

CHAPTER-6

POTENTIAL PROBLEM ANALYSIS

- * General and Specific Objectives**
- * Trainer's Notes and Guidelines**
- * Self-Learning Package for the
Trainees and Assignments**

GENERAL OBJECTIVE

The participant will apply Potential Problem Analysis to familiar projects and their activities.

SPECIFIC OBJECTIVES

The participant will -

- (a) Become familiar with the concept of Potential Problem Analysis (PPA).
- (b) Describe the steps in PPA and apply them to a given Potential Problem.
- (c) For a set of activities in a project :
 - identify Potential Problems
 - segregate the crucial Potential Problems
 - apply PPA to these crucial problems
 - indicate how preventive and contingent actions for Potential Problems can be integrated with the plan.

TRAINER'S NOTES AND GUIDELINES

POTENTIAL PROBLEM ANALYSIS (PPA)

THEME OF THE CHAPTER

PPA is a step in Planning, normally overlooked or avoided, but which adds a very high value and worth to the plan.

PPA's main purposes are-

- (a) To bridge Planning and Implementation.
- (b) To reduce deviations of Implementation from Plan.
- (c) To reduce the uncertainty in outcomes of projects.

PREREQUISITES

- (a) This Chapter has to be taken up only after completion of Chapter - 2 on Planning, Chapter - 3 on Network Analysis and Chapter -4 on Decision Analysis.
- (b) The Tutor should have sufficient expertise in problem solving, grading problems on the basis of frequency and seriousness of occurrence.
- (c) Additional expertise is required by the Tutor in creatively designing a variety of remedial actions.
- (d) The participants should have experience in coping with problems in projects.

PREPARATORY ACTIVITIES FOR TUTOR

- (a) The Tutor should have thoroughly gone through the learning experiences of the Chapter, including assignments.

- (b) The Tutor should have attended certain training programmes on problem solving.

INSTRUCTIONAL GUIDELINES

- (a) The Chapter has been presented in such a form that the learner can manage to learn by himself through understanding illustrations and attempting assignments.
- (b) The suggested time for learning this Chapter is 4 1/2 hours. The suggested break-up is as follows:

Sl. No	Activities	Time in hours
1	- The whole learning package except Assignment-5	2 1/2 hours
2	- Use of OHP transparencies 6.1, 6.2 and 6.3 for summarising the Chapter.	1/2 hour
	Use of content update for enabling participants to identify different potential problems and their categories in projects.	1 1/2 hours
3.	- Assignment - 5	1 1/2 hours

- (c) The introduction to this Chapter may be brief and limited to the links this Chapter has with chapters 2, 3 and 4, as elaborated below.

Chapter - 2: > PPA should be done after identification of resources and support needs
(PLANNING)

> Potential problems emerge from the activity set for the project

Chapter - 3: > The project decomposition into a set of activities is key for any
(NETWORK ANALYSIS) PPA.

Chapter - 4: > The adverse consequences analysis is in fact a PPA.
(DECISION ANALYSIS)

(d) (i) While the participants are learning at their own pace, the Tutor will be sensitive to their learning needs and provide assistance as and when needed.

(ii) The Tutor has to ensure that the participants will be able to generate creatively, preventive and contingent actions for causes of potential problems.

(e) (i) The Tutor should see to it that not more than two groups work on a project listed in Assignment - Five. Therefore, the Tutor may add to the list, other projects, if needed.

(ii) The Tutor may ensure the use of content update on 'Potential Barriers in a Project' by the participants in attempting Assignment - Five. Further, guidance may be provided by the Tutor depending on needs.

(iii) In the Report - Back session the Tutor will promote interaction and comment on the analyses presented.

(iv) The Tutor will give samples of potential problems and the categories they belong to immediately after distributing content update.

(f) The Tutor will use the OHP transparencies 6.1, 6.2 and 6.3 as per the schedule indicated earlier.

SUGGESTED RESPONSES TO ASSIGNMENTS

ASSIGNMENT - ONE:

This is an open-ended assignment and could elicit a wide spectrum of responses, most of which could be appropriate.

SAMPLES - (a) Mode of transport available could cause delays.

