

Formulating a Research Problem

The Central aim of this topic is to detail the process of formulating a Research Problem.

The Research Problem

Broadly speaking, any question that you want answered and any statement or allegation that you want to challenge or investigate can become a research problem or a research topic for your study. However, it is important to remember that not all questions can be transformed into research problems and some may prove to be extremely difficult to study.

The Importance of Formulating a Research Problem

The formulation of a research problem is the first and most important step of the research process. It is like the identification of a destination before undertaking a journey. In the absence of a destination, it is impossible to identify the shortest – or indeed any – route. Similarly, in the absence of a clear research problem, a clear and economical plan is impossible. To use another analogy, a research problem is like the foundation of a building. The type and design of the building are dependent upon the foundation. If the foundation is well designed and strong you can expect the building to be also. The research problem serves as the foundation of a research study: if it is well formulated, you can expect a good study to follow.

According to Kerlinger:

If one wants to solve a problem, one must generally know what the problem is. It can be said that a large part of the problem lies in knowing what one is trying to do. (1986: 17)

Considerations in Selecting a Research Problem

- **Interest** – Interest should be the most important consideration in selecting a research problem. A research endeavor is usually time consuming, and involves hard work and possibly unforeseen problems. If you select a topic which does not greatly interest you, it could become extremely difficult to sustain the required motivation and put in enough time and energy to complete it.
- **Magnitude** – You should have sufficient knowledge about the research process to be able to visualise the work involved in completing the proposed study. Narrow the topic down to something manageable, specific and clear. It is extremely important to select a topic that you can manage within the time and with the resources at your disposal. Even if you are undertaking a descriptive study, you need to consider its magnitude carefully.
- **Measurement of concepts** – If you are using a concept in your study (in quantitative studies), make sure you are clear about its indicators and their measurement. For example, if you plan to measure the effectiveness of a health promotion programme, you must be clear as to what determines effectiveness and how it will be measured. Do not use concepts in your research problem that you are not sure how to measure. This does not mean you cannot develop a measurement procedure as the study progresses. While most of the developmental work will be done during your study, it is imperative that you are reasonably clear about the measurement of these concepts at this stage.

- **Level of expertise** – Make sure you have an adequate level of expertise for the task you are proposing. Allow for the fact that you will learn during the study and may receive help from your research supervisor and others, but remember that you need to do most of the work yourself.
- **Relevance** – Select a topic that is of relevance to you as a professional. Ensure that your study adds to the existing body of knowledge, bridges current gaps or is useful in policy formulation. This will help you to sustain interest in the study.
- **Availability of data** – If your topic entails collection of information from secondary sources (office records, client records, census or other already-published reports, etc.) make sure that this data is available and in the format you want before finalising your topic.
- **Ethical issues** – Another important consideration in formulating a research problem is the ethical issues involved. In the course of conducting a research study, the study population may be adversely affected by some of the questions (directly or indirectly); deprived of an intervention; expected to share sensitive and private information; or expected to be simply experimental ‘guinea pigs’. How ethical issues can affect the study population and how ethical problems can be overcome should be thoroughly examined at the problem-formulation stage.

The Formulation of Research Objectives

There are three principle components in the formulation of a problem.

- The originating questions (what one wants to know?)
- The rational- theoretical or practical (why one wants to have the questions answered?)
- The specifying questions (possible answers to the originating questions in term of that satisfy the rationale.)

Necessary Conditions for Formulating a Research Problem

- **Systematic Immersion in the Subject matter through first hand observation**
- The researcher must immerse him/her self in the subject matter area with which he/she wishes to pose specific problem. This exercise helps a great deal in suggesting to the researcher the specific questions that may be posed for the study to answer. This process is known as pilot survey, preliminary survey or exploratory study.
- **Study of Relevant Literature on the Subject.**
- This would help the researcher to know if there are certain gaps in the theories (his/her research will then be to bridge this gap) or whether the prevailing theories applicable to the problem are in consistent with theoretical expectations and so on. This is also an aspect of exploration.
- **Discussions with persons having rich practical experience in the field of study.**
- This is often known as an experience survey, which again is an exercise at exploration. These people help in sharpening the focus of attention on specific aspects within the field.

Sources of Research Problem

- The research problem may be selected from the following sources:
- **Theory of one's own interest**

A research may select a problem for investigation from a given theory in which he has considerable interest. In such situations the researcher must have thorough knowledge of that theory and should be sufficiently inquisitive to explore some unexplained aspects or assumptions of that theory.

- **Daily problems**

Research problem can also be selected on the basis of daily experience of a researcher. Everyday problems constantly present something new and worthy of investigation and it depends on the worthy of investigation and it depends on the sharpness of the researcher intellect to knit his daily experiences in to a research problem.

- **Technological changes**

Technological changes in a fast changing society are constantly brought forth new problems and new opportunities for research. What is the impact of a changed technology on the existing socio economic set up, always interests the researcher and tempts him to under take such studies as are revealing regarding the impact of new technology on the existing system.

- **Un explored areas**

Research problems can be both abstract and of applied interest. These may also be selected from those areas which have not been explored so far. Such area may be theoretical or empirical in nature.

- **Discussions with other people**

Some times the researcher while discussing the interest with some other people may come across a problem that can be researched by the investigator. The problem may relate to any source as discussed above. In the same way reading assignments in text books, special assignments, research reports and term papers may also suggest some additional areas of needed research. Many research articles suggest some additional areas of needed research. Many research articles suggest problem for further investigation that may prove fruitful.

Criteria of a Good Research Problem

- Factors to be taken in to account in the choice of research problem are both external and personal. External criteria involve such issues as newness and significance for the area, availability of data and method and administrative and institutional cooperation personal criteria include such consideration as interest, training, cost and time. The following are move detailed list of criteria for the choice of research problem.

- **Originality**

It should be sufficiently so that it does not involve objectionable duplication. Ignorance of prior studies may lead a student to spend time a problem already investigated. The study should also employ the most recent data. Although originality is an important consideration, there is also a constant need for verification of the findings of the previous investigations, using newer and better devices and procedures. There is also a need for the testing of former findings under changed conditions.

- **Interesting**

The problem should be interesting for the investigator him self. If he is not interested in to, he will be able to face and overcome the obstacles which come at every step in research. His interest should be purely intellectual and should not be there only for a reward, material benefit, advancement in position, increased authority, etc.

- **Importance**

If it is not worth while, if adds to neither knowledge nor lead to any improvements in the current practices, it would be in vain set up as a discipline and to previous research findings in any way.

- **Immediate Application**

The investigator should ask him self question, will my research help in solving an urgent problem

Common Errors in Formulating Research Problem

- To choose the broad area of study instead of specific problem makes no justification .
- Narrowing or Localizing a Topic
- The problem should not be narrowed to such an extent that it becomes too small and insignificant from research point of view.