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# Student's Guide to Writing College Papers

4TH EDITION

**Kate L. Turabian**

REVISED BY GREGORY G. COLOMB,  
JOSEPH M. WILLIAMS, AND THE  
UNIVERSITY OF CHICAGO PRESS  
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Katherine. And at beginning and end still, Joan, whose patience and love flow more generously than I deserve.”

And to my own family, words cannot do justice to what they have meant to me. Robin and Kiki, Karen, and Lauren have put up with much and blessed me with more. And for more years than either of us wants to acknowledge, Sandra has been the center of it all.

Gregory G. Colomb

## Introduction: Why Research?

Who Does Research

Why Professionals Do Research

Why You Should Learn to Do Research Now

Our Promise to You

### Who Does Research

What comes to mind when you think of research? Those hours you spent collecting random information on some assigned topic for a high school “research paper”? Or maybe you picture a scientist in a lab coat, peering into a microscope? Perhaps a white-bearded professor silently taking notes in a hushed library? You might, however, have pictured Oprah, planning her next show or business venture. Or Fred Smith, founder of Federal Express, who developed the idea for his business in a class research paper. Or what about Sig Mejdal? He’s the chief researcher for baseball’s St. Louis Cardinals, whose manager, Tony La Russa, has had researchers on his staff for decades.

Research is everywhere in the professional world. If you know a lawyer, a doctor, a business executive, a marketer, an event planner, a construction manager, or any other professional, then you know someone whose job depends on research. In our aptly named “age of information” (or, too often, *misinformation*), more jobs than ever require you not only to find information, but to evaluate it, sort the good from the bad, and then report it clearly and accurately. In the age of the assembly line, workers had to learn one set of tasks that they performed the same way, over and over. These days the key to most jobs is not just how much you know, but how good you are at finding out what you don’t. In this new century—*your* century—the skills of research are essential for just about anyone who wants to succeed.

Did you also think of yourself as a researcher? The fact is you do research almost every day. You are a researcher whenever you dig up the information you need to accomplish a goal—from selecting the most popular chemistry teacher, to finding an affordable apartment that allows pets, to figuring out which laptop is best for gaming. Typically these searches are too quick to feel like a research “project,” but you are doing what good researchers always do: collecting information to solve a problem or answer a question.

When you thought of researchers, did you also think of your teachers? We college teachers teach, but we also do research. That research begins in our area of expertise, with what we know, but what gets us excited are the things we *don’t* know but wish that we did: *What’s the connection between morality and the biology of the brain? Will knowing grammar rules make you a better*

writer? Can we reduce global warming by removing the greenhouse gases already in the atmosphere? Did the prehuman Neanderthals die out naturally, or did our human ancestors kill them off? We teachers spend much of our working lives with research questions like those, either asking and answering our own or studying the questions and answers of our colleagues.

Why should the research experience of teachers matter to you? For one thing, it's good to know that we practice what we teach. More importantly, our lives of research color the kind of learning that we value most—and that we expect from you. New college students are often surprised to discover that just knowing the facts is not enough for most teachers. It's not enough in our own work: more than knowing things, what energizes us is our habit of seeking out new questions, the cast of mind that drives all research. And it's not enough in yours: more than checking that you know the facts, we want to see what you can *do* with the facts, what new questions, combinations, possibilities, or puzzles you discover—or invent. We value and reward good answers, but we reward good questions more.

When your teacher asks more from you than just rehashing the facts, she is looking for signs of a critical mind with a questioning bent. She's looking for a mind-set that is keen to find out not just what is already known but what no one knows and perhaps never even thought to ask. The two of us hope that our book can inspire most of you to try on that mind-set, at least for a while. It won't be a waste of time, even if the fit is not right. For even if you are certain that questions are not for you and that what you like are settled answers—and many successful people do—you'll still need to know how to find those answers, and we'll help you do that too.

### Why Professionals Do Research

Research in the workplace takes many forms, but the basic structure of every research project is the same. Someone has a problem or a goal, and they cannot decide what to do about it until they figure out something they don't know: *A business is losing customers to a competitor but cannot respond until it researches why customers are leaving. A shipping company wants to reduce its insurance costs, so it researches OSHA requirements for federal safety certification. A local volleyball league wants to raise money to build a practice facility, but it cannot approach potential donors until it has research showing that it can cover ongoing costs by renting the facility for other sports.*

The need for this kind of research is greater now than ever. Whenever a business or professional organization takes an action that might affect the value of its stock or the well-being of its employees or customers, it faces legal requirements for "due diligence." That is, it must thoroughly research the likely consequences or be liable if things go wrong. But beyond those legal requirements, that kind of research is now considered standard practice. No

responsible professional these days makes a major decision without knowing all they can about it.

