

## **Leadership Mechanisms for Enabling Learning Within Project Teams**

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### **ABSTRACT**

The contribution of this paper is an understanding of the leadership enablers for a project manager to take to support learning within a project team. We define five factors that help understand learning in project teams. In order for a project organization to improve they need to learn from their mistakes, reinforce positive actions, and adapt to customers needs. A project manager can use this paper to help define the specific actions he/she can take to support learning within the project team. Researchers can use this paper to identify the factors that need to be understood to improve our knowledge on learning within project teams.

### **INTRODUCTION**

For an organization to improve and rise above their competitors, it must adapt to customer needs and learn from mistakes and successful practices. The organization needs to learn continuously for them to keep up with the changes in the market. *Before people and organizations can improve, they must first learn* (Garvin, 1993). The learning must also be converted to change how the organization operates. Every organization that wants to stay in the business needs to improve continuously, and follow the changes that happen in the environment they are interacting in (Dixon, 1994). Learning is the path to continuous improvement of our competence. To develop our competence we must function within an organizational culture that fosters such development. Therefore the organization's leadership must act in such a way to develop its organizational culture that supports learning.

Organizational theorists (e.g., Cyert and March, 1963, Argyris and Schön, 1978 and Senge, 1990) can be divided into those who describe the concepts of *organizational learning (OL)* and those who describe the concept of the *learning organization (LO)*. Current literature offers a diverse set of definitions and frameworks of actions to take in order to develop a LO, a place where *high-quality human learning* goes on (Vaill, 1996). A human learning process at the individual level as well as at the group level which in the whole gives us the LO. The literature is often very general of what the focus should be. For example, Schein (1992) suggests developing a *learning culture* and Senge (1990) suggests that the manager should act as a *role model* for the employees and develop an organizational *shared vision*. The recommendations do not provide specific recommendations for a project manager. This research will focus on adapting the concepts of organizational learning and the learning organization to the project environment.

It is most common today that organizations organize by projects, projects that are a key activity of a technical organization. In many important ways, traditional project management theory still suffers from a rationalistic dream which is based upon a perception of the project as a distinct, manageable activity system that, once having been designed using the proper scheduling techniques, can be isolated from the environment and implemented (Buchanan, 1991; Packendorff, 1995). Researchers pursuing this view noticed that projects are actually dependent upon their environment throughout their life cycles (Pinto and Prescott, 1988, 1990). This tells us that the environment has a big impact when preparing for a LO, since an organization that wants to create a LO needs to capture the knowledge and experience throughout the project life cycle, and make use of it for future project improvements.

This research, therefore, attempts to answer the more specific question, "What leadership actions can a project manager take to build a learning culture within the project?" To answer this question, we will first discuss organizational learning in the project environment. Second we define five factors that support learning in project teams. Third we offer final conclusions.

### **ORGANIZATIONAL LEARNING IN THE PROJECT ENVIRONMENT**

We can understand organizational learning in a project environment using the concepts of inter- and intra-project learning (Kotnour, 2000). Inter-project learning is the combining and sharing of lessons learned

across projects to apply and develop new knowledge. Tools to support inter-project learning include information technology tools and employee groups aimed at sharing knowledge across the organization (Fiksel & Hayes-Roth, 1985; Niwa, 1990; Smith, 1994; Shane & Schumacher, 1996; Sullivan & Yates, 1988; Williams & Kotnour, 1993). Sidell (1993) provides a detailed example of an on-line system for recognizing, documenting, validating, and making available lessons learned for an organization. Van Aken, Monetta, and Sink (1994) describe the use of affinity groups or peer groups to share what they have learned internal and external to the organization.

Intra-project learning is the creation and sharing of knowledge within a project. Intra-project learning focuses on tasks within a single project and supports the delivery of a successful project by identifying problems and solving them during the project. Learning takes place when project team members discuss approaches for completing a task or overcoming problems. The intra-learning cycle occurs throughout a project and can be delineated by phase of the project, routine reporting cycle such as weekly or monthly status and review meetings, project deliverables, or major occurrences in the project. An example of intra-project learning is the launch countdown process for NASA space shuttle vehicle launches (Kotnour, Orr, Spaulding, & Guidi, 1997). When a perturbation resulting from either technical, weather or management problems occurs the problem is reported. Real-time troubleshooting and repair plans are developed by a team to help solve the problem. Potential constraints are accurately assessed and coordinated to assure timely, safe and efficient utilization of available support to meet the critical milestones and guarantee on-time launch capability. The problems and their resolutions are saved and studied for use on later launches.

For the project organization to learn, organizational members must create, share, and apply knowledge (Argyris & Schon, 1978; Huber, 1991). The organization's members create new knowledge by being engaged in a learning experience. Learning-by-doing occurs when a problem solver associates plans and actions with results to develop procedures to accomplish positive results and avoid negative results (Anzai, 1987). Throughout the learning process, support is increased for practices that meet expectations and decreased for less effective practices for a given activity. The organization and the project manager need to understand the set of steps that can be taken to support learning within project teams.

