

Research Problem: Definition (Plus 6 Steps To Formulate One)

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Creating a research problem is an important step in the research process and can help outline the process of your study. There are several types of research problems to choose from, and understanding how they differ may help you decide which approach is best for you.

In this article, we discuss what a research problem, the different types of research problems, how to formulate one and why research problems are important.

Key takeaways:

- A research problem introduces the reader to the study topic and the significance of the research.
- It places the research topic into a specific context to help define what researchers plan to investigate.
- It provides a framework for reporting research results that will highlight the information discovered.

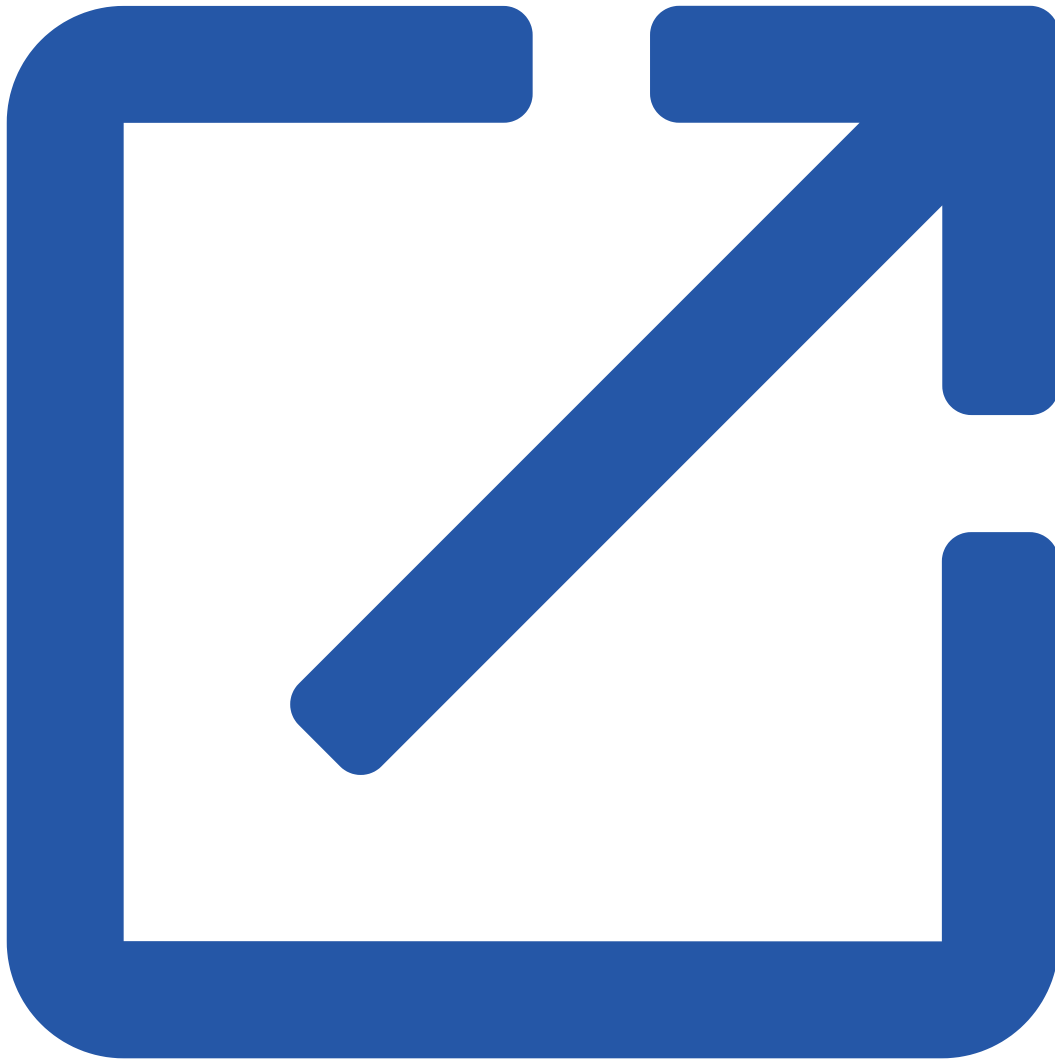
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What is a research problem?