### YOUR FIRST RESEARCH ASSIGNMENT

#### Researching Research in the Workplace

Here's a useful way to start thinking about research: Professionals do research because they need the answer to a question in order to accomplish some goal. Let's suppose that you have a goal—to motivate yourself to care enough about your research assignments that you will do good work on them. And to achieve that goal, you need the answer to a question: *Is research really that important in the workplace?*

So your first mini-assignment is to research the answer. Find five people you know with jobs that you might like to have—not your perfect job, but work that you can imagine doing. Ask them about research on their job. Don't just stop with those activities they call research. Ask about any tasks that require them to find out something they didn't know in order to accomplish some goal. Also ask how much those skills matter in their evaluations of their colleagues. Share your results with your classmates.

#### Why You Should Learn to Do Research Now

Research is at the heart of every college curriculum, and it will show up in your classes in both obvious and hidden forms. Colleges have been this way for centuries, but it's not just tradition that explains why we expect you to learn research.

The first reason is practical: it concerns your economic future more than your current education. You may not yet be a practicing professional who depends on research, but the chances are good that you will be. The research you do now will prepare you for the day when your job depends on your ability to find answers for yourself or to evaluate and use the answers of others. It will also prepare you to *get* that job in the first place: although potential employers care about what you know, the workplace changes so quickly these days that they care more about how prepared you are to find out what you don't yet know.

A second reason has to do with your education, now and for a lifetime of learning. When you understand research, you are better able to avoid the trap of passive learning, where your only choices are to absorb, or not, what some textbook or teacher says. Doing research, you'll discover how the knowledge we all rely on is only as good as the research that supports it. You'll also discover that what you learn from the research of others depends on what questions you ask—and don't ask.

The greatest problem in research today is not finding information—we are awash in it as never before—but finding information we can trust. The

Internet and cable flood us with “facts” about government, the economy, the environment, the products we buy. Some are sound; most are not. Your own research will let you experience the messy reality behind what is so smoothly and confidently presented by experts on the job, in the press, or on TV. As you learn to do research, you’ll learn to distinguish unsupported assertions from reliable research reported clearly, accurately, and with appropriate qualification.

Our third reason you might think idealistic. We teachers ask you to do research because it is the most intellectually exciting part of any education. We hope you too will experience the sheer pleasure of solving a research puzzle: research can spark all the excitement of unraveling a mystery. (TV’s Adrian Monk is an amazing researcher, as are Sherlock Holmes, Miss Marple, and all the heroes of detective fiction.) We also hope you can experience the self-confidence that comes from discovering something that no one else knows. When knowledge is king and businesses—and countries—are valued on their intellectual capital, the one who knows is a special person. If we can teach you to love the hunt for knowledge, we’ll have given you a gift you’ll long treasure.

We must be candid, though: doing research carefully and reporting it clearly can be hard work, consisting of many tasks, often competing for your attention at the same time. And no matter how carefully you plan, research follows a crooked path, taking unexpected turns, sometimes up blind alleys, even looping back on itself. As complex as that process is, we will work through it step-by-step so that you can see how its parts work together. When you can manage its parts, you can manage the often intimidating whole and look forward to your next research project with greater confidence.

#### Our Promise to You

We have based this book on a lifetime—two lifetimes—of research into how experienced researchers do their work, how experienced writers put together effective texts, what readers look for and what they need in a research report, and what a developing writer needs to know to write better and struggle less. Rest assured that what you read here is grounded not in our opinions or preferences but in our best efforts to know what there is to know about doing and reporting research.

We have also based this book on two lifetimes of helping writers learn to write better, not just beginners but some of the most distinguished and successful professionals. So you can also rest assured that what you read here will be the most practical advice we know how to give. We know what it is to have to get a paper out the door, and we’ll respect your need to get your papers done.

We have written this book to inspire some of you to experience not just

the work but the joys of research. We have written it to educate most of you about the nature of research and its reporting, so that you can understand the reasons for the advice we give. And we have written it to give all of you our best practical, step-by-step guidance on how to do your best research and write the best paper you can—now and for the rest of your career. We hope that every one of you will go with us as far down each of those roads as you can or will. But we are confident that if you commit to do your part, we’ll help you get that paper out the door—done, and done right.

## PART I

# Writing Your Paper

We know how anxious you may be feeling if you are facing your first big research project. *What should I write about? How do I find information on it? What do I do with it when I find it?* But you can handle any project if you break it down into its parts, then work on them one at a time. In the first part of this book, we show you how to do that.

You may think that some matters we explain are beyond your immediate needs. We know that a five-page paper differs from a PhD dissertation. But both require the same skills and habits of thought that experienced researchers began learning when they were where you are now. In that sense, this book is about your future, about starting to think in a new way—like a researcher.

We have organized this book as though you could create a research paper by progressing steadily through a sequence of steps, from selecting its topic to drafting and revising it. But we have not written the book that way. No researcher, no matter how experienced, ever marches straight through those steps. They move forward a few steps, go back to earlier ones, even head off in an entirely new direction. So while our sequence of chapters looks like a steady path, when you read them you'll be reminded regularly that you can't expect to follow it without a few detours, perhaps even some new starts. We'll even tell you how to check your progress to see if you might need to go back a step or two.