### SUPPORTING LEARNING IN PROJECT TEAMS

As shown in Figure 1, we have specified five sections within the organization that help explain learning within a project team.

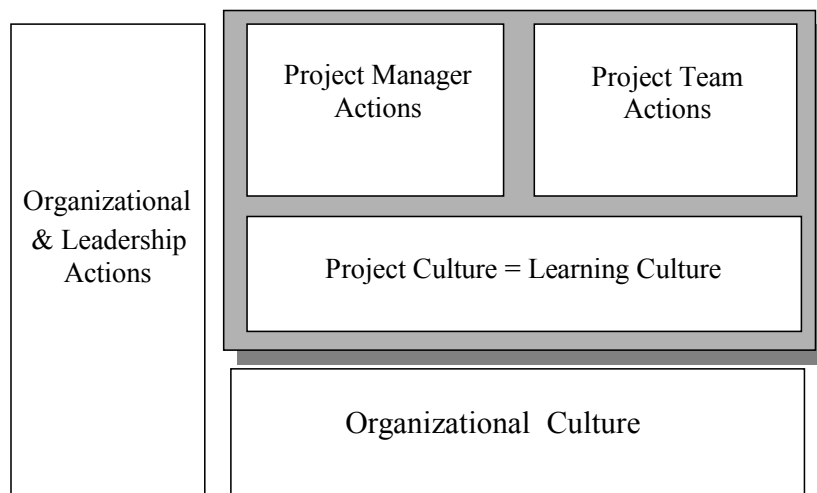


Figure 1. Organizational Framework

If we want teams that share, experiment with new ideas, are innovative, and are not afraid of questioning traditional methods (Dumaine, 1994; Garvin, 1993; Probst & Büchel, 1997; Senge, 1990) – we need to

create the right spirit of allowing this. People do what they see others, in their settings, do. Therefore, to create the 'right' environment, management can encourage learning by (Cavaleri & Fearon, 1996; Senge, 1994):

- Making learning an organizational goal.
- Reinforcing the learning mind-set of the leaders.
- Encouraging experimentation with new ideas and being innovative.
- Implementing reward systems that encourage people to engage in thoughtful dialogue.
- Building a community of learners.

We have identified these five factors as to be the foundation in a learning organization, and to enable learning in project teams we need for the whole organization to take certain actions. The organization can be divided into five parts (see figure 1) and each part has its own role when it comes to create a learning organization.

### **ORGANIZATIONAL LEADERSHIP ACTIONS**

If the organization truly has the desire to create a LO, they need to have that as a goal. To have it as a goal, will mean that it will be assigned resources, such as time, money. It will also get the management interest. The goals of an organization are an important tool to reach the founders' vision of the organization. Involving team members in the goal setting will increase the performance results and give a more creative team. To work towards a set of common goals, bring the team members together and give them a feeling of 'belonging'. If learning is an organizational goal, members will find ways to improve themselves and to share their knowledge with the rest of the team. Goals are also important in the sense that what the management put up as goals are the most important things and will be in everyone's focus.

Organizations should put interest and money on educating their leaders, as well as the team members. Building training programs to share best practices and requiring all to attend ongoing education experiences (Yeung, Ulrich, Nason, & Von Glinow, 1999). Personal development will improve the attitude team members will have at work; increase their engagement to work as a team to reach the organizational goals.

Leaders should be measured, trained, and rewarded if they "are open to ideas from anywhere," "have the self-confidence to involve everyone and behave in a boundary less fashion," and "see change as opportunity not threat" (Yeung, Ulrich, Nason, & Von Glinow, 1999, p. 130).

### **ORGANIZATIONAL CULTURE**

An organization's culture can be viewed as "the accumulated shared learning of a given group, covering behavioral, emotional and cognitive elements of the group members' total psychological functioning" (Schein, 1992, p. 10). People will behave in the way that the culture's values and norms tell you to behave. Culture guides how members of an organization think, act and feel (Heifetz, 2000). The organizational culture will influence the project culture and set the norms and ground rules how the work should be performed. The project culture is built from the organizational culture so if the org. culture does not 'say' what is important then it is much harder to get the 'right' learning culture within the project team.

### **PROJECT MANAGER/LEADER ACTIONS**

To define a set of actions for a project manager in the project environment, for them to create a LO, we need to first realize that a project manager' task today is not the same as a couple of years ago, when his/hers role was to manage the system. Today a project manager also has the role of a leader, to lead change processes at individual, group, and organizational level (Vaill, 1996). It all has to start with the leaders, their own behavior and how they are looking at the team members' behavior, as well as that the leaders need to help the team members on their path of being one with the organization (Senge, 1990; Schein, 1992). Members of an organization, today more than ever, want to combine their own personal goals with the organizational goals. To get the team members to take the risk of learning something new, leaders need to be willing to take that risk first, the risk to model continuous learning and improvements (Kline & Saunders, 1993).

