Process Improvement - Synthesis Paper

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 Overall the course describes the process improvement in detail. It elaborates process improvement essentials and its relationship with the other related disciplines. The course gives an ample understanding of the process and its improvement through different knowledge areas and also provides the practical implication strategies. In addition, the course provides a guide on the tools and techniques that must be used to implement process improvement in an organization. The process improvement course and book provides deeper insight on the knowledge management and quality and its relation with the other business operations such as sales, marketing, supply chain, information technology, product and market development, customer relationship management and finance and accounting as well.

Since every business operation and department involves the processes, process improvement is a discipline applicable in all areas and it is essential to maintain the quality in all business areas and functions. This paper seeks to showcase the understanding developed on problem-solving, its stages and processes, and the tools and techniques that can be employed to solve problems and improve processes in an organization. In addition, it highlights some new and complex tools for problem-solving process management

**What is problem-solving?**

 Problem is at the center of every process and every work that is being done every day. Problem is a gap between the desired state, and it creates difficulties in the processor work. Every problem whether small or big, simple or complex, easy or difficult needs a solution. Problem-solving is the process of identifying the problem and working through the problem with the aim to solve the problem, and it consists of general or ad hoc methods. The problem solving is a detailed process which begins with identifying the problem, looking into the cause or reason behind the problem, selecting and prioritizing alternatives, selecting the best alternative and eventually implementing the solution.

 In a business organization, leaders and managers are expected to solve the various problems, and they must have problem-solving skills. The problem-solving method is a detailed process consisting of various steps and stages. It has different variants consisting of six and eight steps which are employed depending problem. the most common problem-solving method consists of six steps. These stages include defining the problem, determining the root cause of the problem, developing alternative solutions available, selecting one solution, solution implementation and monitoring and evaluation.

**Various stages of problem-solving**

The six-step problem-solving method provides a focused procedure which ensure the consistency in the process and ensures that everyone understands the approach being used for solving issues. The six stages in the problem-solving method fit together depending on the problem.

**Problem Definition**

The first stage is to define the problem, which involves diagnosing the problem, analyzing the context of the problem and the background of the issue. This stage not only involves writing down the problem but also includes brainstorming, obtaining information via questionnaires and interviews to get clarification of the real problem.

**Problem Analysis**

 Problem analysis aims at identifying the root cause of the problem. The problem-solving team explores the root cause of the problem by using certain tools and techniques. Some of the tools that are used to determine the source of porblem include Fishbone diagram, Affinity diagrams and Pareto Chart. Fishbone diagram is also known as cause and effect diagram, and it leads to the leading cause of a problem, and it also illustrates the relationship between several causes of the problem (Boutros, 2014). An affinity diagram is a graphical tool in which ideas are grouped together to get an understanding of the essence of the problem. Pareto chart is used to prioritize competing problems.

**Generating possible Solutions**

 Critical problem solving is about creating a variety of alternative solutions looking at the causes and symptoms of problems. It functions by finding as many solutions to the problem as possible and looking at how symptoms to relate solutions to them. This stage eliminates the less effective solution and seeks to merge the best alternatives to reach a better solution.

**Selecting the best Solution(s)**

 After evaluating all the solutions available. This stage is centered on two questions, what is the most effective solution and which solution is favored by those who are directly affected by the problem. The most suitable solution is then selected based on these questions (“The Problem Solving Process,” n.d.).

**Implementation of Solution**

 After choosing the best solution, the next stage is to plan and implement the solution. The problem-solving team makes use of different tools such as Gantt chart and timelines to effectively implement the solution available.

**Monitoring and Evaluation**

Monitoring and evaluation is the last stage which ensures that all the milestones are achieved. It evaluates the outcomes to detect if the problem is being solved or it persists. This step involves data collection, updating the process and perform the necessary actions needed.

**Essential tools for process improvement and problem-solving.**

 No specific tool is mandatory for process-improvement and problem-solving. Variety of tools and techniques can be sued during the process of problem solving and improvement of processes.

**Process Mapping**

Process mapping allows the visual representation of the process describing the flow of processes from beginning to an end. This map not only reveals the way work is done but also ways it could be done. A process map allows a better understanding of the steps involved in the organizational processes. The essential facts include the input, output and the key steps. Besides, it helps in identifying where the problem occurs.

**Force Field Analysis** This is another tool which helps to identify the factors which hinder improvement in an organization. In this method, various forces against and for any proposed change are studied. After identifying these factors, the organization can work on reducing the impact of these on improvement (Boutros, 2014). Different forces that can be used in this tool comprises personal trends, social trends, vested interests, organizational structures, and present and past practices.

**Fishbone Diagrams**

Fishbone diagram also known as Ishikawa diagram is used to identify the root cause of the process. It is a useful tool not only in process improvement but also in problem-solving. After identifying the root cause of the problem, the process improvement and solving problem become easier. It creates an easy to understand visual presentation of a problem and divides the causes into different categories. In addition, it enables the team to focus on the problem understudy without going into its history.

**Why’s**

 This is a question asking technique that helps in identifying the main cause of the problem or issue by asking several questions. Why’s technique aims at asking why the problem occurred several times. By repeatedly asking "why?" team reaches at the cause of the problem after a few rounds (Boutros, 2014). The main benefit of this technique is that it is cost effective and time-saving technique.

**Pareto Analysis**

Pareto analysis is a bar chart which helps in prioritizing the defects and problems on the basis of the frequency of occurrence. This method is helpful because it breaks down a big problem into smaller bits.

 **Check Sheet**

Check sheet allows solving the issue based on facts rather than the anecdotal evidence. It helps to identify the issues being observed in particular process improvement. Besides, it makes raw data useful (Boutros, 2014).

**Brainstorming**

 Brainstorming is an effective technique to obtain ideas from a large group and allows each member to put forward their ideas.

**5S**

It is used to optimize productivity and reduce weight by the maintenance of orderly workplace, and it utilizes visual clues to accomplish consistent, effective results.

**Affinity Diagram**

It is a graphical tool that is used for organizing ideas. It is generated in problem-solving or brainstorming meetings. Ideas are assembled into meaningful groups which are called affinity sets, to understand the quintessence of performance issue or of a problem.

**Tree diagram**

It is used to break down comprehensive classifications of content into best standards of detail. This diagram starts from a single goal which is further broken down into comprehensive actions which need to be completed to achieve the objective.

**Scatter Diagram**

Scatter diagram is used to analyze the relationship between two variables plotted on a different axis. It provides a good cause and effect analysis.

**Tools for process management and problem-solving**

 Process management involves planning, engineering and improving the processes in order to improve organizational performance. Process management and improvement consist of several methodologies such as Just do it, Kaizen, Rummler–Brach and lean six-sigma. Just do it is a method which is used as soon as the problem occurs. Kaizen is a Japanese philosophy which indicates continuous process improvement (Singh, 2009) and is adopted by a number of companies worldwide to make improvements in their processes. Lean six sigma is a methodology that started in the , and it focuses on process improvement and management. Lean six sigma improves the processes by reducing and eliminating defects to zero and improves the quality of the process. Geary Rummler and Alan Brache defined an approach to process management. Their approach is based on step by step process which guides in making changes to the way work is being done in an organization. The primary point of difference in their model is that an organization behaves as an adaptive system focusing on three areas, workforce, the organization, and its processes and therefore any change proposed must be made in these three areas.

# References

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