“When it is dark enough, you can see the stars”.

Ralph Waldo Emerson
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Creative Problem Solving

Objectives:
After completing this training, you will:

- Know the steps to problem solving.
- Be able to utilize creative brainstorming techniques.
- Better assist your team in keeping positive attitudes and focus on solutions during problem times.
Introduction

Because we are human; because we make decisions; because change is ever present; we have problems. We all know how to solve problems, we do it everyday, and yet problems still manage to overwhelm us and destroy people, organizations, government and countries.

The good thing about problems is that one solution does not work we can usually try another. The trick is to be creative, as creative as possible, in finding that other way to approach and solve it.

Problems

List all the problems or difficulties you had getting here today: ____________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

According to F.F. Fournies, author of Coaching For Improved Work Performance, there are four common reasons why people do not perform the way they should:

1. They do not know what they are supposed to do.
2. They do not know how to do it.
3. They do not know why they should.
4. There are obstacles beyond their control.

The first three reasons can be resolved with quick and systematic training. But the fourth reason, problems, tends to be on going and occurs at work, at home, and in life in general.
Great leaders recognize that we all have problems. A problem is simply a deviation from the norm, serious enough to warrant correction. There is a gap between what *is* and what *ought to be*.

<table>
<thead>
<tr>
<th>People</th>
<th>Task</th>
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<tbody>
<tr>
<td></td>
<td>A Fix-it Problem</td>
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<td>A Do-it Problem</td>
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“A test of a leader is the ability to recognize a problem before it becomes an emergency”.

John C. Maxwell

According to John C. Maxwell in his book *Developing The Leader Within You* great leaders usually recognize a problem in the following sequence:

1. They sense it before they see it (intuition).
2. They begin looking for it and ask questions (curiosity).
3. They gather data (processing).
4. They share their feelings and findings to a few trusted colleagues (communicating).

Once the decision has been made that this is a problem needing solutions, specific and creative problem-solving techniques can begin.

**Steps To Problem Solving**

- Look for or become aware of the problem
- Identify and define the problem
- Gather relevant facts and people
- Generate creative alternative solutions
- Implement the best solution
- Evaluate outcomes and adapt
Step 1: Look For Or Become Aware Of The Problem

“Positive thinking is how you think about a problem. Enthusiasm is how you feel about a problem. The two together determine what you do about a problem.”

Norman Vincent Peele

“There’s no problem so big that I can’t run from it.”

Charlie Brown

When I visited the Toyota assembly plant at Nagoya (Japan) I was told that there were an average of 47 ideas per worker per year of which 80% were adopted. I couldn’t believe it; this meant almost an idea from each worker every week. The Toyota manager said, “I think you in the West have a different view of ideas. What you call complaints, we call ideas. You try to get people to stop complaining. We see each complaint as an opportunity for improvement.”

Michael Maccoby in Harvard Business Review

Employee complaints are one way we can discover fix-it problems. Other indicators that show us something needs to be corrected are:

____________________________________
____________________________________
____________________________________
____________________________________
____________________________________

One of the ways our agencies discover do-it problems is through the use of ‘best practices’. By comparing ourselves to others who are succeeding in their efforts, we can implement what is working well for them. These best practices become our goals. Other ways we can discover do-it problems are:

____________________________________
____________________________________
____________________________________
____________________________________
Step 2: Identify and Define the Problem

In this step you want to be able to discover the root-cause and define the problem with a single sentence. Remember that a problem is the gap between what is and what ought to be. Problem solving is how we close the gap. Step 2 helps us to understand the two sides of the gap before we try to bridge them. Many times, when this step is skipped, the symptoms of the problem are addressed but the root cause is never identified and therefore returns. Research indicates that the effectiveness of solutions increases 85% once the real problem is identified.

Asking The Not Question:

This is a process of elimination through comparisons. Ask:

- Where does the problem occur?
- Where does it not occur?
- When does the problem occur?
- When does it not occur?
- Who is involved in the problem situation?
- Who is not involved?
- What precisely is the problem?
- What is not the problem?
Asking The *Why* Question - Fish Bones:

One way to work toward the root-cause of a problem is to keep asking “why” until we run out of answers.

“The only angle from which to approach a problem is the try-angle.”

Unknown
Step 3: Gather Relevant Facts and People

“Once the facts are clear, the decisions jump out at you.”
Peter Drucker

Fact-finding is mostly the process of asking ourselves the right questions: Who, what, why, when and where.

What has happened, and precisely how did it happen? In the interests of objectivity, we want to make sure that we examine the situation from every viewpoint and arrive at an assessment that everyone can concur with.

Where and when did the problem occur? Is the location factor or time factor of significance?

Who are the people involved in the situation, and in what way does, or did, their involvements affect the situation? Can we expect their behavior to change in any way?

