

# **SOME IDEAS ABOUT KNOWLEDGE MANAGEMENT FROM THE PERSPECTIVES OF LEAN MANAGEMENT CONCEPT**

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## **Abstract**

The aim of this paper is to present some ideas about the knowledge management as that is understood by lean management philosophy. The main ideas taken from lean management relate to the ways how knowledge can be acquired and shared, the relationship between knowledge and learning, and finally how we can define knowledge worker in contemporary offices.

## **Knowledge acquisition and sharing**

### **Continuous improvement and knowledge flow**

Knowledge management can be generally understood as an effort to make know-how available in an organization to those who need it, there where it is needed, at that time, when it is needed and in a form in which it is needed in order to increase human and organization performance (PAPULA – WEBEROVA, 2007). Knowledge is gathered when we work on improving a process or situation. If we do not attempt to improve we do not examine what we are doing and what we can improve. Knowledge is gained through critical analysis of the current situation. When we try to improve the process, we are looking for knowledge in the form of best practices. These best practices can exist internally or can be acquired externally. If they are not available, then the continuous improvement process done internally within a company will result in design and development of a best practice.

However, the challenge is not to wait for process, service, or product failures to occur, and then doing something with that, but to examine these continuously, to develop best practices, and to share this knowledge throughout the organization. This is where standardization of work procedures comes into consideration.

The following list outlines possible reasons why knowledge is not shared properly inside organizations (GOLDSBY – MARTICHENKO, 2005):

1. No formal knowledge-sharing infrastructure

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2. No incentives for individuals to share knowledge
3. No accountability for individuals to share knowledge
4. No time to share knowledge
5. No awareness on what knowledge should be shared
6. No training on how to share knowledge
7. No departmental or interdivisional communication
8. Defensiveness resulting in knowledge concealing
9. No tools in place for sharing knowledge
10. No commitment to sharing knowledge

### **Standardized work and knowledge sharing**

We can indeed associate standardization with knowledge acquisition and sharing. But how could standardized work procedures be connected with best practices? We need to realize that the purpose of standardized work is not to turn people into mindless robots, carrying out a repetitive task. The heart of standardized work is to determine the best way to complete a task, share the knowledge, and continuously improve the standard (GOLDSBY – MARTICHENKO, 2005).

For standards to change, we need to ensure that we have rigorous procedures for sharing knowledge gained while improving the process. For example, if we improve and change a process on first shift, there needs to be a way to ensure that a second-shift employees gain the knowledge of the improvement through instruction in the form of standardized work procedures.

In order to share knowledge we must develop infrastructure. The infrastructure required will depend on the size and depth of the organization. The infrastructure can be for example using appropriate technology like Internet and intranet, or face-to-face meetings. Sharing best practices requires nothing more than a communication or delivery system and commitment. Commitment is here meant providing time and other resources for knowledge sharing (GOLDSBY – MARTICHENKO, 2005).

In the end, the ability to share knowledge may be the determining factor that differentiates company success from failure in the new age of technology and customer awareness.

## **Knowledge and Learning**

### **Learning and knowledge acquisition are more than seminars**

Lots of training programs begin and end with seminars. But just participating in a seminar doesn't give a real understanding of anything. To gain a real understanding, you need to take what

you've heard in a seminar, put it into practice in your own workplace, and show your boss how it can generate results (SHIMOKAWA, K. – FUJIMOTO, 2009).

Hearing something in a seminar corresponds to the planning phase of the plan-do-check-act cycle. Learning depends on doing in the workplace, undergoing a follow-up check by your superiors, and determining what action is necessary to make things work better. Only then have you really learned what you heard or saw in the seminar (SHIMOKAWA, K. – FUJIMOTO, 2009).

The CEO should ask the managers and engineers who come back from the seminar something like this: “What did you hear that left you a strong impression? What did you learn that you want to try out immediately in your own workplace? Let me know what you want to try. Then report back to me about the results.”

Good managers or engineers would say something like this: “We tried our idea for three weeks. However, things did not go well, so we tried some new things. We are simply looking for ways to solve the remaining problems.”

In contrast, wrong managers or engineers would simply say: “We tried an idea, but it didn't work out.” You can't give an approval to people like that. A company that have a lot of these managers and engineers would need to provide training to set things right.

Learning from mistakes is common sense. We also need to learn from what we've done successful and put it to work in tackling new challenges. Attaining a target doesn't mean that we've finished anything. Targets are just tools for tapping people's potential. When we've attained a target, we need to raise another target (SHIMOKAWA, K. – FUJIMOTO, 2009).

What we also need in the workplace is wisdom. Anyone can gain knowledge through study. But wisdom is something else. Books are appearing about for example kaizen, but only someone who actually uses kaizen can really understand how it works. The kaizen didn't arise from textbook learning. It arose from practical experience in the workplace, and the best way to learn about kaizen is to use it (SHIMOKAWA, K. – FUJIMOTO, 2009).

One effective way to do that is to set the goals high and force people to accomplish more than they might have thought possible. Once people really do something successful with that, the necessary wisdom arises.

We need to avoid thinking that the present way of doing things is the best way. We cannot be satisfied with the current situation for a long time. We need to always try to change things. Everything new begins with trying something. Without that determination to try something new, all the knowledge is useless and current knowledge will eventually deteriorate.

We can only master knowledge through hands-on effort. Knowledge accumulates only through this effort. We try things ourselves. If we fail, we learn why we failed and try something

else. If we succeed, we learn why and how we succeeded. Learning only happens if we do things ourselves through hands-on effort.

