6. Research Problem

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Abstract:

A crucial and rewarding part of the research process is defining and solving a research problem, which calls for in-depth knowledge of the subject, awareness of current knowledge and the capacity to pose original questions. The clarity and applicability of a study's research problem are critical to its success and impact.

The complexity of creating research problems is explored in this article, which also emphasizes how crucial they are to the research process. In scientific research, a specific procedure results in the formation of research problems.

Starting with the definition of a research topic, this procedure develops into a particular research problem or hypothesis. to describe the various forms of research approaches, the criteria for conducting research, and what research is and is not. To present a few points of the argument concerning the nature of knowledge and the importance of the scientific method. to explain what a researchable topic is and to introduce the idea that lies at the core of any research project: the research problem. We will talk about it in this paper problem of research

Keywords: Research Problem, Hypothesis, Objective, Problem Statement, Descriptive, Explanatory, Evaluative Problems, Research Questions, Research Design

6.1 Introduction:

The main declaration of a knowledge gap or a basic difficulty in an area that serves as the basis for research is known as a research problem definition. On the other hand, the problem is solved by the results of a research study. An assertion that tackles a knowledge gap, difficulty, or contradiction in a certain topic is known as a research problem. Researchers utilize research problems to determine and specify the purpose of their investigation and analysis.

If you're interested in making a contribution to scientific or social change or adding to the body of knowledge on an existing issue, you might undertake research based on a problem. A research problem may also aid in defining important terms and concepts, broad inquiries, and study-related variables.

In order to uncover answers or solutions, a research challenge directs the choice of tactics and methodologies, data collecting, and result interpretation. The production of insightful ideas and contributions to the larger intellectual conversation is determined by a clearly defined problem. [1]
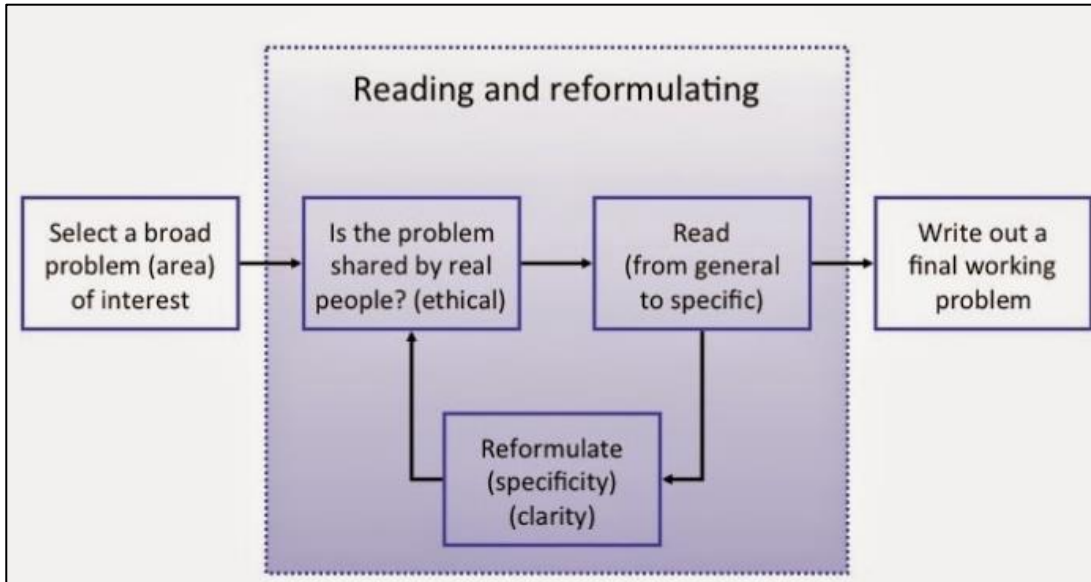
Figure 6.1: Defining a Research problem

To formulate a problem statement for research:

- Determine your general area of interest: To begin, determine the general field of study that piques your curiosity.
- Describe the problem in detail: Reduce the broad topic of focus to a single issue or concern.
- Describe the problem's importance: Give background information on the issue by outlining the significance of the research and the knowledge or understanding gap it addresses.
- Give a brief and clear statement: Make sure to utilize language that your target audience can understand when you succinctly and clearly state the issue.
- A neutral, objective tone should be used while writing the problem statement; subjective terminology and personal prejudice should be avoided. [2]

6.1.1 Characteristics of a Research Problem:

Formulating a research inquiry requires an understanding of the features of a research problem; consider the following five essential criteria:

- **Novel**: An excellent research problem adds something new to the body of knowledge by presenting a novel viewpoint.
- **Important:** An issue should be important if it has the potential to influence theory, practice, policy or our comprehension of a specific occurrence.
- **Feasible:** Developing hypotheses and designing research procedures are made possible by a realistic research challenge. Given the time, finances, and talent at hand, a feasible research problem is one that can be realistically investigated. It should be measurable in terms of its variables and results, and neither too wide nor too narrow to investigate

successfully. These restrictions could be brought on by limitations in the problem's complexity, technique, or resources.