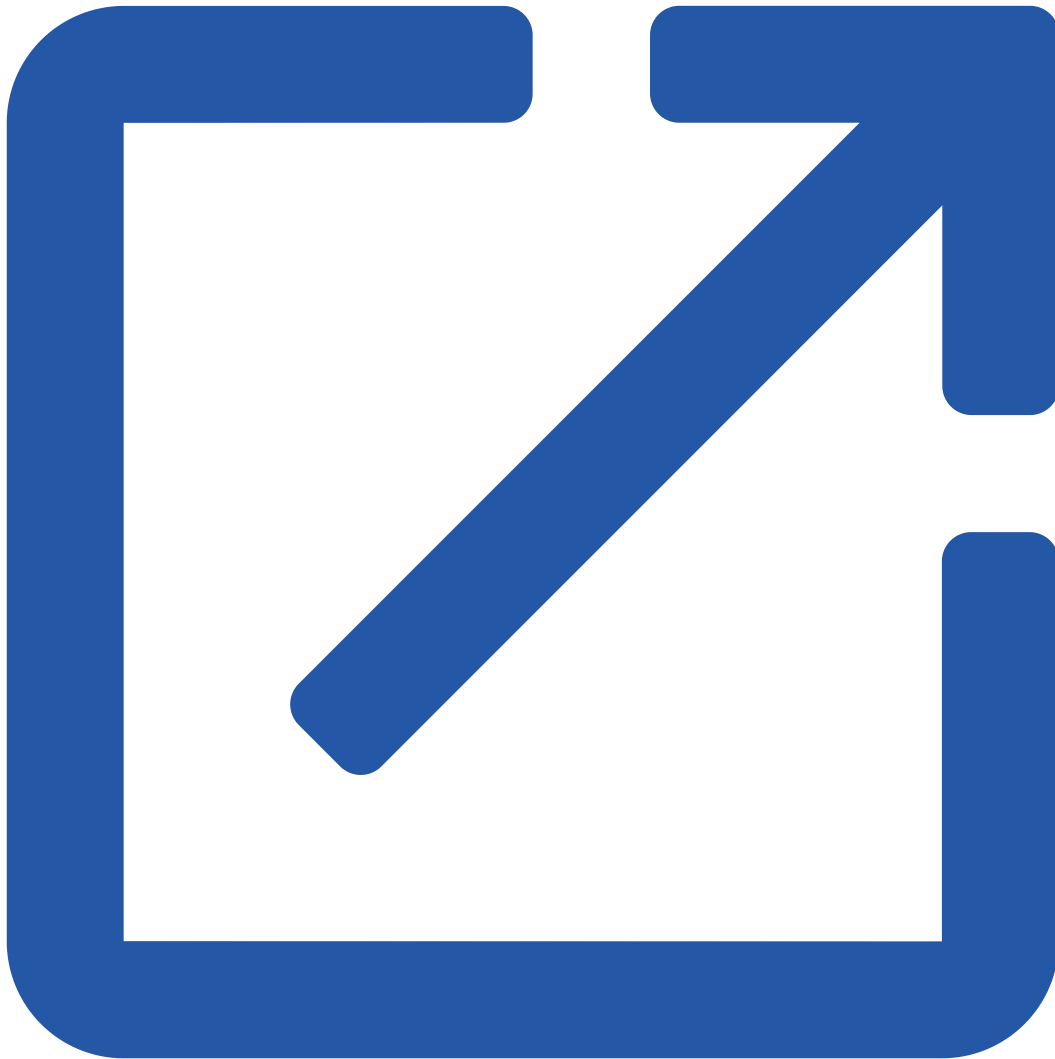
A research problem is a statement that addresses a gap in knowledge, challenge or contradiction in your field. Scientists use research problems to identify and define the aim of their study and analysis. You may decide to conduct research based on a problem if you're interested in contributing to social or scientific change or adding additional knowledge to an existing topic. A research problem may also help identify key concepts and terms, overarching questions and variables.



Characteristics of a research problem

Research problems have various characteristics that are important during the experimental process. Understanding these aspects of a research problem can help as you identify and create your own. Some characteristics include:

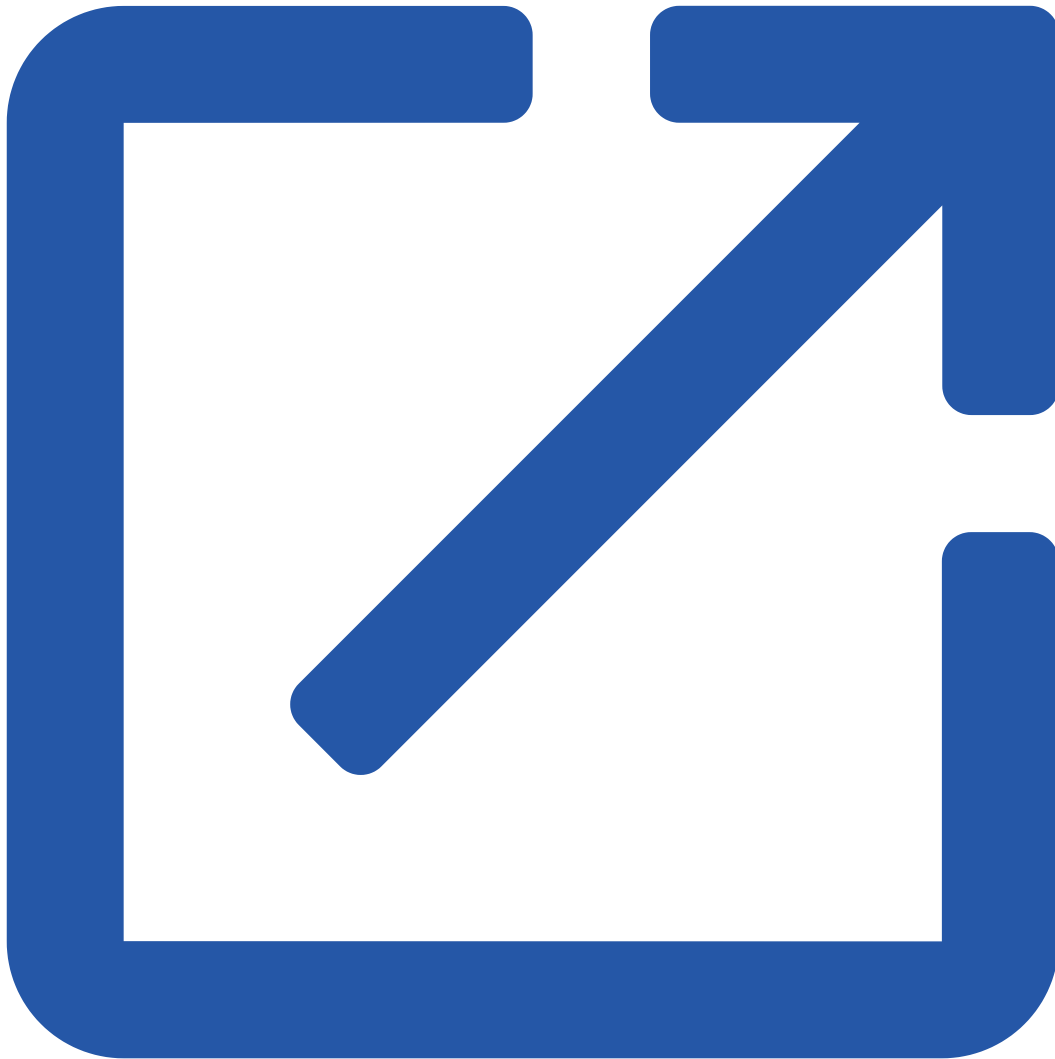
- Reflecting on issues or required knowledge in a particular field
- Relying on evidence and data
- Being practical and manageable for the researchers involved in data collection and analysis



Types of research problems

Here are three kinds of research problems that can help you decide on the format to use:

1. Theoretical research problems



problems allow you to contribute to the overall information and knowledge in an area of study. These kinds of research problems are exploratory and provide basic meaning about the problem's nature or areas of informational gaps. Theoretical research problems can address contradictions between two or more perspectives or address an unresolved question. Researchers develop their hypotheses for these problems according to a particular theory, typically stemming from social philosophy.