But you can manage that kind of looping, even messy process if you know that behind it is a series of tasks whose order makes sense, and that with a plan based on them, you can work your way toward a successful paper. There are four stages in starting and completing a research project.

- In chapters 2–3, we focus on how to find a topic and then in it a research question whose answer is worth your time and your readers' attention.
- In chapters 4–6, we show you how to find information from sources and how to use them to back up an answer.
- In chapters 7–11, we show you how to plan and draft your report so that you make your best case for your argument.
- In chapters 12–14, we show you how to revise that draft so that your readers will think that you based your answer on sound reasoning and reliable evidence.

Several themes run through those chapters:

- You can't jump into a project or even a part of it blindly. You must plan, then keep in mind the whole process as you take each step.
- A researcher does more than find data on a topic and report it. Your job is to gather *specific* data to answer a *specific* question that you want to ask.
- From the first day of your project to its last, you must keep in mind that your report is a conversation with your readers. You have to bring them into that conversation by asking on their behalf the questions that they would ask if they were there in front of you. And then you have to answer them.
- You should try to write every day, not just to take notes on what you read but to clarify what you think of it. You may not use much of this early writing in your final draft, but it prepares you for that scary moment when you have to begin writing it.

At times you may feel overwhelmed by what you read here, especially because we are asking you to think about research and its reporting in ways that you will only need years from now. But we have designed this book so that when you get confused or lost, you can hunker down with our mini-guides and checklists just to get the job done. Then, when you begin to move forward again, you can step back to reconsider the larger issues of the nature of research and the papers we write to report it. Ultimately—probably not today, and maybe not next month or next year, but someday soon enough—you will find that your success on a job or in life will depend on your understanding of that mind-set of a researcher.

#### How to Use Part 1

In part 1, we lay out all the goals, plans, strategies, steps, models, formulas, and everything else we know that will help you to understand, first of all, the mind-set you need to do research well, then the processes and forms you must master to manage a research project, and finally the specific things you must do to get your paper done. We hope that each of you will engage our book in all three ways. Here's how we suggest you do that:

1. Read all of part 1 to get an overview. Read the introduction and chapter 1 carefully, then the rest as quickly as you can. Slow down when we explain what research is like, how researchers think, what the stages are, and why you need them. Speed up when we cover small details that you won't remember anyway.
2. Before you start a new stage in writing your paper, reread the chapters that cover it—for instance, read chapters 2 and 3 before you pick a research question, chapters 7 and 8 before you outline a draft. Use this reading to create a mental plan for how you will get through that stage.

3. As you work on your paper, look in the relevant chapters for checklists, models, and other guides (printed in blue) that will help you go step-by-step.

If your deadline looms and you cannot squeeze out the time for this big-to-little-picture approach, you can work the other way around: start from the checklists, models, and guides. If you understand what to do looking at them alone, do it. If not, read the surrounding text until you do. We hope you won't be so pressed for time that you have to take this shortcut, but we designed this book so that you can. If you do, go back and read the sections you skipped after you turn in your paper. You'll be glad you did.

Go to [www.turabian.org](http://www.turabian.org) to find supplemental materials related to part 1.

# 1: What Researchers Do and How They Think about It

- 1.1 How Experienced Researchers Think about Their Questions
  - 1.1.1 Topic: "I am working on the topic of . . ."
  - 1.1.2 Question: ". . . because I want to find out how or why . . ."
  - 1.1.3 Significance/So What: ". . . so that I can help others understand how or why . . ."
- 1.2 Two Kinds of Research Questions
  - 1.2.1 Practical Questions: What Should We Do?
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- 1.3 How Researchers Think about Their Answers/Arguments
  - 1.3.1 Think of Your Readers as Allies, Not Opponents
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  - 1.3.3 Use the Parts of Argument to Guide Your Research
- 1.4 How You Can Best Think about Your Project
  - 1.4.1 Focus on Convincing Readers, Not on Filling Pages
  - 1.4.2 Picture Yourself in Conversation with Your Readers
- 1.5 How to Plan Your Time (No One-Draft Wonders Allowed)

Every successful researcher does at least two things in a research report: she raises a question that readers want an answer to, and then she answers it. In this chapter, we show you how to get started by finding or inventing a research question interesting enough for readers to care about and challenging enough that you have to research its answer. Then we show you how to plan your project by mapping out the parts of the argument you will need to support that answer.

## 1.1 How Experienced Researchers Think about Their Questions

All researchers gather facts: we'll call them *data*. But they use those data in different ways. Some people gather data on a topic just to satisfy their curiosity: for example, there are history buffs who collect *stories about the Battle of the Alamo* because the history of the Alamo is their hobby. In that case, they don't have to care whether others are interested: they can research in whatever way they want and needn't bother to write up what they find.

Most researchers, however, do their research in order to share it—because their colleagues or clients need it, because they think their question and its answer are important to others, or just because they want others to know something interesting. But when researchers share their results, they have to offer

more than just random data they happened to dig up on their topic. They look for and report only certain kinds of data—those that they can use to show that they have found a sound, reliable answer to a research question, such as *Why has the Alamo story become a national legend?* In other words, they look for and report data that they can use as evidence to support a claim that answers a question.

