

# Problem Solving

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*Man needs his difficulties because they are necessary to enjoy success  
- Abdul Kalam*

## Meaning

It is the process of working through details of problem to reach a solution. Problem solving may include mathematical or systematic operations and can be a gauge of an individual's critical thinking skill. Problem solving refers to a state of desire for reaching a definite 'goal' from a present condition either is not directly moving toward the goal, or needs more complex logic for finding a missing description of conditions or steps toward the goal.

- Stop talking about your problems and start thinking about solutions
- A problem is a chance for you to do your best
- Problems are nothing but wake-up calls for creativity
- Most people spend more time and energy going around problems and then in trying to solve them.
- A systematic approach to defining the problem (question or situation that presents uncertainty, perplexity or difficulty)
- Creating vast number of possible solutions without judging these solutions.

In problem solving there are four basic steps,

1. Define the problem
2. Generate alternative solutions
3. Evaluate and select an alternative
4. Implement and follow up on the solution

## Define the Problem

Diagnose the situation so that your focus is on the problem, not just its symptoms. These steps support the involvement of interested parties, the use of factual information, comparison of expectations to reality and a focus on root causes of a problem.

Generate alternative solutions

- Postpone the selection of one solution until several alternatives have been proposed.
- A standard allows us to evaluate the different intended results offered by alternatives.
- When you try to build toward desired results, it's very difficult to collect good information about the process.

- Considering multiple alternatives can significantly enhance the value of your final solution. Once the team or individual has decided the “what should be” model, this target standard becomes the basis for developing a road map for investigating alternatives.
- Brainstorming and team problem-solving techniques are both useful tools in this stage of problem solving.
- Many alternative solutions should be generated before evaluating any of them.
- A common mistake in problem solving is that alternatives are evaluated as they are proposed, so the first acceptable solution is chosen, even if it’s not the best fit.
- If we focus on trying to get the results we want, we miss the potential for learning something new that will allow for real improvement.

### **Evaluate and select an alternative**

- Skilled problem solvers use a series of considerations when selecting the best alternative. They consider the extent to which:
- A particular alternative will solve the problem without causing other unanticipated problems.
- All the individuals involved will accept the alternative.
- Implementation of the alternative is likely.
- The alternative fits within the organizational constraints

### **Skills used in problem solving**

- Making judgments
- Analytical skills
- Decision making
- Collecting information
- Planning

### **Problem solving strategies**

- **Brainstorming:** Suggesting a large number of solutions or ideas and combining and developing them until an optimum solution is found
- **Lateral Thinking:** Approaching solutions indirectly and creatively
- **Research:** Employing existing ideas or adapting existing solutions to similar problems
- **Divide and Conquer:** Breaking down a large, complex problem into smaller, solvable problems
- **Root Cause Analysis:** Identifying the cause of a problem
- **Trial and Error:** Testing possible solutions until the right one is found
- **Monitoring and Sending Feedback:** The last stage is about reviewing the outcomes of problem solving over a period of time, including seeking feedback as to the success of the outcomes of the chosen solution. The final stage of problem solving is concerned with checking that the process was successful. This can be achieved by monitoring and gaining feedback from people affected by any changes that occurred. It is good practice to keep a record of outcomes and any additional problems that occurred.

- **Cultivate your own attitude**

Generally there are three types of people:

1. Optimist
2. Pessimist
3. Realist

Locks are never manufactured without a key. Similarly, God never gives problems without solutions. Only we need to have patience to unlock them.

### **Promise Yourself...**

- To be so strong that nothing can disturb your peace of mind. To talk health, happiness and prosperity to every person you meet’.
- Take the help of right persons whom you trust and who can really help you.
- Don’t get disappointed on problems....
- Keep knocking at doors....
- To avoid obstacles give attention to the manner of interaction with others
- Avoid acting before others...
- Be sincere ....
- Smile towards problems...
- If you get struck, get away from your desk. Take a walk, take a bath, draw, listen to music, meditate, exercise, whatever you do, don’t joint stride there scowling at the problem
- We always hope for the easy fix; the one simple change that will erase a problem in a stroke. But a few things in life work this way. Instead success requires making a hundred small steps to go right – one after other, no slip ups, no goofs, and every one pitching in.
- Be confident...
- Do your duty at your level best...
- success will follow you
- Love your life..... All the best.....