(b) Not enough travel time provided for.

(c) Queue at ticket counter.

(d) Cinema hall is full.

(e) Appropriate seats not available.

ASSIGNMENT - TWO:

This again is open-ended and the Tutor must be prepared for a variety of responses. Three sample responses are given below.

(A) Potential problems

- The location of your residence may be unfamiliar to some youth volunteers
- The volunteers may have other engagements.
- One late comer could delay the meeting.

For Justification Tutors will look for rational reasoning.

(B) This depends on (A). What is suggested is that the Tutor demand a sense of specificity from the participants when they amplify WHAT, WHERE, WHEN and TO WHAT EXTENT.

ASSIGNMENT - THREE:

This is to be done in groups. Tutor will please ensure that there is ample participation of members in the discussion. Responses are likely to vary from group to group depending on conditions assumed by the groups.

ASSIGNMENT - FOUR:

Again this is a group assignment. Tutor will check for rationality in approach and use of the steps worked out in PPA.

ASSIGNMENT - FIVE:

The Tutor will give his observations on the presentations of the various groups. Since the projects selected by groups will be diverse and the assumptions will be varying, it is difficult to suggest responses. The Tutor may ensure that the PPA model is adhered to and the application is logical.

REFERENCES

1. 'The Rational Manager' by C.H.Kepner and B.B., Tregoe, McGraw Hill, New York 1965
2. Instructional Package prepared by Education Management Centre, TTTI, Bhopal for use in departments of the State Government of Madhya Pradesh, India, 1988.
3. 'Solving Educational Problems' by Havelock and Huberman, Praeger Publications, New York, 1978.
4. 'Youth Mobilisation for Development in Asian Settings' by UNESCO, 1978

CONTENT UPDATE - I

POTENTIAL BARRIERS IN THE COURSE OF A PROJECT

Difficulties and barriers manifest themselves normally as delays, conflicts, shortages or speaking generally, problems. Many of the barriers can be predicted well in advance. Either they can be overcome or persons can get well prepared to face them in the course of a project.

These difficulties can be categorised for simplifying assimilation and understanding.

A. GEOGRAPHIC

- a) Long distance between places.
- b) Slow transportation or difficult access.
- c) Isolation from other establishments or related agencies or support organisations.
- d) Difficulty in contacting users or persons related to the project.
- e) Climatic conditions, persistent difficulties in movement, work and contact.

B. HISTORICAL

- a) Frequent changes in leadership.
- b) Past project management vastly different than proposed system.
- c) Previous experience with support agencies tends to create suspicion.

- d) Administrative elite opposed to project.
- e) Structural disorder due to poor leadership, teams etc. in the past.

C. SOCIAL AND CULTURAL

- a) Conflict among ideologies about project (its nature and need, its environmental impact).
- b) Poor organisational climate for sharing ideas openly.
- c) Inadequate social harmony and good relations among project team members.
- d) Significant cultural differences in attitudes and values.
- e) Poor interest and, consequently, poor attendance during project meetings.

D. POLITICAL

- a) Disputes among political groups or factions.
- b) Objections to project by special interest groups.
- c) Lack of support, interest and understanding by political leaders.
- d) Certain important political leaders opposed to project.
- e) Poor communication among political leaders.

- f) Managers, administrators and workers do not understand political realities.
- g) Political opposition to outside technical assistance.
- h) Change in government and introduction of new policies.
- i) Political pressure for early results, expectation of accomplishment in too short a time.
- j) Fear of political and power conflicts due to project.

E. ECONOMIC

- a) Inadequate financial support in terms of timeliness and quantity from internal and associated external sources.
- b) Inflation and cost increases.
- c) Under - estimation of costs.
- d) Mismanagement of funds.
- e) Significant delays in delivery of funds.
- f) Sudden alteration in economic conditions and policies, rapid change in priorities for funding.
- g) Low priority for project.
- h) Economic realities not understood in advance, not prepared for in advance by the managers of the project.
- i) Poor economic advantage (from cost-effectiveness/ cost benefit studies).