Leaders need to show the way, act as a role model, in order to get the right culture in the organization (Senge, 1990; Schein, 1992). The right culture of open communication, honesty, bringing forward bad

news, and showing that we can use the knowledge from our mistakes as well as from success to improve and build our knowledge. An organization's culture often reflects the personality of its leaders (Yeung, Ulrich, Nason, & Von Glinow, 1999) meaning that leaders that really want to create a learning organization will communicate the importance of learning, value it, spend time learning themselves, and encourage others to do the same.

The project manager needs to create the project culture and actions for the whole team to create knowledge, share it and apply it.

### **PROJECT CULTURE**

The project culture is influenced by the organizational culture but is not necessarily the same. As mentioned before, the organizational culture sets the ground rules for how the work shall be proceeded in the organization, and then each project team creates their own culture of how to accomplish the objectives and reaching the project goal.

Team members should feel free to experiment with new ideas and to be innovative, since that will build new knowledge. This is possible with the right supportive environment, an environment that is based in core values that recognize individuals, and their interactions with others (DeVilbiss & Leonard, 2000). If there is an understanding within the organization how the work should be done, everyone will work in that manner, and this understanding comes from the values and norms of the organization's culture.

In order for the team members to create knowledge organization should build a culture of engagement. To enable sharing of the knowledge we need a culture of commitment, trust, and no fear (Richardson, 1995). By the formation of a "community of learners" team members will be committed to respect each other's views, and to their own personal development as people and members of the particular organization (Cavaleri & Fearon, 1996).

There are many ways of creating the 'right' culture. Just by driving out the fear, the fear of failure, admitting one's failures, and the fear of sharing new knowledge, will build organizations where knowledge is gladly developed and shared. Other useful actions on the way of creating a learning culture are; by punish inaction not unsuccessful actions; by encourage leaders to talk about their failures, especially what they have learned from them; give people second (and third) chances; learn from mistakes; and not punish people for trying new things (Pfeffer & Sutton, 1999).

### **PROJECT TEAM ACTIONS**

Team members will with the right culture, the right project manager/leader actions and the support from the organization engage in learning. As long as team members get guidelines and directions, from management, of how to perform their work, they will happily create knowledge by being innovative, searching for information that is needed and apply the knowledge to produce successful projects. If there is an understanding of how this knowledge can be shared and stored for future use, team members will do that. This knowledge can later then be used for future projects, and to build capabilities (Kotnour, 2000).

The organization's members create new knowledge by being engaged in a learning experience. Learning-by-doing occurs when a problem solver associates plans and actions with results to develop procedures to accomplish positive results and avoid negative results (Anzai, 1987). The plan-do-study-act (PDSA) cycle, an easily understood and widely used model from quality management (Juran, 1988), is used to represent the learning process in a project environment.

- In the "plan" step, the project team determines the nature of the problem and constructs a plan. The plan is a set of expectations about the set of steps to take and the expected results.
- In the "do" step, the project team implements the plan. Implementation produces a set of results about the expected and unexpected actions taken and associated performance such as cost, schedule, or technical performance. These results are used to understand project status and to move the project forward.
- In the "study" step, the project team reflects on the associated plans, and results to determine the good and bad instances. The output of the "study" step is a lesson learned.

- The “act” step is the closing of the loop to show the decision to continue with or abandon the process of improvement.

Throughout the learning process, support is increased for practices that meet expectations and decreased for less effective practices for a given activity. The PDSA steps parallel the project management process steps, “planning” is the same, “do” is “executing”, and “studying” is “control”. The “act” step is the use of the lessons learned on the next project during the planning phases. The use of “study” over “control” emphasizes the need for learning and improvement.

#### ASSESSMENT TOOL

This study utilizes a survey for data collection to understand the relationships in the model (see Figure 1). The survey is designed to address each component of the model and to understand each of the relationships among organizational support, project managers’ support, project team members’ learning actions, organizational learning (learning outcomes and project performance outcomes), and the creation of a learning organization.

We are interested in producing knowledge that is useful to both theory and practice; therefore we employ the action research method (Susman, 1983; Weisbord, 1987; Whyte, 1991), which deliberately maximizes the involvement of professionals in helping design the methods for data collection, and analyze the data. Action research is a scientific approach to studying the resolution of important social or organizational issues together with those who experience these issues directly.

#### CONCLUSIONS

There must be a ‘program’ in the organization that enables the creation of a learning organization. Have learning as a goal – which give it resources (e.g. time, money, and interest), helping managers discover their inner model – by personal development, encourage team members experiment with new ideas, have reward systems that encourage the ‘right’ behavior of create and share knowledge, and forming of a “community of learners” (Cavaleri & Fearon, 1996).

There are many positive outcomes with a learning organization. Referring to the *lesson learned oriented survey* (Kotnour, 1999) we can see that project manager have the three learning goals in mind when they are managing a project. These learning goals are: delivering a successful project, building capabilities, and delivering a series of successful projects. Learning gives the members the ability to assimilate new idea, from others, from past experience and to translate those ideas into action (Yeung, Ulrich, Nason, & Von Glinow, 1999). Learning will improve and develop the organization’s members; increase productivity; and result in higher morale, and improved organizational work climate (Preskill & Torres, 1999).

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