersen, 2014), and the need to adopt systems thinking to achieve flexibility (Kapsali, 2011). As stated by Duffield and Whitty (2015), there is a need of a new paradigm for organizational learning in the project management field that conceptualises and articulates how projects are interlinked and generate value to a higher order learning purpose. This should be of special interest in project-based organizations operating as subsidiaries, due to their (direct or indirect) involvement parent company strategy.
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