F. PROCEDURAL

- a) Formal authority to begin project was delayed.
- b) There was a lack of clear lines of authority.
- c) There was no clear structure for decision making.
- d) There was too much decentralization of decision making to different groups.
- e) There was too much centralization of decision making.
- f) There was not enough co-ordination of people in different roles.
- g) There was a lack of common understanding of project objectives.
- h) There was a lack of agreement on project objectives.
- i) Outside technical assistance was faulty.
- j) Materials for the project were of poor quality.
- k) Materials for the project were of insufficient quantity.
- l) Materials for the project were not ready or not delivered on time.
- m) There was a lack of skilled manpower to implement the project as planned.
- n) The departure and replacement (turn-over) of key persons in the project happened too quickly to preserve continuity.
- o) The project was implemented too quickly.
- p) The project was implemented too slowly.
- q) There were too many rules and regulations.

**SELF-LEARNING PACKAGE
AND
TRAINEE'S ASSIGNMENTS**

POTENTIAL PROBLEM ANALYSIS

If a youth worker can act before a problem develops rather than after the problem surfaces, he will find it more rewarding. This could avoid trouble and prevent problems from occurring, or minimise their undesirable effects. The technique used for making this happen is called Potential Problem Analysis. The basis here is the well known proverb - "An ounce of prevention is worth a pound of cure". In other words it requires a certain amount of time and attention to tackle tomorrow's problems right today so that they do not assume undesirable or disastrous proportions.

While project leaders and managers may not be using this technique regularly in practice, there are instances of the use and application of this technique in certain spheres associated with day to day life. For example -

- a) Parents get their children inoculated to prevent certain diseases.
- b) A person contemplating a long journey by car takes some precautionary measures like checking tyre pressure, quantity of fuel, etc.

One reason for managers neglecting PPA in their official work may be the normal human tendency to overlook the 'critical consequence' of an action. The question 'what could go wrong?' is rarely asked or answered because of the faith placed in plans. Everyone appears convinced that a plan is eminently workable. What could go wrong is rarely included as a step in planning. And yet people who implement always mention that things have gone wrong, that things will continue to go wrong, and things will always go wrong.

There is always a readiness to consider that only when problems occur they should be tackled. In other words opportunities for prevention are missed out and troubles are permitted to result. Potential problems (problems not prevented) can wreck, jeopardise actions however well conceived they are. The utility of PPA lies in preventing or reducing such problems and outcomes.

Normally potential problems can be anticipated by just thinking on a project. But this procedure is arbitrary and lacks focus. On the other hand, a more systematic approach would be to consider the component activities in the activity set (Refer chapter -2 on Planning and chapter -3 on Network Analysis) as the primary source of potential problems. In this case, the potential problems that may arise in the performance of each activity can be anticipated.

ASSIGNMENT - ONE

Identify and write below Potential Problems (at least three
for 'GOING TO A MOVIE THEATRE TO SEE A FILM').

1. -----

2. -----

3. -----

(Check with your Tutor)

Potential Problem Analysis has to be done in a systematic manner. Seven questions lead to PPA -

1. WHAT COULD GO WRONG ?

A plan is really a series of 'shoulds' or 'performance points' at which some things planned are supposed to occur. After making the plan a manager must go over this plan and think of problems that might crop up. He can find plenty of potential problems if he looks carefully at those elements where trouble starts so often.

Sources of Potential Problems are -

(a) When something new, complex or unfamiliar is tried.

Steps to 'reduce Drug Addiction' or 'to make a group of Adults literate' are complex projects and would contain a high proportion of Potential Problems.

(b) When deadlines are tight.

Given one week's time to hold a sports meet for a cluster of communities can prove to be a tight deadline and will present numerous Potential Problems.

- (c) When an action is critical or has effects on other actions.

Acceptance of a scheme by beneficiaries is critical to the success of various activities in the scheme. If acceptance is low, Potential Problems will surely arise.

- (d) When actions involve more than one person, function, or department.

A self employment generation scheme may involve numerous government and non government agencies. The more the agencies the more the likelihood of Potential Problems.

- (e) When responsibilities are difficult to assign, or lie outside the manager's area.

Organising a blood donation camp involves a number of functions, some of which lie outside the youth worker's skills and knowledge areas. This would lead to many Potential Problems.

