

## Research Questions

A research question is a clear, concise, and open-ended question that centers your research for a paper, project, or literature review. It forms the foundation of a research-based assignment and helps guide the entire research process. A well-made research question is essential to define the scope and direction of your paper, guiding you in collecting relevant information for drawing conclusions later. As a researcher, you are not only summarizing a topic; you are attempting to find a gap in the literature where you can answer a researchable, narrow question.

### How to Create a Research Question

The best way to start making a research question is to find the topic you wish to research. A topic can easily fit into the sentence “I want to write a paper about...” However, a research question molds that topic into an open-ended question, which can lead you to find sources that help you answer that question.

Example Topic: Emperor Penguins and glacial melting

Example Research Question: How is glacial melting impacting Emperor Penguin populations?

Example Topic: Anxiety and social media

Example Research Question: How does TikTok affect anxiety/depression in young people?

Note that you are not arguing anything yet with the research question. It is just a format to make the topic more specific and easier for you to research. A poor example of a research question with this format would be to ask, “How is social media leading to an increase in anxiety/depression in young people?” which already assumes that social media increases anxiety/depression, leading to biased research ruling out sources that may argue the contrary.

### *Best Practices to Create a Good Research Question*

A good research question ought to be clear. It should provide enough specifics that one’s audience can easily understand it without needing additional explanation.

Example Unclear Research Question: How does the environment affect people?

This research question is unclear because it lacks specificity. The term “environment” is too broad and could refer to various environments we live in, such as physical, social, cultural, or natural. There is also ambiguity in the word “affect”; it is fairly vague. Lastly, to discuss how “environment” affects all “people” is much too broad—it’s not a researchable topic within the

scope of one paper. Without specifying these terms, the question lacks the necessary precision for focused research. To fix this, the author should attempt to narrow their topic.

Example Clear Research Question: How does prolonged exposure to air pollution in urban areas impact the respiratory health of adults aged 50 and above over a five-year period?

Additionally, a research question should be concise.

Example Wordy Research Question: What are the various factors (parental involvement, teacher-student relationships, school budget) that contribute to student performance in academic settings, and how do they interact with each other in shaping the overall academic success or failure of students in different educational institutions across diverse socioeconomic backgrounds and cultural contexts?

This research question is not concise for two main reasons. The first is that the question is overly complex, attempting to address multiple factors in student performance, including socioeconomic backgrounds, cultural contexts, and educational institutions. An overly complex research question will be a challenge, resulting in a paper that is too broad to execute. The second reason is that this question contains multiple sub-questions; a concise research question should ideally contain *one* central issue to maintain clarity. To fix this, the author may want to focus on one aspect of their research question instead of including all the details.

Example Concise Research Question: How does parental involvement impact the academic performance of high school students in urban public schools?

It is important to be both specific and concise to create a focused question that can be answered in a research project (to make it manageable in scope).

Finally, a research question should be open-ended and worthy of extended research/discussion.

Example Non-Open-Ended Research Question: Is Khan Academy beneficial in improving student test scores in mathematics?

This research question is framed with a binary nature, suggesting a “yes or no” answer; therefore, there is no room for the author to explore this topic. To fix this, the author may consider including the question words “how” or “why” in their research question, or they could expand their question to branch out into various factors to discuss or find measurable avenues such as time.

Example Open-Ended Research Question: How does student use of Khan Academy in mathematics improve students’ understanding of mathematical concepts over time?

Using the word “how” at the beginning of the question invites discussion and critical thinking. Questions that begin with “how” cannot be answered by a simple “yes or no” because it requires

the author to explore the concept. Overall, creating an open-ended question invites exploration and does not limit the research to a binary outcome. Researchers should avoid “yes or no” research questions and instead prioritize questions that ask “how?” or “why?” as they will lead to more discussion.

### **Activity 1: Creating Research Questions**

Below, you will see a list of research topics. Practice making research questions by re-forming the topic into a clear, concise, and open-ended question narrow enough to focus but broad enough to research.

1. Artificial intelligence in high school education
2. Mental health and social media usage
3. Workplace diversity and company performance

### **Activity 2: Fixing Research Questions**

Review the following research questions that need some work. Identify the problem (lack of clarity, concision, or open-endedness) and provide feedback on improving them.

4. Topic: Claude McKay’s poetry and the Harlem Renaissance
  - Working Research Question: Is Claude McKay’s poetry a reflection on how white patronage exploited Black artists in the Harlem Renaissance?
5. Topic: Sleep deprivation and cognitive function
  - Working Research Question: How does sleep deprivation affect cognitive function?
6. Topic: Climate change and the Global South
  - Working Research Question: What are the multifaceted effects of climate change on extreme weather events, rising sea levels, and warming temperatures on the relatively poorer countries of the world in the Global South; which countries in the world generate the most CO2 and how is that reflective on global inequality, and can we identify economically viable and sustainable preventative measures these countries can potentially implement to mitigate the adverse effects of climate-induced weather?

### **Answer Key for Activity 1**

The answers below are examples of what the research questions could look like, but they are not the only ways that you could transform these topics into questions. Answers will vary.

1. In what ways can artificial intelligence tools benefit the classroom through student engagement and learning outcomes in high school education?
2. What is the relationship between different social media apps (Instagram, TikTok, Snapchat) usage and the mental well-being of adolescents?
3. How does employee diversity in terms of gender, ethnicity, and age contribute to performance in a team-based corporate setting?

### **Answer Key for Activity 2**

4. Needs to be open-ended: How does Claude McKay's depiction of artists in the Harlem Renaissance in his poetry thematically illustrate white exploitation of Black culture?
  - Reformat the question to allow for there to be room for discussion, rather than a simple "yes or no" answer.
5. Needs to be clearer: What is the relationship between sleep duration and quality of academic performance in college students?
  - Find a way to fill the gap; it is already known that sleep deprivation affects cognitive performance, but what narrow, specific sub-topic can you focus on?
6. Needs to be more concise: How are rising global temperatures impacting the extreme weather events in the Global South, and what affordable prevention measures could these countries implement?
  - Cut down to focus your paper and research.

### **References**

Hays, Anne. "Research Questions from topic to question to keywords." *YouTube*, uploaded by

CSI Library Instruction, 18 August 2022, [www.youtube.com/watch?v=PPOr2VRIXR0](http://www.youtube.com/watch?v=PPOr2VRIXR0).

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[writingcenter.gmu.edu/writing-resources/research-based-writing](http://writingcenter.gmu.edu/writing-resources/research-based-writing).