The best researchers, however, try to do more than just convince others that their answer is sound. They also show why that answer is worth knowing by showing why their question was worth asking in the first place. In a business setting, researchers usually show why their research helps someone decide what to do:

If we can understand why our customers are moving to the competition, we can know what we have to change to keep them.

But in an academic setting, researchers usually show how the answer to their research question helps others understand some bigger, more important issue:

Historians have long been concerned with how we Americans developed our sense of national identity. If we can figure out why the Alamo story has become a national legend, then we might better understand how regional myths like the Battle of the Alamo have shaped that national identity.

But even if you cannot imagine yourself appealing to historians, you can locate that larger issue in the context of your class:

A major issue in this class has been how we Americans developed our sense of national identity. If we can figure out why the Alamo story has become a national legend, then we might better understand how regional myths like the Battle of the Alamo have shaped that national identity.

You can find out whether your question is a worthy one by describing your project in a sentence like this one:

1. I am working on the topic of stories about the Battle of the Alamo,
2. because I want to find out why its story became a national legend,
3. so that I can help my classmates understand how such regional myths have shaped America's sense of a national identity.

In its second and third parts, this sentence takes you beyond a mere topic to state a question *and* its importance to readers.

When you state why your research question is important *to your readers*, you turn it into a research problem. A research problem is simply a question whose answer is needed by specific readers because without it they will suffer a cost. That cost is what transforms a question that is merely interesting to you into one that you expect others to care about.

### TQS: How to Identify a Worthy Research Question

You can help yourself think about your project by describing it in a three-step sentence that states your TOPIC + QUESTION + SIGNIFICANCE (or TQS):

TOPIC: I am working on the topic of \_\_\_\_\_,

QUESTION: because I want to find out \_\_\_\_\_,

SIGNIFICANCE: so that I can help others understand \_\_\_\_\_.

Don't worry if at first you cannot find a worthy significance for the third step. As you develop your answer, you'll find ways to explain why your question is worth asking.

Note: Like all of the formulas you will find in this book, the TQS formula is intended only to prime your thinking. Use it to plan and test your question, but don't expect to put it in your paper in exactly this form. You will use its information in your introduction, but not the sentence itself (see chapter 13).

That three-step TQS sentence is worth a closer look because the success of your project will depend on your ability to discover or invent a good research question.

#### 1.1.1 Topic: "I am working on the topic of . . ."

Researchers often begin with just a topic, something that sparks their curiosity, such as *the Battle of the Alamo*. But if you stop there, you've got problems. Even a focused topic is a poor guide to your work. You can only mound up notes on the facts you happen to find on your topic. You will have no principled way to decide which facts to look for, which ones to use in your paper, and which to discard. When that happens, students typically run into trouble, in the form of a *data dump*. They dump everything into a report that reads like a grab bag of barely connected facts. Most readers quickly become bored, asking, *Why are you telling me this?* They might read on, but only if they are already interested in the topic. But even readers fascinated with your topic will want to know: *What do these facts add up to?*

#### 1.1.2 Question: ". . . because I want to find out how or why . . ."

Experienced researchers don't start their research until they have not just a topic but a question about it, such as *Why has the regional story of the Alamo become a national legend?*

Researchers know that readers want the facts they read about to add up to something. Specifically, they want those facts to back up some main finding—a claim that adds to their knowledge or understanding. But they will think that claim is worth reading about only if it answers some research question. With-



out such a question to guide their reading, your readers will struggle to see what, if anything, your research adds up to.

At the same time, you need such a question to guide the research leading up to your paper: without one you will struggle to know what information you need. All you can do is discover everything you can about your topic and hope you can pull it together at the end. But with a research question, you can know what facts to look for and, when you find them, which ones to use in your paper—those facts that are relevant to your question. (As we'll see later, you'll need not only the facts that support your answer but also any ones that might seem to discredit it.)

You may have to do some preliminary reading about your topic to come up with a question, but in every research project, formulating that question is the crucial first step.

### 1.1.3 Significance/So What: "... so that I can help others understand how or why ..."

Experienced researchers also know, however, that readers won't be interested in just any research question. They want to know why the answer you have found is worth knowing. So once you find a question that you like, expect that readers will ask you a question of their own: *So what?*

You could ask the question *How many cats slept in the Alamo the night before the battle?* but who would care about its answer? All but the most fanatical cat-lovers would want to know: *So what? Why should I care about those cats?* Readers ask *So what?* about all research questions, not just the off-the-wall ones. If you tell readers that you want to research the question *Why has the regional story of the Alamo become a national legend?*, you should expect them to ask in turn: *So what? Why should I care that you can explain that?* Your answer must point them to the significance of its answer: *If we can find that out, we might better understand the bigger issue of how regional stories shape our national identity.* Experienced researchers know that readers care about a question only when its answer might make them say not *So what?* but *That's worth knowing!*

Of course, professional researchers have a big advantage: they already know what issues their readers care about. Students, especially beginners, have less to go on. So don't worry if at first you cannot find some great significance to your research question. Keep hunting for a good *So what?*, but all won't be lost if you don't find one. As long as you find a question in any way relevant to your class, you can always explain its significance in terms of the class (for more on this, see 13.1.3):

... so that I can help my classmates understand how such regional myths have shaped America's sense of a unified national identity, which has been an important issue in our study of American diversity.