2. WHAT, SPECIFICALLY, IS EACH PROBLEM ?

For each Potential Problem it is important to find out

- * What is it ?
- * Where will it occur ?
- * When will it occur ?
- * To what extent or degree ?

ASSIGNMENT - TWO

You are a Youth Worker. You have fixed a project planning meeting of eight youth volunteers at 7.30 pm tomorrow at your residence.

A. Identify three Potential Problems that may arise in the activity (Project planning meeting).

(1) -----

(2) -----

(3) -----

- B. For any one of the Potential Problems identified by you in A, describe the problem as follows -

WHAT IS THE PROBLEM ?

WHERE WILL THE PROBLEM OCCUR ?

WHEN IS IT LIKELY TO OCCUR ?

TO WHAT EXTENT ?

3. HOW RISKY IS EACH PROBLEM ?

A manager cannot cope or bother with every Potential Problem. He must eliminate those with small risks and concentrate on those which are more threatening to his plan.

To prioritise between Potential Problems two questions or criteria become necessary :

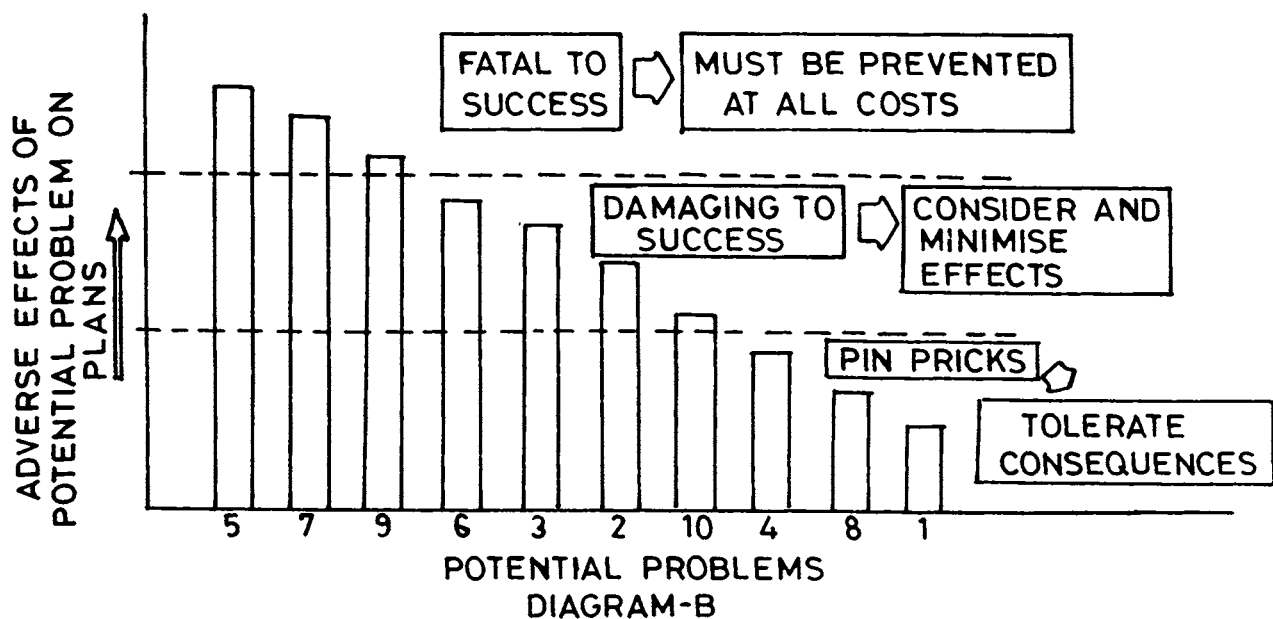
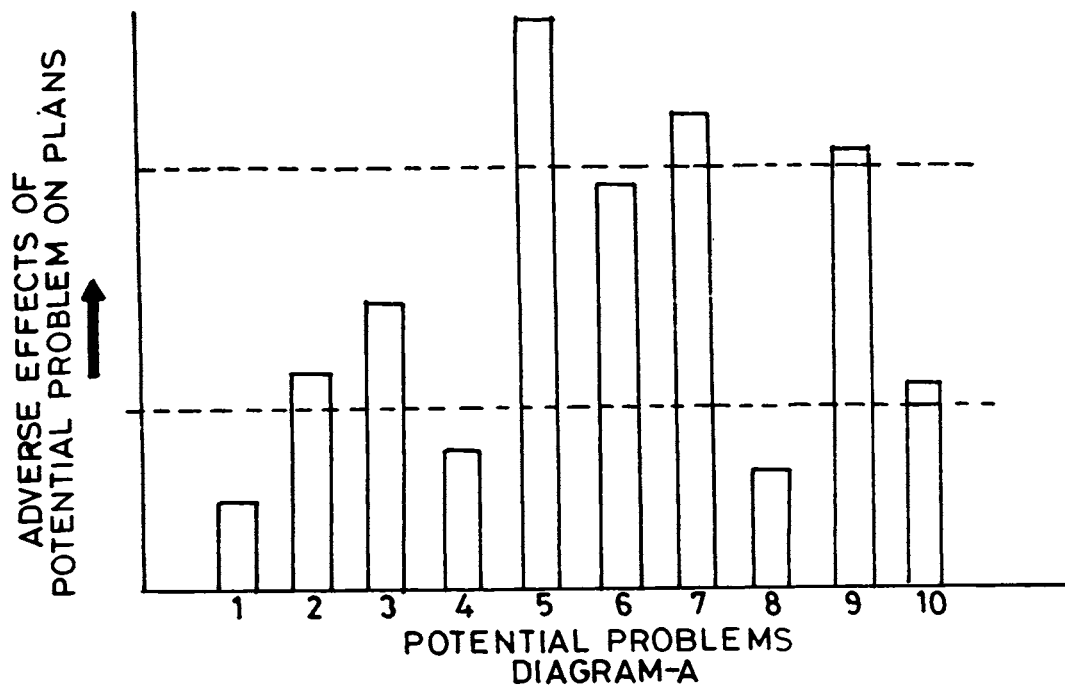
- How serious will it be if it happens ?
- How probable is it that it might happen ?

