Problem Formulation & Problem Solving

Effective problem formulation is a fundamental success of all analyses, particularly in command-and-control assessment because the problems are often ill-defined and complex, involving many dimensions and rich contents.

Problem formulation involves the decomposition of the analytic problems into appropriate dimensions such as structures, functions, and mission areas.

Problem formulation is an interactive process that evolves over the course of a study. It is essential even for small studies as where time is short, it will save time later and help ensure quality.

The problem formulation phase should identify the context of the study and aspects of the problem-related issues. There is no universal acceptance approach to problem formulation. However, practices exist that can be applied. First, find out what the question is then find out what the real question is.

Problem Solving:

When we start reading these and want to learn how to solve a problem by using computers, it is first important to understand what the problem is. We need to read all the problem statements several times to ensure that understand what is asked before attempting to solve the problem.

Method of problem-solving:

1. Recognize and understand the problems
2. Accumulate facts
3. Select the appropriate theory
4. Make necessary assumptions
5. Solve the problems
6. Verify the results

Performing step 5 may involve a computer.

The 5 steps in using a computer as a problem-solving tool:

1. Develop an algorithm and flowchart
2. Write a program in computer language
3. Enter the program into the computer
4. Test and debug the program
5. Run the program, input data, and get the results from the computer