

I-Cap Student Research Project

Tips To Define Your Research Question

Identify Your Area of Interest

Start by selecting a broad topic that genuinely interests you. Your enthusiasm for the subject will keep you motivated throughout the research process.

- **Example:** If you are interested in climate change, you might start with a broad topic like "climate change impacts."

Conduct Preliminary Research

Before narrowing down your question, do some initial reading to understand the existing literature, key debates, and gaps in knowledge within your area of interest.

- **Example:** After initial reading, you might find that there is limited research on the impact of climate change on urban heat islands.

Be Specific

A good research question should be specific and focused. Avoid broad or vague questions that are too difficult to address within the scope of an undergraduate project.

- **Example:** Narrow your question to "How does climate change affect the frequency and intensity of urban heat islands in New York City?"

Ensure Feasibility

Consider the resources available to you, including time, access to data, and any necessary equipment. Make sure your question can be realistically answered within these constraints.

- **Example:** Ensure you have access to temperature data for New York City and the tools necessary to analyze it.

Define Key Terms

Clarify any ambiguous terms or concepts in your question to ensure that it is clear and understandable. This will also help you stay focused during your research.

- **Example:** Clearly define what you mean by "urban heat islands" and "intensity."

Formulate Open-Ended Questions

Aim for open-ended questions that promote exploration and discussion rather than yes/no answers. This encourages a more comprehensive analysis.

- **Example:** Instead of asking "Do urban heat islands exist in New York City?", ask "What are the contributing factors to the formation of urban heat islands in New York City?"

Align with Research Objectives

Make sure your question aligns with your research objectives and goals. It should guide your study and help you achieve specific outcomes.

- **Example:** If your objective is to explore mitigation strategies, your question might be "What are effective mitigation strategies for reducing urban heat islands in New York City?"

Seek Feedback

Discuss your research question with peers and your supervisor. Their input can help refine your question and ensure it is academically rigorous.

- **Example:** Present your question to your professor and peers for feedback.

Consider the Scope:

Ensure your question is appropriately scoped for an undergraduate project. It should be challenging but not too complex or extensive.

- **Example:** Ensure your question is not too broad, such as "How does climate change affect the entire United States?"

Reflect on the 'So What?' Factor

Your research question should address a gap in knowledge or have practical significance. Ask yourself why this question matters and what contribution your research will make to the field.

- **Example:** Your question should address why it's important to study urban heat islands in New York City.