The adverse effects of a Potential Problem on plans can be considered to be the product of SERIOUSNESS and PROBABILITY OF OCCURRENCE.

Imagine a project or set of activities, for which ten Potential Problems have been identified. For each of them, seriousness and probability have been estimated. Their products i.e. adverse effects, have been computed.

It is the usual practice to assign seriousness values from 1 to 10 and probability values from 1 to 100. For example, in case a Potential Problem has a seriousness weight of 5 and probability of occurrence of 40% then the adverse effect would have a value of $5 \times 40 = 200$.

Diagram A shows the adverse effects of each one of the ten Potential Problems and these effects have been rearranged in the order of decreasing effect in Diagram B. Further action is also suggested in Diagram B.



Thus, the Potential Problems in any project can be categorised into:

- (a) FATAL
- (b) DAMAGING
- (c) IRRITATING (Pinpricks)

Actions to be contemplated on each of the categories are indicated in Diagram - B.

ASSIGNMENT - THREE

The following Potential Problems have been identified for a youth welfare project, "BLOOD DONATION CAMP".

You are to :

- (a) Indicate the seriousness and probability of occurrence of each of the above Potential Problems.
- (b) Compute adverse effects values

Sl. No.	Potential Problems	Serious- ness weight	Probability of occur- rence	Adverse effects value
1.	Donors not adequate in numbers			
2.	Donors frightened			
3.	Insufficient space			
4.	Surroundings not hygienic			
5.	Doctors having limited time			
6.	Identified doctors do not turn up			
7.	Not enough medical equipment			
8.	Inadequate Funds			

-
- (c) Draw a diagram similar to Diagram - B for the Potential Problems.

This assignment should be performed in groups of 5 to 9.

CHECK YOUR ANSWERS WITH THE TUTOR.

4. WHAT ARE THE POSSIBLE CAUSES OF EACH PROBLEM ?

The listing of causes for problems is done on the basis of experience. Probably some of these causes will never come into being to produce a problem. But this should not stop the detailing of causes.

