# INSTRUCT TEACHING GUIDE
# 7. RESEARCH PLANNING

**If your students are beginning a research assignment, refer to:**

- Creating a Research Plan
- Framing a Problem
- Identifying Search Strategies

## DISCUSSION TOPICS

**Research Planning**

Information overload can be a major roadblock in the research process. This discussion will help students conceptualize a research pathway and brainstorm solutions to common research challenges.

Begin by asking students to consider a recent research project. What was the topic? How did they develop a research question and locate sources? Next, have the students form pairs to discuss their common research setbacks to share with the group. Based on student input, come up with a list of common challenges and ask students to brainstorm solutions.

**Search Strategies**

Most students are familiar with search engines such as Google, but it's important they move beyond using a single search tool. This discussion will help students identify familiar research tools and additional resources to use in their search process. Begin by asking students to describe how they access information for school, work, or entertainment. Next, have your students select a search tool they are familiar with, such as Google or an online encyclopedia, and discuss its strengths and weaknesses. Use the following prompts to encourage student analysis of their chosen search tool:

- How easy is it to find and share information using this tool?
- How quickly can you get relevant results?
- Are there certain types of information this tool locates better than others?
- Is there an advanced search option? Describe a situation in which you would use advanced search.

Use this discussion to segue into using academic search tools as an additional resource to those identified by your students. Encourage students to use multiple search tools based on their information need and the stage of the research process.

*This teaching guide can be used by Instruct customers who have selected the Critical Thinking content package.*

## ACTIVITIES

**Research Planning**

To prevent frustration or information overload, it's a good idea to use a research roadmap. Help students work through common sticking points by creating an if/then map to guide their research process. This activity can be completed on a whiteboard with the whole class, or students can complete it individually on paper.

First ask students to identify the key stages of research. For each stage, have students create a checklist of tasks they already should have completed (for example, before diving into background research, students should have reviewed their research assignment and identified key topics and subtopics). Provide additional research challenges (like encountering a contradictory argument) and ask students to come up with solutions using a flow chart.

**Framing a Problem**

If your students are having trouble formulating a research question for assignments, start with a short discussion using a timely or popular topic such as technology or entertainment (e.g. free tuition to four-year college proposals or the effects of smartphones on interpersonal relationships). Students should form small groups to discuss the following questions:

- What do you already know about the topic?
- What else would you like to know about the topic?
- Have any personal experiences influenced the way you interpret the topic?

Next, have each group come up with one open-ended question and one close-ended question related to their topic to share with the class.

**Keywords**

Locating the most relevant results relies on using the right combination of keywords. For this activity, divide students up into small groups. Assign each group a high level topic and a subtopic; for example: *artificial intelligence* and *self-driving cars*. Students then will brainstorm a list of keywords for both the topic and subtopic.

Using a database or Google Scholar, students will run a keyword search to locate at least 3 sources on their high-level topic and at least 2 sources on their subtopic to share with the class. Encourage students to revise their keyword lists based on their research findings (replacing *self-driving cars* with *autonomous vehicles*, for example). Students should be able to report on the accuracy of their initial keyword list and any changes made during the search process.

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