Why hasn’t the situation resolved itself? Surely someone would have looked into it by now and sorted things out. Is there something here that I’m missing?

Effective Problem Solving

Socrates is credited for developing the method of problem solving in a team 2,400 years ago. He would gather others around him and ask for their opinions and support. Before you start gathering people, make sure the people you select are the most competent to assess this specific problem, are concerned about solving it and have the attitudes necessary to approach problem solving.
Step 4: Generate Creative Alternative Solutions

“The ultimate solutions to problems are rational, the process of finding them is not.” W. Gordon

1. RELATIONAL WORDS

1. Identify the service to be altered, or the object to be changed.
2. Apply the words from the checklist to this service or object, recording the results in the spaces provided.
3. Review the results to see if they suggest possible solutions.

A verbal Relational-Word Checklist:

_Multiply_______________________________________________________________
_Divide________________________________________________________________
_Eliminate_____________________________________________________________
_Subdue______________________________________________________________
_Invert________________________________________________________________
_Separate_____________________________________________________________
_Transpose____________________________________________________________
_Unify_________________________________________________________________
_Rearrange____________________________________________________________
_Distort_______________________________________________________________
_Rotate_______________________________________________________________
_Reverse_______________________________________________________________
_Combine______________________________________________________________
_Complement__________________________________________________________
Submerge
Substitute
Soften
Adapt
By-Pass
Add
Subtract
Widen
Repeat
Extrude
Remind
Protect
Segregate
Integrate
Symbolize
Stretch
(Other)

Possible solutions:
2. Brain-Writing 6-3-5

1. The problem is identified.
2. Six people, sitting in a circle, write down three ideas in three columns within a specified time (usually 5 minutes).
3. Participants then pass their ideas on to the next person in the circle.
4. This person piggybacks on the original three ideas and develops new ones from them, writing these down beneath the originals.
5. The process is repeated until every person has contributed to every other person’s original thoughts.
6. The results are discussed and evaluated.

Problem: ________________________________________________

<table>
<thead>
<tr>
<th>Solution #1</th>
<th>Solution #2</th>
<th>Solution #3</th>
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3. Excursion Technique

1. The leader instructs participants to visualize an excursion into or through some physical location that has nothing to do with the problem at hand.
2. Participants record things they saw in their excursion in the first column.
3. Participants draw analogies between what they saw and the problem and record these in the second column.
4. The leader asks participants to determine what the analogies they drew in step three suggest in terms of solving the problem and record in solutions in column three.
5. Participants share their experiences and solutions. (As with all brainstorming techniques, building on each other's ideas is encouraged).

<table>
<thead>
<tr>
<th>Excursion Observations</th>
<th>Analogies to the Problem at Hand</th>
<th>Possible Solutions</th>
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<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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Step 5: Implement the Best Solution

According to John C. Maxwell, the following questions should be asked to help you decide which solution to implement:

- Which solution has the greatest potential to be right?
- Which solution is in the best interests of the organization?
- Which solution has momentum and timing on its side?
- Which solution has the greatest chance for success?

Step 6: Evaluate Outcomes and Adapt

The following list of questions was adapted from Maxwell and can help you objectively look at the outcome of your solutions.

- Were we able to identify the real (root) causes of the problem?
- Did we make the right decision?
- Has the problem been resolved?
- Have the people affected accepted this solution?
- Did I help people to develop problem-solving skills so that they can creatively solve future problems?
Attitude

Your attitude towards problems can be the deciding factor in determining how you approach a problem and how willing you are to try solutions that fall short of perfection or aren’t your idea. The following list of personal attributes can be cultivated to help you be a more creative problem solver: Put a check mark next to those you do well:

___ Acceptance of the existence and complexity of the problem.
___ Calmness in the face of contradiction.
___ Empathy with the person you see as the source of the problem.
___ Openness to all possible solutions.
___ Optimism about the chances for success.
___ Balance in approaching the problem.
___ Curiosity about where it originated.
___ Awareness of your own role in creating the problem.
___ Courage about addressing difficult or dangerous issues.
___ Relaxation to allow intuition and subconscious ideas to arise.
___ Playfulness to encourage creative thinking.
___ Surrender to the possibility of resolution.
Ownership

- Ask them to decide on the best solution to their problem.

- List their solutions on paper. Integrate your ideas with theirs until they have ownership of them.

- Develop a game plan and ask them to take responsibility and ownership for it. Let them set up a time frame and accountability process.

- Ask questions. Help people to think through the entire process of their problem.

- Never allow others to think you always have the best answers. This will only make them dependent on you.

- Team solutions:
Resources


Cloke, K. & Goldsmith, J. (2000). *Resolving Conflicts At Work*

Higgins, J. (1994). *101 Creative Problem Solving Techniques*


Maxwell, J. (1993). *Developing The Leader Within You*