5. HOW PROBABLE IS EACH POSSIBLE CAUSE ?

Here again a manager relies on his judgement and experience. For each cause the probability of occurrence is to be judged. The causes with high probability need more attention. It is suggested that such estimates be done in groups.

6. HOW CAN A POSSIBLE CAUSE BE PREVENTED OR ITS EFFECTS MINIMISED ?

The best action is to eliminate or reduce the probability of occurrence of a Potential Problem. This is generally referred to as PREVENTIVE ACTION. In fact, there may be more than one preventive action for one cause.

Remember, the preventive action tries to eliminate the cause.

7. WHAT IF DOUBTS ARISE ABOUT SUCCESS OF PREVENTIVE ACTIONS ?

In case a potential problem is too serious, a manager cannot be certain about the success of preventive actions. Then he has to do more than rely on preventive actions. Some 'CONTINGENT ACTION' will also be needed. Contingent action is like insurance or 'fail-safe' action. They are like evacuating passengers through lifeboats on a sinking ship.

The plan must contain preventive actions and contingent action whenever necessary. Both these types of actions may require preparation.

Preventive actions must occur before the likely occurrence of the Potential Problem. Plans must clearly locate these actions in such a manner that causes of Potential Problems do not arise.

Contingent action is normally contemplated after the potential problem has surfaced despite preventive action. This means preventive action has not worked. The use of contingent actions should be at the earliest and as soon as the problem becomes visible. It should not be delayed till the problem has assumed disastrous proportions.

ILLUSTRATION - ONE

A Partial Potential Problem Analysis for a project "TREKKING IN A GROUP OF 20" is given below. Amongst the many serious Potential Problems, only three have been considered in this illustration.

PROJECT : 'TREKKING IN A GROUP OF 20'

POTENTIAL PROBLEM 'A' - Trekkers do not assemble at the right time at the starting point

Causes	Preventive Action	Contingent Action
Assembly time not convenient	Assembly time fixed after consultation with the trekkers	-
Information of assembly time inappropriate	Complete information in simple/graphic presentation (map), Frequent reminders or communication	-
Dropouts	Keep substitutes ready	Smaller group

POTENTIAL PROBLEM 'B' - Food not available
at resting points.

Causes	Preventive Action	Contingent Action
Inadequate food stocks at resting points	Food stocks to be carried	
Breakdown in cooking facilities	Resting point equipped with solar/coal cooker	Use of available fire wood

POTENTIAL PROBLEM 'C' - Trekkers fall ill during trekking

Causes	Preventive Action	Contingent Action
Inadequate physical protection against adverse weather condition	Communicate before trek about need for appropriate protective clothing Without necessary gear not allowed to trek	Keep an essential stock of necessary clothing
Low resistance to adverse environmental conditions among trekkers	Select physically fit trekkers only	Instructors trained in elementary first aid and simple medication, Carry stocks of medicines
Polluted environment	Avoid the trek, Select other time periods for trekking	Stocks of medicines to be carried

ASSIGNMENT - FOUR

An analysis of a potential problem is given below. You are required to comment upon the analysis and finalise your comments in groups of 5 to 9. Show your analysis to the Tutor.

POTENTIAL PROBLEM : Potential donors do not respond to requests for funds.

Causes	Preventive Action	Contingent Action
1. Requests are made only through written communication	1. Prepare a document with details about project 2. Plan to meet personally to distribute document	Use personal influence also
2. Too many requests from voluntary units to some donors	1. Start early to influence the donor to attach high priority to your request	Influence donor through other sources
3. No acknowledgment on previous donations	Present evidence of the work and the fruits of investment in past projects of your organization.	Give personal assurance

ASSIGNMENT - FIVE

For any one of the following projects:-

- (a) identify at least three critical activities and for each one of them specify one potential problem.
- (b) perform a PPA on any two of the identified potential problems
- (c) present your analysis to the rest of the participants and seek their suggestions.

PROJECTS

- 1. Organising a skills training programme for youth.
- 2. Organising a youth rally.
- 3. Promoting self-help programme among villagers for better utilisation of local resources.
- 4. Setting up a guidance and counselling cell for delinquent youth.

The assignment is to be carried out in groups of 5 to 9.