- **Clear and specific:** A well-defined research problem is precise, easy to understand, and devoid of any room for ambiguity. Making ensuring the problem is specific guarantees that it is not ambiguous, that it is focused, and that it tackles a specific facet of the larger subject.
- **Rooted in evidence:** A good research problem leans on reliable proof and data, while ignoring unreliable data. It must also take ethical standards into account, protecting the rights and welfare of any participants in the study. [3]

Research Problem Statement:

The problem a researcher wants to study is succinctly and precisely described in a research problem statement. It establishes the topic of the study and provides a structure for formulating research questions or hypotheses. The problem statement usually starts with a general topic or area of study before focusing on a particular issue or research question. What knowledge or understanding gaps exist, the significance of the research, and any possible ramifications or applications should all be covered. A strong research statement keeps the researcher focused and leads the study project's growth. It also supports other researchers in appreciating the scope and impact of the research, as well as identifying prospective topics for collaboration or additional exploration. [4]

6.2 Components of a research problem:

The components of a research problem are as follows:

Figure 6.2: Component of Research Problem (Source: www.questionpro.com)

- **Research consumer:** A group of people, or several groups of people, must struggle or encounter an issue. The researchers might be among those that are dealing with the issue. The research consumers are all the other people who deal with the issue but are left out of the study.
- **Research-consumer's objective:** The study consumer must encounter an issue or require an issue to be resolved. There cannot be a foundation for research if there is no problem.
- **Alternative means to meet the objective:** When dealing with a marketing research dilemma, always have a "Plan B." It implies that in order to achieve the goal of the study, the researcher needs to have a minimum of two options. The researcher cannot have an issue if there is no other option or way to accomplish the study goal.
- **Doubts in the selection of alternatives:** Part of the issue is that there are other ways to achieve the goal. Both methods should be such that the researcher is unsure of which is the superior strategy. This really increases the research's credibility.
- **There must be more than one environ-ment:** It is essential that the issue is present in multiple environments. It is possible for the issue to be lessened by a change in environmental conditions. In environment "A," a researcher might have doubts regarding the most effective methods, while in environment "B," they might not have as many. [5]
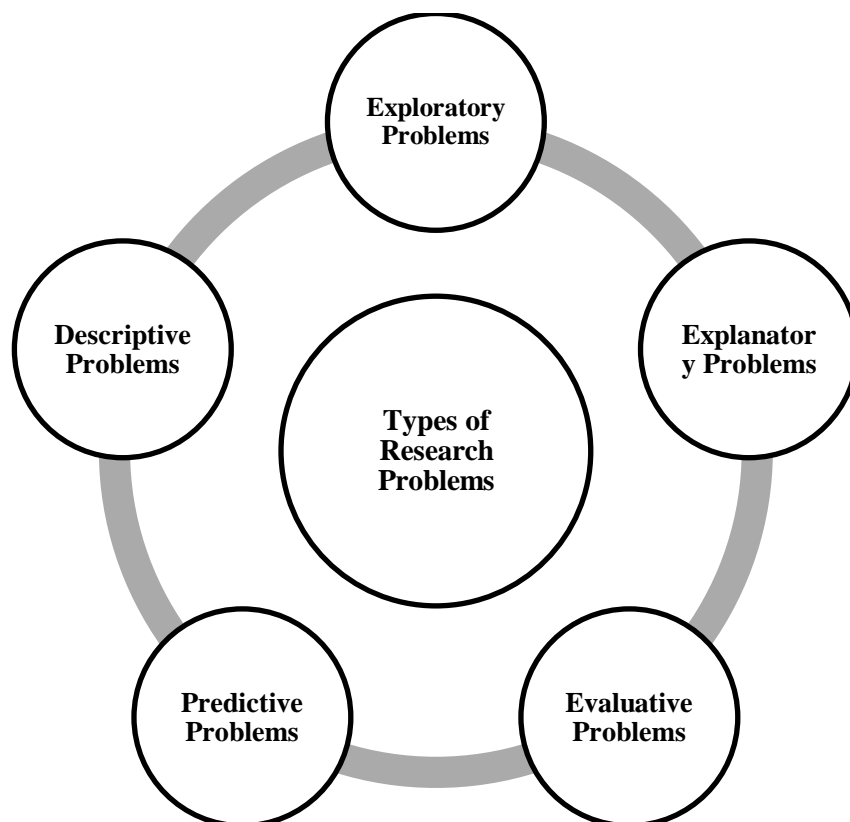
6.3 Types of Research Problem:

Figure 6.3: Types of Research Problem

1. Descriptive Problems: These concerns center on characterizing or documenting a particular event, incident, or situation. A researcher might examine a community's age, gender, income and educational attainment for example.
2. Exploratory Problems: These problems typically aim to generate new theories or ideas by delving extensively into a particular topic or situation. For example, a researcher may investigate the factors influencing the degree of employee satisfaction among employees in a specific industry.
3. Explanatory Problems: These problems typically entail putting theories or hypotheses to the test in order to determine the cause of a particular event or phenomena. To find out if exercise has a direct effect on mental health, a researcher could look into the relationship between exercise and mental health. [6]
4. Predictive Problems: These problems necessitate estimating or forecasting probable events or trends. A researcher might, for example, look at the factors that could lead to success in a particular field or industry.
5. Evaluative Problems: These problems include figuring out how effective a particular program, intervention, or tactic is. For example, a researcher may evaluate how a new teaching strategy affects student learning outcomes.

Sources of Problems for Investigation:

Finding a problem to study can be difficult, not because there aren't many issues to look into, but rather because the goal is to create a problem statement that is original, researchable, and socially important without just repeating what has already been done. Take into consideration these three general sources of inspiration to help you choose a problem to base a research project on:

- **Deductions from Theory:** This has to do with inferences drawn from social philosophy or generalizations that the researcher is familiar with from everyday social life. Research is then done to match these inferences from human behavior inside an empirical framework. A research problem or hypothesis that outlines the anticipated results in specific empirical scenarios might be developed from a theory. "What relationship between variables will be observed if theory aptly summarizes the state of affairs?" is the study question. After that, a methodical inquiry can be planned and executed to determine whether empirical evidence supports or contradicts the hypothesis and consequently the theory.
- **Interdisciplinary Perspectives:** Academic movements and scholarship that originate in fields other than your core area of study can help you identify a problem that serves as the foundation for a research investigation. Examining research from related fields should be part of any assessment of relevant literature since it might lead to new areas of inquiry and analysis. A more thorough grasp of a particularly complicated issue can be built through an interdisciplinary approach to research project selection than any one discipline could supply.
- **Interviewing Practitioners:** Research issues on certain subjects can be identified through formal or casual conversations with practitioners who offer guidance on new avenues for future study and how to make research findings more applicable to practice. Conversations with subject-matter specialists, such educators, social workers, medical professionals, etc., provide an opportunity to pinpoint real-world, practical issues that could go unnoticed or understudied in academic circles. This method offers some useful information as well, which could be useful while planning and carrying out your study.

- **Personal Experience:** Problems that are worth looking at can arise from your daily experiences. Consider your own experiences and/or annoyances with a problem that affects your neighborhood, community, or society as a whole. One can derive this, for instance, by consciously seeing specific interactions for which there is no obvious explanation or by observing an incident that seems abnormal or damaging to a person or group.

- **Relevant Literature:** A comprehensive and in-depth analysis of relevant research related to your general area of interest can frequently be used to determine the choice of research problem. This could highlight any knowledge gaps we still have on a subject. Research may be done to: 1) close these knowledge gaps; 2) assess whether the approaches used in previous studies can be modified to address other issues or 3) ascertain whether a comparable study could be carried out in a different field of study or with a different study sample [i.e., different populations]. Additionally, writers usually provide implications for future research at the end of their findings, which can also be a useful source of issues to look into. [7]

6.4 Important Features of Research Problem Statement:

1. Clarity: The problem statement ought to be understandable and unambiguous. Write it such that both subject-matter specialists and non-experts may understand it.

2. Specificity: The problem or issue that the research study seeks to answer should be precisely and concisely stated in the statement. It should be both sufficiently wide to be interesting to other professionals in the subject and sufficiently narrow to be managed.