2. Applied research problems



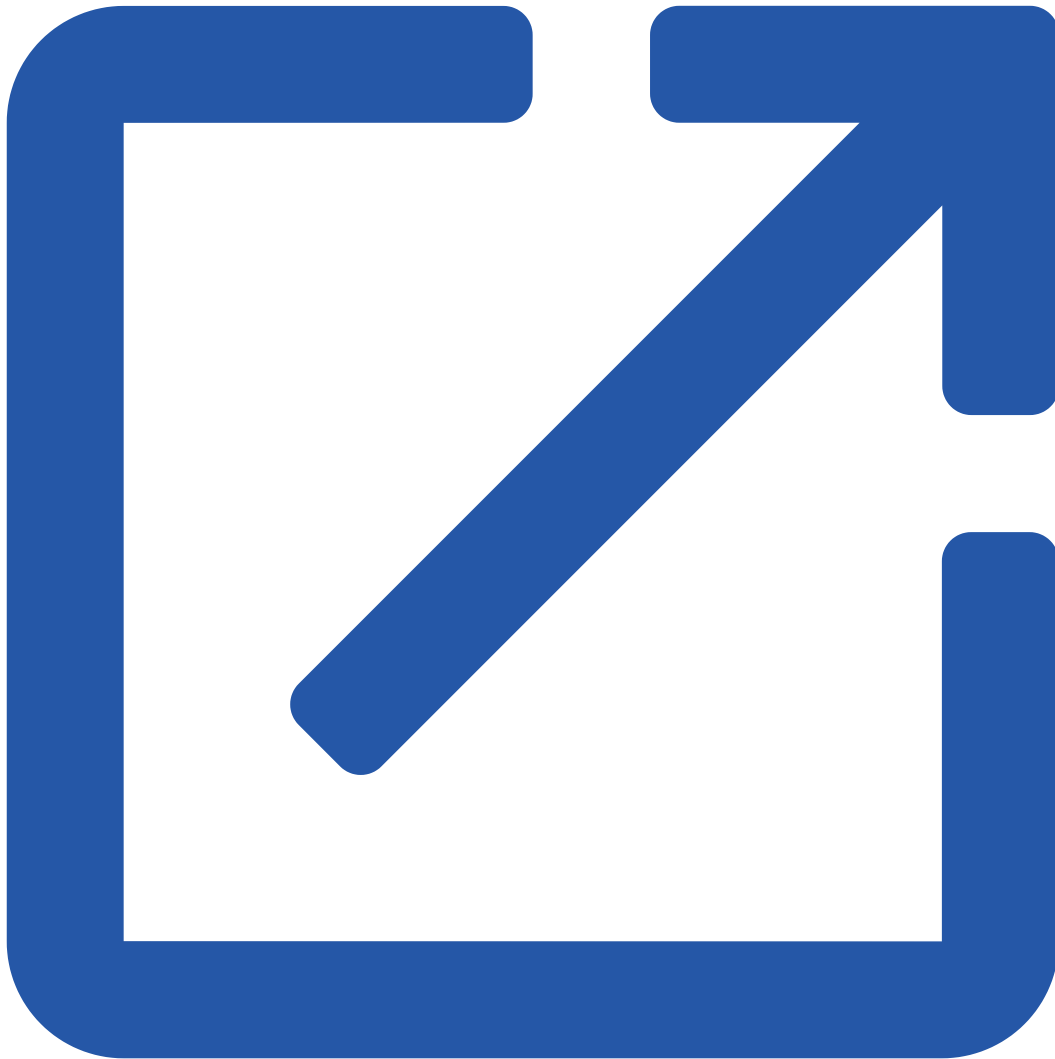
problems, or non-systematic problems, involve the practical use of theoretical knowledge. Meaning that scholars may use a particular theoretical framework to gain information. It also includes an exploratory hypothesis and tests to verify the accuracy of the hypothesis. Social scientists typically use applied research problems in studies where the objective is to provide practical and applicable solutions to help individuals and groups if they encounter challenges.

3. Action research problems

Similar to applied research problems, [action research](#)



problems also aim to provide solutions for problems but are more time-sensitive and immediate. Action research problems can also be part of a larger reflective ongoing process that combines research, analysis and action. Researchers develop and implement a research strategy to create innovative solutions and discoveries as soon as possible. For example, an action research problem in education might include finding a solution for a district-wide problem impeding student success. This may include school staff members working together and using district-wide action research data to find a solution.



How to formulate a research problem

Consider following these steps when planning your own research problem:

1. Identify a general area of interest

As you determine an area of study, consider areas that are under-explored or present challenges within the field. Assess how you might address the area of concern and whether you can develop a research problem related to this issue. If your research is action-based or applied, consider reaching out to those who work in a relevant field to get feedback about problems to address, or follow up on research that others have already started. Consider these various aspects when choosing an area of interest:

- Contradictions between two or more theoretical perspectives
- Situations or natural relationships that are not well investigated
- Processes in an institution or organization that you and your research team could improve
- Areas of concern by individuals who work or are experts in a particular industry

Related: [How To Write a Methodology \(With Tips and FAQs\)](#)



2. Learn more about the problem

Consider learning more about the area of interest, such as its background and specifics. Ask yourself what you need to know about a particular topic before you begin your study. Assess who or what it might affect and how your research could address those relationships. Consider whether

other research groups have already tried to solve the problem you're interested in and how your approach might differ.

3. Review the context of the information

Reviewing the context of your research involves defining and testing the environmental variables in your project, which may help you create a clear and focused research problem. It may also help you note which variables are present in the research and how to account for the impact that they may have on it. By reviewing the context, you may easily estimate the amount of data your research is likely to deliver.