## 1.2

### Two Kinds of Research Questions

Research questions come in two varieties. One kind of question concerns what we should do to address a tangible problem. We call such questions *practical*. Practical questions are common in the professions, business, and government. The other kind of question concerns what we should think. We call such questions *conceptual*. Conceptual questions are also common in the professions, business, and government, when their answers help us understand what causes a practical problem. But conceptual questions are most common in the academic world. You will need to distinguish the two kinds of research questions because your teachers usually expect you to address conceptual questions rather than practical ones.

#### 1.2.1

##### Practical Questions: What Should We Do?

The answer to a practical question tells us what to do to change or fix some troublesome or at least improvable situation. You can recognize a practical question by looking at the third step in the TQS formula: that step states both the practical problem and something we should do to change it.

T: I am working on the topic of A, (*What's interesting about that?*)

Q: because I want to find out B, (*So what if you do?*)

S: so that I can help others know **what to do** to fix C.

Suppose, for example, someone asked about your research as an intern in the Dean of Students' office:

- T: Q: What are you doing for your internship?  
A: As part of our binge-drinking project, I'm researching incoming students' assumptions about how much their colleagues drink.
- Q: Q: What do you want to know about that?  
A: We know that first-year students assume that college students drink more than they really do, but we don't know whether they develop that false assumption before they arrive on campus or after they begin to hear drinking stories from their upper-class colleagues.
- S: Q: So what if you know that?  
A: Then our office can know how to give students a more realistic picture in our safe-drinking orientation.

What makes this *practical* research is that you are interested in the question chiefly because you want to use the answer to decide what to do about a troublesome practical problem, in this case binge drinking by students.

### 1.2.2 Conceptual Questions: What Should We Think?

Academic researchers ask a different kind of question. Its answer doesn't tell us what to do to change the world, but only how to *understand* it better: *How does the irreverent sitcom The Simpsons reinforce traditional, conservative values? Why do unwed teen mothers keep their babies? When does a cult become a religion?*

You can recognize a conceptual question because its significance in the third step concerns not what we do but what we understand:

T: I am working on the topic of A, (*What's interesting about that?*)

Q: because I want to find out B, (*So what if you do?*)

S: so that I can help others **understand** how/why/whether C.

Suppose, for example, that you had to ask your teacher's approval for the topic of your research paper:

T [ Q: What are doing for your paper?

A: I want to write on the early years of Motown Records.

Q [ Q: What do you want to know about that?

A: I want to find out how and why Motown "smoothed out" African American roots music for white audiences.

S [ Q: So what if you know that? What does that tell us?

A: If we can explain how Motown was able to appeal to those audiences, we can better understand how the so-called "mainstream" culture was really a composite of ethnic cultures.

Q: Now that would be interesting.

### 1.2.3 The Challenge of Answering *So What?* for Conceptual Questions

Students can be impatient with conceptual questions because they seem irrelevant to the genuinely serious problems in the "real" world. Many can't even imagine an answer to a *So what?* question like this one: *So what if we don't understand why Shakespeare had Lady Macbeth die offstage?* (No one asks *So what?* of a researcher trying to understand how to cure Alzheimer's.) Even if you share that impatience, do not try to build your project around a major practical problem. You can't expect to solve the world's problems in the classroom. For now, keep in mind that you are just getting started in your career as a researcher and that the modest questions you can answer in a few pages are likely to have modest consequences.

You can also look forward to a day when you can answer conceptual questions relevant to the practical problems that beset us. Before we can solve an important practical problem, we almost always have to do conceptual research

to understand its causes and effects. We often use the answer to a conceptual question to solve an unanticipated practical problem, as when the Pentagon recently used historical research on the fall of empires to create a plan for the future of the U.S. military.

Try to be patient if at the start of your project you cannot think of any good answers to *So what?*—even the most experienced researchers sometimes have to find their results before they can say why they are worth knowing. Remember that you'll need *some* answer by the end, and keep your eye out for larger issues as you do your reading. (We'll show you what to look for in chapter 4.) The more often you imagine others asking *So what?* and the more often you practice answering it, even if only to your own satisfaction, the more confident you can be that you can succeed at every researcher's toughest task—convincing others that your work is worth their time.

