

Solving Problems with Proven Techniques

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Humans have been solving problems since the beginning of time. Our problem-solving skills are responsible for spurring social and technological advancement. However, over time, our individual skills become less innovative. Oftentimes, as we gain experience, we resort to solutions that have worked in the past instead of broadening our scope of ideas. Although tried and tested approaches work well, we may sometimes overlook situational differences which necessitate alternative solutions, and oftentimes we turn a blind eye to developments that present us with new and improved options. If we overlook these issues, we will continually run into problems and will not experience progress.

Remember that there are many ways to tackle an issue, so it's essential to expect the unexpected. This article looks at problem-solving techniques that are believed to yield creative solutions.

What You Need to Know

Being experienced, I have encountered most of these problems in the past. Why should I spend time on a problem solving technique when I can just do what I've successfully done in the past?

Your experience will come in handy in evaluating the effect of applying new solutions to familiar problems. Most industry and business sectors are not in a constant state of growth—they either develop technologically, or conduct their business in a changing environment. These changing dynamics have an effect on different levels. Try doing something different and see what happens.

Why should I rely on “outlandish” techniques which take a long time to apply?

Some of these techniques enable you to re frame your problem and, in turn, introduce a number of different options which you may not have considered in the past. Also, as other developments redefine the problem you are facing, some of these solutions become less viable over time. If you stop trying, you cannot succeed. Think beyond the immediate problem and consider its impact and consequences. Wide-ranging solutions could pay unexpected dividends.

Given the number of different problem solving techniques, how do I identify the best one?

It does not matter which technique you adopt as long as it leads you to think about the problem differently. Be aware of the time and resources available to you and identify the best suited approach given your circumstances. If you are an analytical thinker, employ research and analogy techniques and ask: "Who has solved this problem before?" or "Which other problems does mine resemble?" If you are more creative, try a lateral or brainstorming technique.

Using the different problem solving techniques is very time-consuming. Is there a way in which to solve problems quickly, yet imaginatively?

As long as you find a good solution without agonizing over it for a long time, feel free to streamline your preferred approach. Be aware of your time and resource limitations and identify the best approach for you. As you become better at problem solving and start to address causes and not just symptoms, you'll be more satisfied in the long-term.

What to Do

Think About Your Usual Approach

Reflect how you usually approach such situations—do you confront the problem by looking for the possible cause, or by assuming that the cause will remain present? Look for a strategy that matches your analytical or creative style and implement it entirely, before choosing another. Although it is difficult to disrupt our regular patterns, trial and error is a good start.

Know the Techniques

The following are some techniques which have worked in the past.

Brainstorm

In brainstorming, a group of people focus on a particular issue or problem and take advantage of the richness of diverse thinking. In this way, they come up with new ideas by using the creative resources of people who are not familiar with the technicalities surrounding the problem they are trying to solve.

This however, is not an unstructured activity—brainstorming sessions are usually chaired and output is recorded. The following is a template for the process:

- *Define* the situation and decide on the desired outcome. Everyone involved must be familiarized with the problem and know what needs to be achieved in the allotted time.
- *Encourage* everyone to become engaged. Establish that all ideas are welcome—there is no such thing as a radical or ridiculous idea.
- *Stick to the deadline*. This exercise has a time limit. The best ideas usually emerge early so set a time limit or be aware of performance levels and end the session once it stops being productive.
- *Record* everything that is said. Try to capture everything and do not censure at this phase, that comes later.
- *Identify patterns* and common themes. Start to put ideas into the same category or form clusters of related ideas—this makes the output more manageable.
- *Refine* the ideas. Determine the circumstances in which the ideas could be adopted and what is needed to make them work.
- *Identify your top choices*. Further develop these ideas and evaluate their viability.
- *Review and follow up*. Everyone involved must be informed of the outcome so that their contribution is appreciated.

Have someone in your brainstorming group who is completely unfamiliar with the problem or situation, as unfamiliar eyes can be very insightful.