3. Significance: The problem's significance and the knowledge or understanding gap it fills should be explained in the statement. It should serve to justify the significance of the research project and provide it perspective.

4. Relevance: The statement should address a topic that researchers are currently concerned about and be pertinent to the subject of study.

5. Research questions: In order to address the problem or issue, the statement should contain a list of research questions that the project seeks to answer.

6. Research objectives: A list of precise and quantifiable goals that the research study seeks to accomplish should be included in the statement.

7. Scope: The precise demographic, environment, or context that the study endeavor will concentrate on should be specified in the statement.

8. Theoretical framework: An outline of the theoretical ideas and tenets that guide the research project should be included in the statement.

9. Research design: An outline of the study methodology should be included in the statement. To answer the study questions and objectives this will be helpful in gathering and analyzing data. [8-9]

Formulation of Research Problem:

Choosing an appropriate problem from the researcher's chosen field is the first stage in the research process. There are a number of issues in every sector or area of education that may be related to action, application, or pure research. One of the hardest things for a researcher, especially a novice is to choose and formulate a relevant problem. A researcher can find a relevant research problem or cultivate a feeling of problem awareness from a variety of sources. [10]

The features of a good research problem are its:

i) significance,

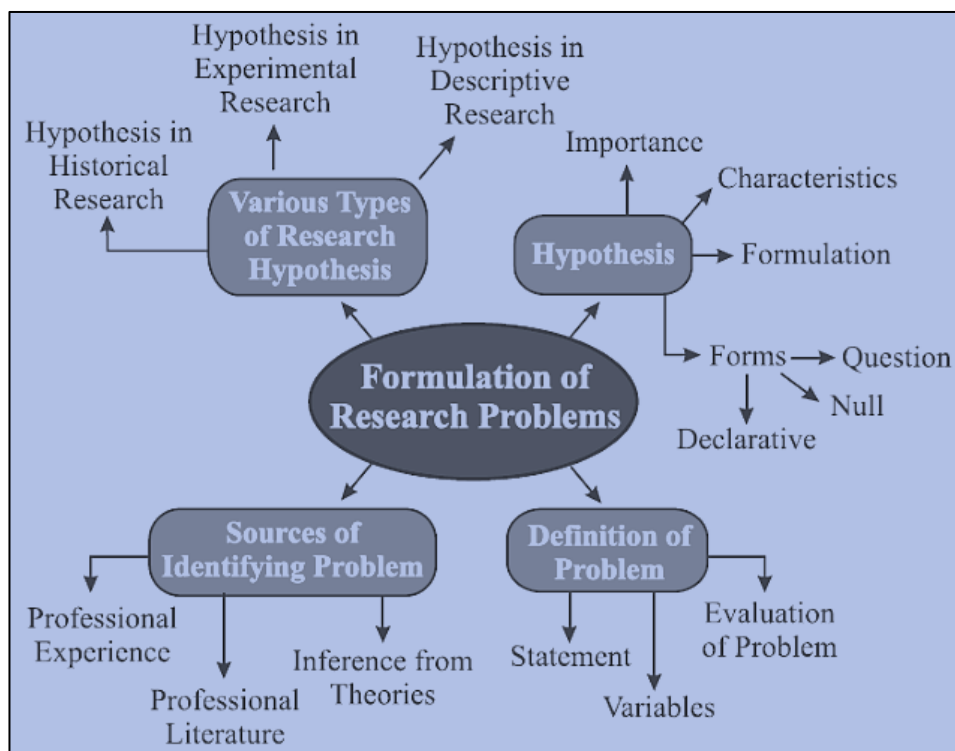ii) originality, and

iii) feasibility.

Figure 6.4: Formulation of Research Problem [11]

6.5 Conclusion:

The process of defining a research problem is a process of improvement rather than a single step. Like a hazy image, our initial understanding is broad. The picture becomes clearer when we examine current knowledge, think about the possible effects, and evaluate workable research techniques. A clear, targeted question replaces the ambiguities.

This inquiry considers the available data and resources in addition to our research interests. The end result is not only understandable and solvable, but it also has significance; it opens the door to the development of solid theories and, eventually, the resolution of the issue at hand. Therefore, defining a research problem is more about carefully guiding a clear path through the fog than it is about nailing a target on the first try. In order to guarantee that the research is targeted, relevant, and makes a substantial contribution to the field the article also addresses efficient methods for expressing and evaluating research concerns. This strategy is essential for researchers who want to create meaningful and impactful research.

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