

Crafting Effective Research Questions

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WHAT'S COVERED

In this lesson, you will discover how to craft effective research questions by specifying problems, strengthening your problem solving skill. Specifically, this lesson will cover:

1. [Crafting Effective Research Questions](#)
2. [Influence of a Research Question](#)
3. [Developing Your Research Question](#)

1. Crafting Effective Research Questions

Most of us look for information to answer questions every day, and we often act on the answers to those questions. Are research questions any different from most of the questions for which we seek information? Yes.



KEY CONCEPT

Sometimes students inexperienced at working with research questions confuse them with the search statements they will type into the search box of a search engine or database when looking for sources for their project. Or, they confuse research questions with the thesis statement they will write when they report their research. The next activity will help you sort things out.

See how they're different by looking over the examples of both kinds below and answering questions about them in the next activity.

Regular Question	Research Question
What is homesteading?	Why has there been an increase in homesteading in the last ten years?
Is there a teacher shortage?	How are state and federal laws affecting the number of teachers entering and leaving the profession?
Is recycling worth it?	How can beginning a recycling program benefit our community?
What is a community garden?	What are the economic and health benefits to beginning a community garden?

Do I need a cover letter?	What factors and skills are most important to hiring managers and human resources?
Should I support a local business?	What are the economic effects of local businesses on a community?
What do bees do?	What are the effects of the decreased population of bees on the environment?



BIG IDEA

By clearly identifying the specific problem in which you are looking to solve, you improve your chances of properly solving the problem.

2. Influence of a Research Question

Whether you're developing research questions for your personal life, your work for an employer, or for academic purposes, the process always forces you to figure out exactly:

- What you're interested in finding out.
- What it's feasible for you to find out (given your time, money, and access to information sources).
- How you can find it out, including what research methods will be necessary and what information sources will be relevant.
- What kind of claims you'll be able to make or conclusions you'll be able to draw about what you found out.

For academic purposes, you may have to develop research questions to carry out both large and small assignments. A smaller assignment may be to do research for a class discussion or to, say, write a blog post for a class; larger assignments may have you conduct research and then report it in a lab report, poster, term paper, or article.



BIG IDEA

For large projects, the research question(s) you develop will define or at least heavily influence:

- Your topic, in that research questions effectively narrow the topic you've first chosen or been assigned by your instructor.
- Which information sources are relevant to your project.
- Which research methods are appropriate.
- What claims you can make or conclusions you can come to as a result of your research, including what thesis statement you should write for a term paper or what results section you should write about the data you collected in your own science or social science study.

Consider the following components and the influence of a research question within a proposal:

Component	Description of Influence
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Thesis	Within an essay, poster, or term paper, the <i>thesis</i> is the researcher's answer to the research question(s). So as you develop research questions, you are effectively specifying what any thesis in your project will be about. While perhaps many research questions could have come from your original topic, your question states exactly which one(s) your thesis will be answering. For example, a topic that starts out as "animal welfare" could eventually lead to a research question that is "are the benefits of animal testing worth the treatment of the animals?" In turn, the researcher's thesis will answer that particular research question instead of the numerous other questions that could have come from the topic.
Information Sources	You can't tell whether an information source is relevant to your research until you know exactly what you're trying to find out. Since it's the research questions that define that, it's they that divide all <i>information sources</i> into two groups: those that are relevant to your research and those that are not—all based on whether each source can help you find out what you want to find out and/or report the answer.
Research Methods	Your research question(s) will help you figure out what <i>research methods</i> you should use because the questions reflect what your research is intended to do. For instance, if your research question relates to describing a group, survey methods may work well. But surveys can't answer cause-and-effect questions.
Claims or Conclusions	The research questions you write will reflect whether your research is intended to describe a group or situation, to explain or predict outcomes, or to demonstrate a cause-and-effect relationship(s) among variables. It's those intentions and how well you carry out the study, including whether you used methods appropriate to the intentions, that will determine what <i>claims or conclusions</i> you can make as a result of your research.



Problem Solving: Why Employers Care

No matter which career field you pursue, you will need to solve problems. You may need to find why some customers are dissatisfied or determine why sales have decreased. By using the research methods from this lesson, you can isolate the specific problem and work toward potential solutions. This makes you a valuable asset to your employer.

3. Developing Your Research Question

Because of all their influence, you might worry that research questions are very difficult to develop. Sometimes it can seem that way. But we'll help you get the hang of it and, luckily, none of us has to come up with perfect ones right off. It's more like doing a rough draft and then improving it. That's why we talk about developing research questions instead of just writing them.

The steps for developing a research question, listed below, can help you organize your thoughts.



STEP BY STEP

1. Pick a topic (or consider the one assigned to you).
2. Write a narrower/smaller topic that is related to the first.
3. List some potential questions that could logically be asked in relation to the narrow topic.
4. Pick the question that you are most interested in.
5. Change that question you're interested in so that it is more focused.

Once you know the steps and their order, only three skills are involved in developing a research question:

- Imagining narrower topics about a larger one,
- Thinking of questions that stem from a narrow topic, and
- Focusing questions to eliminate their vagueness.

Here is a visualization of the process:



HINT

Every time you use these skills, it's important to evaluate what you have produced—that's just part of the process of turning rough drafts into more finished products.

Maybe you have a topic in mind but aren't sure how to form a research question around it. The trick is to think of a question related to your topic, but not answerable with a quick search. Also, try to be specific so that your research question can be fully answered in the final product for your research assignment.



TRY IT

For each of the narrow topics below, think of a research question that is logically related to that topic. (Remember that good research questions often, but not always, start with “Why” or “How” because questions that begin that way usually require more analysis.)

Topics:

- U.S. investors' attitudes about renewable energy
- The increase in student debt
- The character of Romeo from *Romeo and Juliet*
- Climate change
- Bitcoins

After you think of each research question, evaluate it by asking whether it is:

- Logically related to the topic
- In question form
- Not answerable with a quick Google search
- Specific, not vague

Sometimes the first draft of a research question is still too broad, which can make your search for sources more challenging. Refining your question to remove vagueness or to target a specific aspect of the topic can help.



TRY IT

The first draft research questions below are not focused enough.

First Drafts of Research Questions:

1. What is wrong with schools?
2. How can we lessen pollution?
3. How can we improve farms?
4. Where is the best place to live?
5. What are the effects of standardized testing?

Read them and identify at least one area of vagueness in each. Check your vagueness with what we identified. It's great if you found more than we did because that can lead to research questions of greater specificity. See below for our answers.

Question 1: What is wrong with schools?



Vagueness: What schools do we mean, colleges, public schools, private schools? What do we mean by “wrong?”

Question 2: How can we lessen pollution?

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Vagueness: There are many types of pollution: air, water, etc. Which one are we discussing? Who do we mean by “we?” All people? People in this locality?

Question 3: How can we improve farms?

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Vagueness: What type of farms do we mean? What do we mean by improve? Do we want to decrease costs? Increase productivity? Make them more environmentally friendly?

Question 4: Where is the best place to live?

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Vagueness: Do we mean in the world or within a state? What are some of the parameters? Cost of living? Good schools?

Question 5: What are the effects of standardized testing?

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Vagueness: What are the effects of standardized tests on what? Schools? Teachers? Students? Which tests do we mean?



SUMMARY

In this lesson, you learned how to **craft effective research questions** by specifying problems, strengthening your problem solving skill. The **influence of a research question** extends to every part of the research and writing process, including your sources, your research methods, and your thesis and conclusions. Because of this influence, it is important to **develop a research question** that is focused, specific, and fully answerable.

Best of luck in your learning!

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