Role play

When struggling with an issue, observe someone else who is faced with the same problem but does not share your knowledge about the subject. Although some people dislike role-play exercises, these are useful when it comes to approaching problems from completely new perspectives and exploring them at considerable depth.

First, brief your partner about the issue and describe what you hope to get out of the exercise. For the rest of the exercise, assume the role of a coach:

- The “coachee” must articulate the goal. This is done to make sure that they understand the problem and the goal of the exercise.
- The “coachee” must focus on what is going on now. Are there barriers that are keeping you from finding a solution? (This exercise is not meant to be negative—hearing him or her explore the situation may reveal new ways to look at things.)
- Facilitate the brainstorming session. Ask them “What are your ideas for a solution?”, “What do you envision as the ideal outcome?”, “What is in the way of the such an outcome?”, “How would you address this?” and so on. These are the nuts-and-bolts of the role-play exercise. Their ideas may surprise you. Remember to take notes.
- The “coachee” must come up with an action plan. He or she must identify the priorities and brief you on what needs to be done for their solution to be implemented.

Stick to your role throughout the exercise and do not criticize their suggestions. Instead, if something that you don't think would work is suggested, it is best to ask "How can this implemented?", or "Can you come up with alternate ideas?"

People can be inventive people when they are not limited by "facts."

The "Silent Observer" is another role-play exercise wherein two people discuss the problem from a new perspective. The problem holder (that's you) is the restrained observer. Here too it is important to not disrupt the flow of ideas with negative or critical comments. During this exercise, you merely observe and record the dialogue between the two people.

Research and analogy

These techniques are best for people who aren't very intuitive. The goal of these strategies is to focus on the problem directly and seek solutions from others. By asking "Who else may have encountered this problem?" you may be directed to someone else in the same business or industry sector who has already addressed the problem. This strategy usually leads to a precise solution.

You could also reflect on the problem's nature and consider whether it may appear in a similar form but different context. By asking yourself the question "What else could this problem look like?" you may find another solution that is equally applicable to your situation.

Challenge Assumptions

We tend to take for granted our assumptions surrounding a problem or situation. They are so ingrained and familiar that we stop noticing them. However, when the context changes—as a result of technological or design advances—our assumptions are no longer valid. As assumptions are an intrinsic part of our perception, we must take conscious steps to expose them. The first step toward challenging assumptions is to identify them. This can be done by having someone ask us "What are your assumptions on the situation?" If that person continues to question us, our core assumption—which may conflict with the desired outcome—will come to the fore. We can then ask, "Is the assumption relevant or does it need to be re-evaluated?" and "Is it a good idea to hold on to this assumption given the circumstances?"

Once we have identified the assumption, we can determine its nature. Do time and cost considerations limit our proposed solutions? Do we assume that we won't have access to resources? Are assumptions restricting our creativity? Do we assume that political factors will limit our ideas? Are there barriers in the way of our novel solution?

Next, consider your problem without relying on your previous assumptions and see where this goes. After identifying the constraints standing in the way of your solution, you can start to challenge them.

What to Avoid

You Limit the Scope Of Your Problem-solving Activities

Don't become so overwhelmed with ideas that you then can't narrow them down. Only deal with one technique at a time and limit the amount of time that you spend on it. Once you have some ideas, proceed to the next stage- you may always come back to this phase if you can't come up with a viable solution.

You Think You Know All the Answers

People are reluctant to admit it when they run out of ideas. When this happens, you may engage others in problem-solving activities.

You Think That Brainstorming Activities are a Waste of Time

Despite this commonly held view, brainstorming has a dual advantage: besides solving problems, it provides teamwork benefits. The spirit of cooperation will continue after the brainstorming session and lead to improved work conditions.

Where to Learn More

Book:

Higgins, James M. 101 Creative Problem Solving Techniques: The Handbook of New Ideas for Business. New Management Publishing Company, 2006.

Web Sites:

Basic guidelines for problem solving and decision-making:
www.managementhelp.org/prsn_prd/prb_bsc.htm

Mind Tools: www.mindtools.com

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