forming research questions

Research starts with curiosity. In order to turn your curiosity into a research question, it must be channeled into a search for a practical answer. This handout suggests strategies to form a proper research question and includes a four-step method to determine whether or not the question you’ve formed is one worth asking.

Research Question vs. Thesis

Some beginning writers start with a claim—a thesis—and then try to find sources to back themselves up. In this process, they often ignore contradictory information. This isn’t really research.

Research is asking a question and finding sources that lead you to your answer—not the other way around. Instead, as you research, you’ll come up with what you think might be the answer to your question. This is your hypothesis. Once you research a bit more to modify and strengthen your hypothesis, it will elevate to become your thesis.

There are four steps that you can take to help you generate a research question that is worthwhile to ask and feasible to answer.

Step 1: Reflect and Observe

Reflecting and observing means reflecting on your own interests and observing your surroundings. You want your research question to be something you’re interested in—otherwise, you won’t want to go searching for an answer to it. To brainstorm topics you are interested in, look around your home, work, or community, and think about the problems in those places that you’d like to help solve.

However, your question doesn’t necessarily have to address a problem. Sometimes, it helps to just think about things that you’ve always wondered about or that have always made you ask, “Why?” Make a list of topics or questions that come to mind, even if you think they are too broad, too narrow, or too strange. You can then tweak these ideas using the following three steps.

Turning Research Topics into Questions

Often students find that their research topics are too broad. This means that while you can research the topic, you are simply gathering information about it, not really asking a question or making an argument. One way to overcome this obstacle is to look at relationships between ideas.

Broad Topic: smoking and the environment

Narrower Topic: What is the impact of smoking on the environment?
You can also ask questions about your topic, such as its history, function, or effect in a larger context. Asking “how” or “why” instead of “what” can help with this.

**Focused Topic:** How do the chemicals used in cigarette production that enter water supplies impact the environment?

In addition, as you research, think about if you agree or disagree with what you find in your sources, and use this assessment to help you build your research question. You can also try combining a couple of questions together to form a new one.

**Turning Problems into Questions**

Starting with a known problem can also give you a good research question. Problems can be **practical** (something is happening that we need to change because it is leading to a bad outcome) or they can be **conceptual** (there is something that we don’t understand that is causing a bad outcome, which makes it important that we try to understand the cause).

**Practical Problem:** How can we prevent the spread of the Zika virus?

If you are coming up with a conceptual question, it may helpful to think, “If we can answer this question, we can better understand __________.” If you can think of something to fill in that blank, you are probably asking a question worth answering.

**Conceptual Problem:** How does a mother’s contraction of the Zika virus during pregnancy impact the immune system of her newborn?

*Note:* For more information on generating research questions, please see our “Brainstorming: Invention” handout.

*Note:* For additional strategies for turning topics and problems into research questions, please see our “Writing Process” handout.

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**Step 2: Assess Your Knowledge**

After you choose one research question to pursue, you want to ask yourself, “What do I already know about this topic?” To tap into your current knowledge, you can brainstorm or free write about the topic, thinking about where and when you first learned about it.

You’ll also want to ask yourself, “What don’t I know about this topic?” By asking yourself this, you can figure out where you need to start researching and what information you need to start gathering. For example, if you are writing about cancer and don’t know anything about how it is diagnosed or treated, that is something you are going to have to address.

As you research, you’ll probably realize there are more things you don’t know or more things that you wish you did know. Keep track of these questions as they can often lead to new research topics or refinement of your current one.

Use the chart at the top of the the next page to help you determine the limits of your current knowledge on your subject.
### Known vs. Unknown Information

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<thead>
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<th>Known</th>
<th>Unknown</th>
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<tbody>
<tr>
<td><strong>Known</strong></td>
<td>Known Knowns: What do you know that you know?</td>
</tr>
<tr>
<td><strong>Unknown</strong></td>
<td>Known Unknowns: What do you know that you don’t know?</td>
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*Note: For more information on how to determine what you already know and what you need to know about your topic, please see our “Writing Process” handout.*

### Step 3: Adjust Your Variables

You need your question to be specific enough that you can feasibly begin to answer it but not too big for the time you have to research or for the length of your paper. However, you also don’t want your question to be so narrow that there isn’t anything out there to help you find an answer to it!

In order to achieve this balance, you can add to or change many variables in your research question:

- If you’re studying a disease or phenomenon, is there a subcategory that you can look at?
- If you’re studying a population, can you narrow it by gender, race, or age?
- Are you looking at this question locally, nationally, or globally?
- Are you looking at this question over the past 100 years or just the past 10 years?
- Can you define one part of your question more specifically?

Let’s look at an example: If you’re starting with the question “What are the social effects of cancer?”, you can adjust the variables to make this question more narrow:

**Type of cancer**: What are the social effects of leukemia?

**Population affected**: What are the social effects of leukemia on American teenagers?

**Definition of “social effects”**: What is the effect of leukemia on the social media use of American teenagers?

In contrast, your question may be too narrow, and you may find that there is not enough research on this topic. If that is the case, broaden your question. Instead of asking “What is the effect of leukemia on the social media use of American teenagers?”, you could ask, “What is the effect of cancer on the social media use of American teenagers?”

When you feel like you’ve hit the median of just enough information to be able to answer your question but not so much that it’s overwhelming, you’ve found an answerable question.

### Step 4: Assess Your Question’s Relevance

Now that you’ve got an interesting question that’s the right scope, you want to make sure that answering
it will actually matter. In other words, you want your research question to be able to answer the question, “So what?”

Does answering your research question help to solve a problem that currently exists? Does it help you achieve or change something? If it does, then it’s a question worth answering, not just one worth asking.

If you’re having trouble determining the relevance of your research question, try filling in these blanks: “I am asking ___________ because ___________.” or “I am asking ___________ in order to ___________.” If you can fill in those second blanks, your question is relevant to your issue.

References