## 1.3

### How Researchers Think about Their Answers/Arguments

Students are often surprised to realize that what they had thought was the main job of research—looking up information on a topic—is a small part of a successful research project. Before you start looking things up, you have to find a good research question to guide your reading and note taking: what you look for is information that will support and/or test an answer to that question. But once you think you have found an answer, your work has just begun. Readers won't accept that answer just because you believe it: you have to give them good reasons to believe it too. And they won't just take your word that your reasons are good ones: you have to support each reason with reliable evidence. In short, readers expect you to offer a complete and convincing argument that uses the information you have found to explain and support your answer.

### 1.3.1

#### Think of Your Readers as Allies, Not Opponents

By *argument*, we do not mean anything like the heated exchanges you see on TV or among your friends, where anything goes because all anyone cares about is winning. Unfortunately, many students imagine all arguments are like that, partly because the loud and angry ones are so memorable but also because the language we use to describe argument makes it sound like combat:

I will defend my position from the attack of my opposition; then I will marshal my most powerful evidence to counterattack. I'll probe for weak spots in the other position, so that I can undermine it and knock down its key claims. We will fire away at each other until one or the other of us gives up and surrenders, leaving only the victor and the vanquished.

Experienced researchers know that they would be foolish to treat readers like enemies to be vanquished. To succeed, a researcher must *enlist readers as allies* who agree to do or think what the researcher claims they should. If

you hope to win over your readers, you must adopt a stance that encourages them not to be defensive but receptive, because you treat their views, beliefs, and questions with respect. That does *not* mean telling them only what they already believe or want to hear—after all, your ultimate goal is to change their minds. But you do have to attend closely to what you know (or imagine) your readers already believe, so that you can move them from where they are to where your new claim would lead them.

#### CAUTION

##### Don't Pander to Teachers

Many students are rewarded in high school for writing papers that tell teachers what they want to hear by repeating what the teacher has already said. But that can be a grave mistake in college: it bores your teachers, who think it is not enough that you just rehash what's said in class and in the readings. They want to see not only that you know the class material but that you can use that knowledge to think for yourself. If your papers, especially your research papers, merely summarize what you've read or repeat back your teacher's ideas, you will get that dreaded comment: *This does not go far enough.*

When your teacher says that you must *make* an argument to support your answer, don't think of *having* an argument, in which everyone battles for their position and no one changes their minds. Instead, imagine an intense, yet amiable conversation with people who want to find a good answer to your question as much or even more than you do. They don't want to hear about your opinions but about reasoned claims you can support. They want to know what reasons led you to your claim and what evidence makes you think those reasons are true. Because this is a conversation, they'll expect you to consider their point of view and to address any questions or concerns they might have. And they'll expect you to be forthcoming about any gaps in your argument or complications in your evidence. In short, they want you to work *with* them to achieve the best available answer, not for all time but for now.

### 1.3.2 Think of Your Argument as Answers to Readers' Questions

To create that kind of argument, you will have to answer the questions that any rational person would ask whenever you ask them to do or believe something new. Each answer corresponds to one of the parts of argument.

#### 1.3.2.1 The Core of an Argument: Claim + Reasons + Evidence

Your answers to the first three questions constitute the core of your argument.

1. **Claim:** *What's the answer to your question?* Once you raise your research question, readers naturally want to know the answer. That answer is what you claim and then support.

Although many people think that black musical artists of the 1950s and 1960s were harmed when white performers "covered" black records by creating their own versions to sell to white audiences, I claim that the practice of racial covering actually helped the original artists more than it harmed them.<sup>claim</sup>

2. **Reasons:** *Why should I believe that?* Unless your answer is obvious (in which case, the question was not worth asking), readers will not accept it at face value. They'll want to know why they should accept your claim as true.

Although . . . , I claim that the practice of racial covering actually helped the original artists more than it harmed them.<sup>claim</sup> because without covers white teens would not have heard or bought the original recordings,<sup>reason 1</sup> because covers gave white audiences a taste for blues, R&B, and gospel,<sup>reason 2</sup> and because white teens then began to seek out the work of black performers.<sup>reason 3</sup>

3. **Evidence:** *How do you know that?* Even when your reasons seem plausible, responsible readers won't accept them just on your say-so. They expect you to ground each reason in the factual evidence you collect from sources.

Although . . . , I claim that . . .<sup>claim</sup> because . . .<sup>reasons</sup> My evidence that white teens would not have heard or bought the original recordings is as follows: [sales statistics, information on record distribution and radio play, quotations from performers and producers at the time, etc.]<sup>evidence for reason 1</sup>

#### 1.3.2.2 Acknowledging Readers' Voices

You'll have the basis for a sound argument once you can offer readers a claim that answers your question, reasons to believe that they should accept your claim, and evidence showing that those reasons are true. These three elements make up the core of every argument. But if you offer only the reasons and evidence that you think support your claim, thoughtful readers may feel that you have not dealt with them fairly. They want to know not only what you found that supports your claim, but also what you found that might work against, or at least complicate it—especially if they have views that are different from yours.

So in addition to the reasons and evidence that you pull together to support your claim, you should answer questions that might seem to challenge it:

4. **Acknowledgment and Response:** *But what about this other view?* You cannot expect your readers to think exactly as you do. They will know things you don't, they will believe things you don't, and they may even distrust the kind of argument you want to make. If you adopt a genuinely cooperative stance, then you are obliged to acknowledge and respond to at least some of the questions that arise because of those differences.

