Defining the Research Problem

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What is a Research Problem?

A **research problem**, in general, refers to some difficulty which a researcher experiences in the context of either a theoretical or practical situation and wants to obtain a solution for the same. Usually we say that a research problem does exist if the following conditions are met with:

- There must be an individual or a group which has some difficulty or the problem.
- There must be some objective(s) to be attained at. If one wants nothing, one cannot have a problem.

What is a Research Problem?

- There must be alternative means (or the courses of action) for obtaining the objective(s) one wishes to attain. This means that there must be *at least two means* available to a researcher for if he has no choice of means, he cannot have a problem.
- There must remain some **doubt** in the mind of a researcher with regard to the selection of alternatives. This means that research must answer the question concerning the relative efficiency of the possible alternatives.
- There must be some environment(s) to which the difficulty pertains.

Selecting a Problem

- The ***research problem*** undertaken for study must be carefully selected.
- A ***problem*** must spring from the **researcher's mind** like a plant springing from its own seed.
- A ***research guide*** can at the most only help a researcher choose a subject.
- ***Technical Criteria***
- ***Personal: Interest, Training, Expertise, financial capacity, time factor involved in the project.***

Selecting a Problem

The following points may be observed by a researcher in selecting a research problem or a subject for research:

- Subject which is overdone should not be normally chosen, for it will be a difficult task to throw any new light in such a case.
- Controversial subject should not become the choice of an average researcher.
- Too narrow or too vague problems should be avoided.
- The subject selected for research should **be familiar** and **feasible** so that the related research material or sources of research are within one's reach.

Selecting a Problem

- The **importance of the subject**, the **qualifications and the training of a researcher**, **the costs involved**, **the time factor** are few other criteria that must also be considered in selecting a problem. A researcher must ask himself the following questions:
  - Whether he is well equipped in terms of his background to carry out the research?
  - Whether the study falls within the budget he can afford?
  - Whether the **necessary cooperation** can be obtained from those who must participate in research as subjects?
- The selection of a problem must be preceded by a preliminary study.

Necessity of Defining the Problem

Quite often we all hear that a problem clearly stated is a ***problem half solved***.

- This statement signifies the need for defining a research problem.
- The problem to be investigated must be defined unambiguously for that will help to discriminate relevant data from the irrelevant ones.
- Questions like:
  - What data are to be collected?
  - What characteristics of data are relevant and need to be studied?
  - What relations are to be explored?
  - What techniques are to be used for the purpose?

Techniques Involved in Defining a Problem

- Defining a **problem** involves the task of laying down **boundaries** within which a researcher shall study the problem with a pre-determined objective in view.
- Defining a ***research problem properly and clearly*** is a crucial part of a research study and must in no case be accomplished hurriedly.
- Hence, the research problem should be defined in a systematic manner, giving due weightage to all relating points.

5 Techniques:

1. **Statement of the problem in a general way:**
2. **Understanding the nature of the problem:**
3. **Surveying the available literature:**
4. **Developing the ideas through discussions:**
5. **Rephrasing the research problem:**

- Technical terms and words or phrases, with special meanings used in the statement of the problem, should be clearly defined.
- Basic assumptions or postulates (if any) relating to the research problem should be clearly stated.
- A straight forward statement of the value of the investigation (i.e., the criteria for the selection of the problem) should be provided.
- The suitability of the time-period and the sources of data available must also be considered by the researcher in defining the problem.
- The scope of the investigation or the limits within which the problem is to be studied must be mentioned explicitly in defining a research problem.

Illustration

Let us suppose that a research problem in a broad general way is as follows:

"Why is productivity in Japan so much higher than in India"?

Ambiguities:

- What sort of productivity is being referred to?
- With what industries the same is related?
- With what period of time the productivity is being talked about?

"What factors were responsible for the higher labor productivity of Japan's manufacturing industries during the decade 1971 to 1980 relative to India's manufacturing industries?"

"To what extent did labor productivity in 1971 to 1980 in Japan exceed that of India in respect of 15 selected manufacturing industries? What factors were responsible for the productivity differentials between the two countries by industries?"

Conclusion

- We may conclude by saying that the task of defining a research problem, very often, follows a sequential pattern—
  - The problem is stated in a general way,
  - The ambiguities are resolved,
  - And rethinking process results in a more specific formulation of the problem so that it may be a realistic one in terms of the available data and resources and is also analytically meaningful.