Problem Solving

Nobody in this world doesn't have any problem. It means everybody has that. You can find the problems everywhere, such as in a workplace, in the market, at school, in the campus, etc.

It seems that life is so hard, isn't it?

Therefore, from now on you need to possess new paradigm towards problems. You should welcome and get them in touch enthusiastically. In real life, one characteristic of adult people is problem solving ability.

There are some steps to solve problems:

1. Determine what the problem is.

2. Prepare any possible alternatives

3. Compare advantages and disadvantages of each alternatives

4. Choose the best choices

Structuring the Problem.

Stage One: *Identifying the Problem*

Before being able to confront a problem its existence needs to be identified. This might seem an obvious statement but, quite often, problems will have an impact for some time before they are recognised or brought to the attention of someone who can do anything about them.

Example: *In many organisations it is possible to set up formal systems of communication so that problems are reported early on, but inevitably these systems do not always work. Once a problem has been identified, its exact nature needs to be determined: what are the goal and barrier components of the problem? Some of the main elements of the problem can be outlined, and a first attempt at defining the problem should be made. This definition should be clear enough for you to be able to easily explain the nature of the problem to others.*

GOAL (I want to...)	BARRIER (but…)
Tell a friend that we find something they do irritating.	I don't want to hurt their feelings.
Buy a new computer.	I'm not sure which model to get or how much money is reasonable to spend.
Set up a new business.	I don't know where to start.

Looking at the problem in terms of goals and barriers can offer an effective way of defining many problems and splitting bigger problems into more manageable sub-problems.

Sometimes it will become apparent that what seems to be a single problem, is more accurately a series of sub-problems. For example, in the problem:

"I have been offered a job that I want, but I don't have the transport to get there and I don't have enough money to buy a car."

"I want to take a job" (main problem)

"But I don't have transport to get there" (sub-problem 1)

"And I don't have enough money to buy a car" (sub-problem 2)

Useful ways of describing more complex problems are shown in the section, 'Structuring the Problem', below.

Problem	Working Definition
"I want to take a job, but I don't have the transport to get there and I don't have enough money to buy a car."	"I want to take this job."

Stage Two: ***Structuring the Problem***

The second stage of the problem solving process involves gaining a deeper understanding of the problem. Firstly, facts need to be checked.

Problem	Checking Facts
"I want to take a job, but I don't have the transport to get there and I don't have enough money to buy a car."	"Do I really want a job?" "Do I really have no access to transport?" "Can I really not afford to buy a car?"

The questions have to be asked, is the stated goal the real goal? Are the barriers actual barriers and what other barriers are there? In this example, the problem at first seems to be:

| Goal	Barrier 1	Barrier 2
Take the job	No transport	No money

This is also a good opportunity to look at the relationships between the key elements of the problem. For example, in the 'Job-Transport-Money' problem, there are strong connections between all the elements.

By looking at all the relationships between the key elements, it appears that the problem is more about how to achieve any one of three things, i.e. job, transport or money, because solving one of these sub-problems will, in turn, solve the others.

Chain Diagrams

Chain diagrams are powerful and simple ways of representing problems using a combination of diagrams and words. The elements of the problem are set out in words, usually placed in boxes, and positioned in different places on a sheet of paper, using lines to represent the relationship between them.

Chain Diagrams are the simplest type, where all the elements are presented in an ordered list, each element being connected only with the elements immediately before and after it. Chain diagrams usually represent a sequence of events needed for a solution. A simple example of a chain diagram illustrates the job-transport-money example as as follows:

| Get Money | → | Get Transport | → | Take Job |
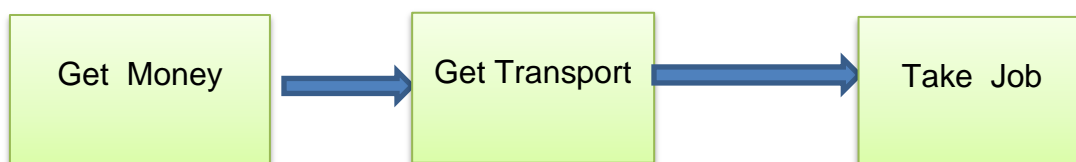
Listing

Listing the elements of a problem can also help to represent priorities, order and sequences in the problem. Goals can be listed in order of importance and barriers in order of difficulty. Separate lists could be made of related goals or barriers. The barriers could be listed in the order in which they need to be solved, or elements of the problem classified in a number of different ways. There are many possibilities, but the aim is to provide a clearer picture of the problem.