I claim that . . .<sup>claim + reasons + evidence</sup> To be sure, there were many elements of exploitation in racial covering. The white performers, not the black artists, received

the money and fame. And many artists of the 1950s never received any of the benefits that came later.<sup>acknowledgment</sup> But covers helped to bring about a situation in which black artists are among our most popular, influential, and wealthy pop musicians.<sup>response</sup>

### 1.3.2.3 Explaining Your Logic

In some cases, researchers make arguments in which they have to explain not only their reasons and evidence, but their principles of reasoning. Suppose, for example, you were visiting your friend Paul in Cajun country. It is a warm July evening, so he invites you to go for a walk on the levee, and then he adds, "You might want to put on long sleeves." This makes no sense, so you ask, "Why?" "Because the sun's going down," he replies. Now you are truly baffled. You understand Paul's claim, and you can see the sun going down. But you just cannot understand why that means you should wear long sleeves on a warm July night. His reason is true, and his evidence is good. But his argument so far fails.

That's when we need a warrant, when readers understand our claim and accept our reason and evidence, but do not see why the reason (the sun going down) supports the claim (you need long sleeves). So now you ask again: "Why does the sun going down mean that I need long sleeves?" As it happens, Paul has a good answer in the form of a warrant: "Ah," he says. "You don't know about swamp country. When the sun goes down, the mosquitoes come out. If you don't cover up, they will eat you alive."

Now it all makes sense. As an expert in swamp-country living, Paul knew a principle of reasoning that you did not: *When the sun goes down, you should protect your skin from mosquitoes.* Once you learn the principle, you can accept the claim (though you might wonder why anyone would go walking among mosquitoes that want to eat you alive).

A warrant states a principle of reasoning of the form: When this condition is true, we can draw this conclusion. They are used most often when an expert (Paul) makes an argument about something he knows well (swamp-country living) for someone who is not an expert (you). The expert (Paul) needs a warrant if the non-expert (you) understands a claim (put on long sleeves) and accepts the truth of its supporting reason (the sun is going down) but doesn't see how the reason supports the claim. The warrant supplies the missing connection: "When the sun goes down, the mosquitoes come out, and you must protect your skin from bites. So wear long sleeves to protect your arms."

5. **Warrant:** *Why does that evidence support your claim?* When readers see the world in ways that are very different from yours, they may not recognize what general principle of reasoning connects your reasons and your claims. This situation rarely arises when you write a paper for a class, but it might. For example, you would have to supply a warrant if some readers asked, *But why*

*does it matter that white teens would not have heard R&B without covers? How does that show that covers helped more than harmed black artists?* To which you would have to reply with a general principle:

An artist benefits from any product that expands his audience for future sales, even if he makes no money off the sale of that product.<sup>warrant</sup>

For the most part, only advanced researchers need warrants, most often when experts write for readers who are not experts, when they use a new or controversial research method, or when they address a controversial issue. You probably won't have to explain your logic in a paper for a class, so we will not dwell on this fifth question. But you should know that readers might ask it.

### 1.3.3 Use the Parts of Argument to Guide Your Research

A research question helps guide your research because it tells you generally what information to look for: whatever is relevant to answering your question. But in the parts of argument you have an even better guide. As you search for and read your sources, remember that you will need information to answer at least four questions that every cooperative argument must address.

#### Plan Your Research Around the Questions of Argument

Every argument must answer the three questions that define the core of a research argument, and cooperative ones must also answer a fourth.

C O R E	[	1. What's the answer to your research question?	Claim
		2. Why should I believe that?	Reasons
		3. How do you know that reason is true?	Evidence
		4. But have you considered this view? [or this evidence, complication, objection, etc.]	Acknowledgment & Response

Create a plan to search for and read sources so that you have good answers to each of these questions:

1. **Claim:** If you begin without a plausible claim that answers your research question, start by reading general treatments of your topic in order to get ideas for possible answers.
2. **Reasons:** Once you have a claim that can serve as an hypothesis, make a list of the reasons why you think that claim is true. If you think of too few plausible reasons, do some more general reading. If you still can't find any, look for another claim.
3. **Evidence:** Once you have a list of reasons, search for specific data that might serve as evidence to support each one. Depending on the kind of reason, that evidence might be statistics, quotations, observations, or

any other facts. If you cannot find evidence for a reason, then you have to replace that reason. If you find evidence that goes against a reason, keep the evidence. You may need to acknowledge it in your paper.

4. **Acknowledgment & Response:** As you read for claims, reasons, and evidence, keep a record of anything that might complicate or contradict your argument. You will need to acknowledge it if you think it might also occur to your readers.

We discuss these steps more fully in chapters 6 and 7.