Related: [Data vs. Information: What's the Difference?](#)



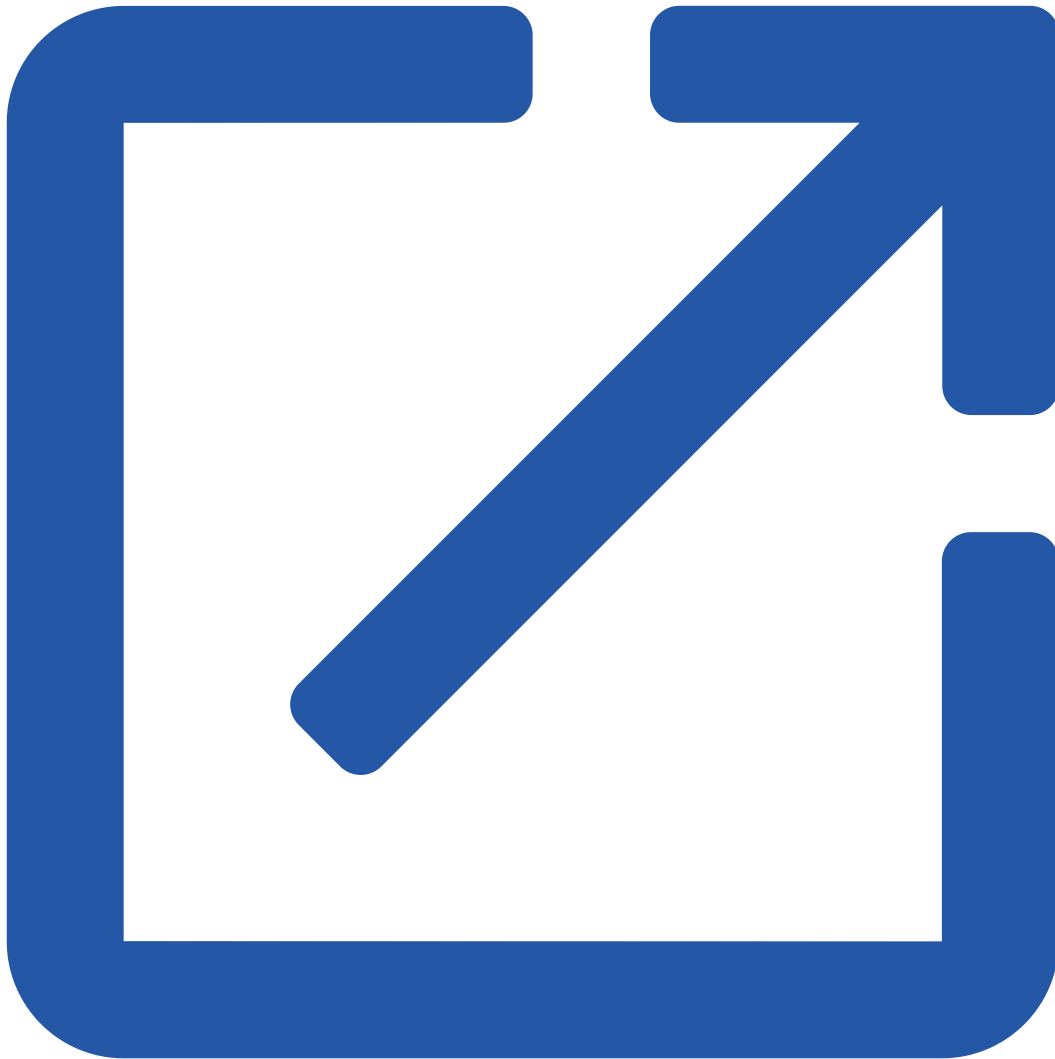
4. Determine relationships between variables

After identifying the variables involved in your research, you can learn how they're related to one another and how these relationships may contribute to your research problem. Consider generating as many potential perspectives and variable interactions as possible. Identifying the relationships between variables may be useful when deciding the degree to which you can control them in your study and how they might affect potential solutions to the problem you're addressing.

5. Select and include important variables

A clear and manageable research problem typically includes the variables that are the most relevant to the study. The research team summarizes how they plan to take these variables into consideration and how they might influence the results of the study. Selecting the most important variables can help the reader understand the trajectory of your research and the potential impact of the solution.

Read more: [10 Types of Variables in Research and Statistics](#)



6. Receive feedback and revise

Consider reaching out to mentors, teachers or industry experts for feedback on your research problem. They may present you with new information to consider or suggest you edit a particular aspect of your research design. Revising your research problem can be a valuable step in creating impactful and precise research. However, before asking for feedback, consider these aspects of your study: