

ANALYTICAL WRITING SKILLS: ANALYSE A PROBLEM

Timeframe:	8 hours
Learning Outcome:	<ul style="list-style-type: none">Analytical writing and presentation skills: ability to research a specific topic, analyse a problem, think creatively, suggest a solution and prepare a clear presentation of the solution.
Recommended Reading:	<ul style="list-style-type: none">Clargo, M. 2001, Problem solving tools and techniques, http://www.tesseract.dsl.pipex.com/Files/Problem_Solving_Tools.pdf (accessed 12 September 2012).Rooney, J.J., and van den Heuvel, L.N. 2004, 'Root cause analysis for beginners', Quality Basics, July 2004, http://asq.org/qic/display-item/index.html?item=19550&item=19550 (accessed 10 November 2012).
Section Overview	<ul style="list-style-type: none">O'Loughlin, E.F.M. 2010, Problem-solving Techniques: #5 – SWOT analysis, http://www.youtube.com/watch?v=3s8nW8zGgpY (accessed 12 September 2012).
Section Overview	<p>Analytical writing requires the writer to consider problems and find solutions to them. In this section of the manual, we will look at the generic problem solving process. Problem solving and decision-making are important skills for business and life. Problem-solving often involves decision-making, and decision-making is especially important for management and leadership. Solving problems or dealing with indecision is something that a lot of us take for granted, but do we really know how to solve problems so as to achieve the best results? In order to improve our problem-solving abilities we need to develop effective problem-solving skills. This section discusses problem solving within a business environment.</p>

1.1.1 Introduction

Problem solving can be defined as:



The ability to solve problems. It is a basic life skill and is essential to understanding technical subjects. Problem-solving is a subset of critical thinking and employs the same strategies. In general, the goal of problem-solving is to adduce correct solutions to well-structured problems. Problem-solving is the process of reasoning towards solutions using more than simple application of previously learned procedures (CTL, 1998).

Based on the above, we can state that problem-solving is:

- A tool to be used to achieve specific goals related to identified problems.
- A life skill that is necessary to identify problems and find suitable solutions.
- The process of tracking problems in a systematic way.
- The activity that individuals engage in to achieve a desired outcome.

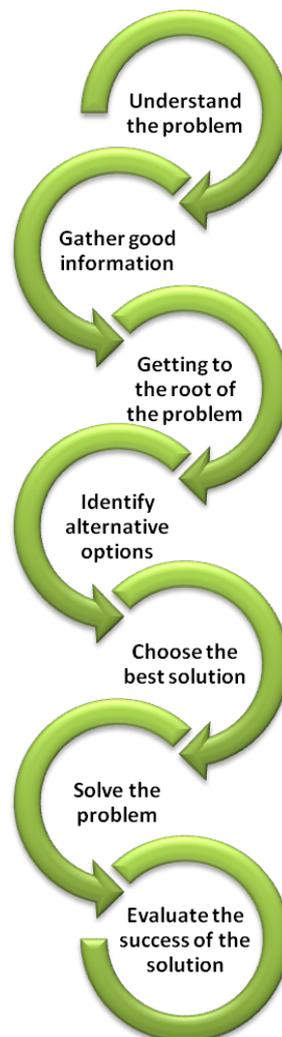
One can engage in problem solving if one wants to reach a goal and experiences obstacles on the way. As a learner, employee, parent, etc., your goals are likely to be many and varied. You might want to become computer literate, buy a car, improve your fitness, or solve problems within your department. Within the research process problem-solving skills will be useful when compiling the research topic or the research problem.

It is likely that in working towards a goal one may encounter some barriers. At the point at which one comes up against a barrier, one can engage in a problem solving process to help achieve the set goal.

The problem solving cycle forms the basis for solving problems in an effective and efficient manner. Remember that problem-solving is the process that occurs to ensure that the gap between the current situation and the desired situation is eliminated. For research purposes, the research will fill the gap between the current situation and the desired situation. Keep this in mind as you work through this section, as it will help you to understand and apply the cycle in an effective manner.

The main steps of problem-solving process are presented in **Figure 1**.

FIGURE 1: PROBLEM SOLVING PROCESS



(Adapted from Zwilling, 2011)

It is useful to view problem solving as a cycle because a problem often needs several attempts to work out before it is solved, or the problem may change and your original analysis may not be relevant any longer. The information below describes each of these problem-solving steps in more detail.

Identify the Problem

The first step you need to take is to identify and name the problem so that you can find an appropriate solution. To identify a problem is often easier said than done. Especially in the work environment, the problem that you have identified may be caused by a bigger problem. In that case each problem needs to be named and the relationship between them determined. Often in the business environment, the problem will be presented to you to research. This does not mean you should skip this step in the problem solving cycle. You have to ensure that you evaluate whether the problem presented is the actual problem and not a root of a deeper underlying problem.

It is recommended that the principle of troubleshooting be used to identify the problem or problems that are standing in the way of achieving set goals. The principle of troubleshooting refers to isolating the source of the problem and fixing it (webopedia.com, 2012). Troubleshooting typically occurs:



“... through a process of elimination whereby possible sources of a problem are investigated and eliminated, beginning with the most obvious and easiest problem to solve (Webopeia.com, 2012).”

The example below provides a real life situation which explains troubleshooting.



One of the problems that you may be faced with in completing this programme is the submission of the assignment on the set due date. The reason why this might be a problem is because of a big project at work that is taking up a lot of your extracurricular time. The source of the problem in this case is therefore the project at work on which you spend a lot of your own time. The solution might be to optimise the time you spend at work and not to stay after hours to complete more work. In this way you are eliminating the cause of the problem and therefore you are also eliminating the problem.

Part of this step, to determine exactly what the problem is, is to also determine the following (**Table 1**):

TABLE 1: IDENTIFY THE PROBLEM

How urgent is the problem?	Do I need to give it top priority or can I do it tomorrow? Some problems are urgent and you need to do whatever you have to, to fix the problem immediately.
How important is the problem?	Urgent problems clamour for attention but might not reflect their importance in the overall scheme of things.
Whose responsibility is it to solve the problem?	Who should be involved in fixing the problem? Can you do it yourself or do you need the assistance of other people to fix the problem?

The value of determining the above is to make sure that you treat the actual problem and not one of the causes of the problem. It also ensures that you are using your time effectively and spending it on issues that are important to the overall success of the organisation.

Gather Information

Before you can decide on how to solve a problem you have to go through the process of gathering the facts. This process should be conducted in a disciplined way so as to ensure that all relevant information related to the problem has been obtained.

Gathering all the information is very often a difficult process, especially when one has limited time at hand to solve a problem. In such circumstances one has to ensure that the most crucial facts related to a problem have been collected and analysed. Time should also be set aside to understand and analyse the facts collected. Information gathering is an essential step in the research process.

Gathering information requires that you understand the difference between two sub-types of problems, namely fix-it problems and do-it problems (Kneeland, 1999). The fix-it problem is quite simply an existing, unsatisfactorily situation that needs to be fixed as soon as possible. Remember that problems occur where there is a gap between the way things are and the way one wants things to be. Fix-it problems try to fix the difference between the way things are and what one desires them to be. The do-it problems are a bit different and refer specifically to objectives that need to be achieved. The problem is figuring out how to achieve the objective successfully.

In the case of a fix-it problem the goal of gathering information is to find out what is causing the problem and make it go away. In the case of a do-it problem, the goal is to clarify an objective and decide how you can achieve it. In such circumstances the goal should be kept in mind and information gathered until the goal has been achieved.

During this step, fact findings have to be sharply focused. You need to know in advance what information is essential in order to understand and analyse the problem. Information can be obtained in a variety of ways and we will discuss this later in the Study Guide.

Fact-finding is largely a matter of asking the right people the right questions. Questions to ask to obtain the most relevant information include the following:

- What has happened and how precisely did it happen?
- Where and when did the problem occur?
- Who are the people involved in the situation?
- How did their involvement affect what happened?
- Will their behaviour change in any way in future?
- Why has the problem not been sorted out by now?

(Zenyuch, 2009)

A checklist of questions related to What, Who, When, Where, Why and How, will provide a good starting point to obtain information related to a problem. When one systematically collects information like this, one must decide in advance who to talk to and what the specific questions are that should be asked. More progress is usually made by seeking individual opinions and observations from colleagues, before going after the same information in more formal sources such as minutes, reports, e-mails, etc.

There is however a catch when obtaining information from colleagues – they might not be entirely objective about the problem and may often furnish one with information not at all related to the problem. Information obtained from colleagues must therefore be verified by comparing it to information available in more formal sources of information.

Once you have obtained the information required to effectively identify the problem, the next step will be to analyse the information to determine the significance of it in relation to the problem you face. It is impossible to hold all the information required to solve a problem in our minds and also think about it coherently. The key to success here is to present the facts in a way so that you and others can understand them at a glance. We will discuss such problem solving tools later in this section.

Getting to the Root of the Problem

Once all the facts pertaining to a problem have been obtained, the next step will be to ensure that you understand the root causes of a problem. A root cause is an initiating cause in a causal chain, leading to an outcome or effect of interest. Root causes are used to describe the level where an intervention could reasonably be implemented to change performance and prevent an undesirable outcome.

(Rooney and Vanden Heuvel, 2004).