### **Knowledge Worker in an Office**

In the modern office nowadays it is not a tidy desk or stockroom that matters, but the efficient flow of information. Today a knowledge worker in an office is a person that is a computer user, adept at a number of applications, and both the creator and the consumer of information. Today, the office knowledge worker has grown with computers.

The current state of office work takes the factory analogy literally. There's nothing wrong with red-tagging old reference materials and unused office equipment. There's nothing wrong with standardizing workstations and adding visual performance feedback, such as progress charts. However, these steps are not as important, today, as efficient information flow.

One of the principles of 5S applied in an office is that, once an area is clean and organized, it becomes easier to spot exceptions and we can understand and solve the root cause of this exception. This is great for solving the problem of toner spills around a centrally located copier, but not so great for understanding that the reason there is so much rework in a department is because some of the employees are still cutting and pasting from an obsolete data source. The symptoms we would look for in the knowledge workers' information flow process are invisible to the eye in the workplace. A simple visual system cannot work in an environment where the key material – information – is largely invisible (GONZALES-RIVAS – LARSSON, 2011).

Today's modern offices rely less on paper-based work systems and more on electronic ones. Until the electronic age, office work was contained within documents. The pre-electronic age office was ordering from a catalog or previous experience with the vendor. Today, you might look up the product on the internet and evaluate more offerings, view the product on the vendor's Web site, purchase online by placing an electronic order, and track your shipment online. Records are generated automatically and stored electronically for retrieval as needed. The advent of e-mails, cell phones, corporate intranets, and so forth have all quickened the transfer of information (GONZALES-RIVAS – LARSSON, 2011).

### **Two types of knowledge**

Information is knowledge. One way of thinking about information is as a flow of messages, which, once embedded in a person's mind, is knowledge. There are two types of knowledge (GONZALES-RIVAS – LARSSON, 2011):

(1) Explicit knowledge that can be expressed, formalized, and shared through manuals or specifications;

(2) Tacit knowledge that is not easily expressible and cannot be formalized, such as insights, feelings, morale, and working atmosphere.

When information has been processed in someone's mind in the form of explicit knowledge, it can be translated into action. One important implication of this is that once explicit knowledge is articulated or visualized through models or graphs, it again becomes information, and for others to gain the same understanding from that information requires a shared knowledge base (GONZALES-RIVAS – LARSSON, 2011).

In the knowledge worker's environment, it is important to identify and emphasize knowledge, develop or emphasize a knowledge-intensive culture within the organization, and build infrastructure for knowledge sharing. This means that a systematic approach for creating, storing and retrieving, transferring, and applying knowledge is needed.

Knowledge creation occurs when new knowledge is developed or when existing knowledge is replaced by tacit or explicit knowledge originating from the organization. An organization is a learning organization when creates new knowledge. Furthermore, there is a distinction between an individual's memory and organizational memory. Individual memory is based on observations and experience; organizational memory can include culture, processes, and structure, as well as information archives.

To achieve useful knowledge transfer, where knowledge is transferred and shared among individuals, groups, and the organization itself, the company needs to according to authors Gonzales-Rivas and Larsson (2011):

- (1) perceive the value of the source's knowledge,
- (2) promote and secure the source's willingness to share knowledge,
- (3) build a set of rich transmission channels, and
- (4) promote and secure the receiving unit's willingness to acquire and use the source's knowledge.

For knowledge workers it is essential to have accurate and actual information accessible in a simple, fast, and correct way so that they can visualize, analyze, and continuously improve performance; in other words they need information that can be translated into knowledge on which to base executable decisions.

## **Expansion of knowledge**

Expansion of knowledge requires theory. Knowledge is expanded through revision and extension of theory based on systematic comparisons of predictions with observations. If predictions and observations agree, the theory gains credibility. If predictions and observations disagree, the variations (special and common) between the two are studied, and the theory is modified or abandoned. Expansion of knowledge (learning) continues forever (GITLOW, 2009).

Plans are built on assumptions. Assumptions are predictions concerning the future performance of the process required by the plan. Predictions have a higher likelihood of being realized if the processes required to deliver the assumptions are stable with low degrees of variation. That is, if you can stabilize and reduce the variation in the process involved with the plan, you can affect the assumptions required for the plan. Hence, you can increase the likelihood of a successful plan (GITLOW, 2009).

The PDSA cycle, and the DMAIC, DMADV from Six Sigma quality management initiative are important tools for expanding knowledge by continuous improvement or innovation of the theory about the process. The PDSA cycle can help in improving and innovating processes and thereby acquiring process knowledge, by reducing the difference between customers' needs and process performance.

The PDSA cycle consists of four stages: Plan-Do-Study-Act. Initially, a plan is developed to improve or innovate the standardized best-practice method that is characterized by a revised process map or a flowchart. Hence, a process improvement team plans to modify a process from operating under the current best-practice process map to operating under a revised (improved or innovated) process map (GITLOW, 2009).

To summarize, the PLAN (revised process map) is tested using an experiment on a small scale or trial basis (DO) for a predetermined period of time, the effects of the plan are studied using measurements from key indicators (STUDY), and appropriate corrective actions are taken and locked in with training and documentation (ACT).

## **Conclusion**

The presented ideas are by no means conclusive, further information gathering is necessary when someone wants to learn much about knowledge management. The aim was just to bring additional knowledge into the field of knowledge management, to provide contribution to this management discipline from the perspectives of lean management that focuses on the knowledge acquisition and learning directly on the shop-floors.

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