Problem
'I want to take a job, but I don't have the transport to get there and I don't have enough money to buy a car.'
Order in which barriers need to be solved
1. Get money 2. Get car 3. Get job

A visual representation and a working definition together makes it far easier to describe a problem to others. Many problems will be far more complex than the example used here.

(https://www.skillsyouneed.com/ips/problem-solving2.html)

Social Problem-Solving

Social problem-solving might also be called 'problem-solving in real life'. In other words, it is a rather academic way of describing the systems and processes that we use to solve the problems that we encounter in our everyday lives.

The word 'social' does not mean that it only applies to problems that we solve with other people, or, indeed, those that we feel are caused by others. The word is simply used to indicate the 'real life' nature of the problems, and the way that we approach them.

A Model of Social Problem-Solving

One of the main models used in academic studies of social problem-solving was put forward by a group led by Thomas D'Zurilla.

This model includes three basic concepts or elements:

This is defined as the process used by an individual, pair or group to find an effective solution for a particular problem. It is a self-directed process, meaning simply that the individual or group does not have anyone telling them what to do. Parts of this process include generating lots of possible solutions and selecting the best from among them.

Problem

A problem is defined as any situation or task that needs some kind of a response if it is to be managed effectively, but to which no obvious response is available. The demands may be external, from the environment, or internal.

Solution

A solution is a response or coping mechanism which is specific to the problem or situation. It is the outcome of the *problem-solving process*. Once a solution has been identified, it must then be implemented. D'Zurilla's model distinguishes between problem-solving (the process that identifies a solution) and solution implementation (the process of putting that solution into practice), and notes that the skills required for the two are not necessarily the same. It also distinguishes between two parts of the problem-solving process: problem orientation and actual problem-solving.

Problem Orientation

Problem orientation is the way that people approach problems, and how they set them into the context of their existing knowledge and ways of looking at the world.

Each of us will see problems in a different way, depending on our experience and skills, and this orientation is key to working out which skills we will need to use to solve the problem.

An Example of Orientation

Most people, on seeing a spout of water coming from a loose joint between a tap and a pipe, will probably reach first for a cloth to put round the joint to catch the water, and then a phone, employing their research skills to find a plumber.

A plumber, however, or someone with some experience of plumbing, is more likely to reach for tools to mend the joint and fix the leak. It's all a question of orientation.

Problem-solving includes four key skills:

Defining the problem,

Coming up with alternative solutions,

Making a decision about which solution to use, and

Implementing that solution.

Based on this split between orientation and problem-solving, D'Zurilla and colleagues defined two scales to measure both abilities. They defined two orientation dimensions, positive and negative, and three problem-solving styles, rational, impulsive/careless and avoidance. They noted that people who were good at orientation were not necessarily good at problem-solving and vice versa, although the two might also go together.

The skills required for positive problem orientation are:

1. Being able to see problems as 'challenges', or opportunities to gain something, rather than insurmountable difficulties at which it is only possible to fail.

2.. Believing that problems are solvable. While this, too, may be considered an aspect of mindset, it is also important to use techniques of Positive Thinking;

3. Believing that you personally are able to solve problems successfully, which is at least in part an aspect of self-confidence.

4. Understanding that solving problems successfully will take time and effort, which may require a certain amount of resilience;

5.. Motivating yourself to solve problems immediately, rather than putting them off.

(https://www.skillsyouneed.com/ips/social-problem-solving.html)