#### 1.4 How You Can Best Think about Your Project

You have learned a great deal new about writing research papers, and it's only the end of the first chapter. We'll cover this ground again in later chapters, where we'll go step-by-step through the process of planning, researching, drafting, and revising your paper. Don't expect to walk through those steps exactly as we lay them out—research is too messy, with lots of looping back and jumping forward. But if you stay flexible and take it one step at a time, you'll get through the process easily enough.

##### 1.4.1 Focus on Convincing Readers, Not on Filling Pages

For now, we would like you to focus not on the steps but on creating an overall mental picture of research that you will keep in mind as you work. Unfortunately, the two most popular pictures are ones we hope you will avoid. In the first, you think of your project as no more than looking up information. All that matters is the hunt. What comes after is an afterthought:

Q: *How's your project coming?*

A: Good. I dug up lots of information from lots of sources (even including a bunch of print sources from the library). All I have to do is figure out how to organize my notes and then I can just write it all up.

In the second picture, you think of your project as filling up pages. All that matters is mounding up enough information to fill the assigned number of pages:

Q: *How's your project coming?*

A: Good. I have a four-point outline and I've found three pages of stuff on the first two points. All I need is three more pages on the second two points and I'm done.

If you think of your project in these ways, you'll doom yourself to failure.

Although you and your teacher might say that your assignment is to write a research paper, we urge you to think instead in terms of a research project. Writing a research paper is only one step in a complex process in which (1) you

find a research question important to you *and* to your readers; (2) you decide what information you need to find based on the question you ask; (3) you use the information you find to select and then test the best answer to your research question; and (4) you finally present that answer and its support in a way that anticipates readers' questions.

As you begin to plan for your project, let these principles be your guide:

- Don't think that your primary task is to collect and organize information from sources (though you will have to do that). **Your task is to ask and answer a research question that interests you and your readers.**
- Don't think that when you write your paper your goal is to fill up a certain number of pages with the information you've found. **Your paper is what you say to your readers, what you use to communicate your question, its answer, and your argument supporting that answer.**
- Most importantly, don't think of research as a solitary endeavor. **Keep your readers with you from start to finish.**

If right from the start you focus on *asking and answering questions*, you'll find it easier to do the things that will produce a successful paper. Focus on finding stuff to fill pages, and you're sure to go wrong.

##### 1.4.2 Picture Yourself in Conversation with Your Readers

As you plan, research, and draft your paper, picture yourself in an imaginary conversation with your readers. Imagine those readers as interested and inquisitive colleagues, even partners, who want an answer as much as you do. You welcome their questions because they help you know what to say and how to say it. If you can do that, your paper will be better. But just as importantly, you'll be preparing yourself for the day when your readers are indeed colleagues who need from you the best answers you and they can find.

Imagine that conversation taking place not in a classroom, but sitting around a table. Your question grabs their attention because they recognize that they'll be worse off if they can't find an answer. You share not just your answer, but all the information you can find that is relevant to deciding whether your answer is a good one. In sharing that information, you try to anticipate their questions. You are candid enough to acknowledge any information that challenges or complicates your answer, and you address objections they might have. Even so, they have many more questions, alternative explanations, and other issues—each of which you consider and address as fairly as you can. In short, you join with your readers in working through the task of finding and testing the best answer you can find. If you think of your project in these terms, you'll make more good decisions and waste less time as you write your paper. You'll also find that in making your work matter to your readers, you make it matter to you as well.

**WORKING IN GROUPS****Find Surrogate Readers**

You can help yourself think of your paper as a conversation with readers if you talk about your work to your family, friends, and classmates. Later we will suggest that you form a writing group for testing your storyboard and draft. But it may not be too early to form an informal group even before you find a question. Recruit three or four classmates who will join you for coffee or lunch just to talk over your earliest ideas. At this point, you don't need suggestions, just a sympathetic ear. You will also learn just from listening: the more you experience what your readers will, the easier it will be to imagine them.

### 1.5 How to Plan Your Time (No One-Draft Wonders Allowed)

Have you ever heard the tale of the one-draft wonder? That's the student who starts writing a paper at midnight before the deadline, knocks out one quick yet perfect draft, and then receives the best grade in the class. The one-draft wonder is one of the more enduring school-based urban legends: the two of us hear such tales all the time, but we've never seen the real thing. We couldn't pull it off when we were in school, and we've never taught a student who could do it either—though we have taught too many students who hoped they could fool us with weak drafts that were all too obviously written the midnight before.

You can't hope to write a decent research paper if you begin the night or even the week before it's due. This is confirmed not only by the thousands of students we've known but by studies of successful and unsuccessful writers. This research shows that the most successful writers tend to share some writing habits:

- They start drafting as soon as possible, before they think they have all the evidence they might need.
- They write in regular short periods rather than in marathon bursts that dull their thinking and kill their interest.
- They set a goal to produce a small number of pages every time they write, even if those pages are not very good.
- They report their progress to someone else if possible, or on a chart if not.
- They anticipate that everything will take longer than they think it should.

To make these insights work for you, you'll have to back-plan from your due date to set interim goals with specific deadlines. Start by giving yourself at least one working session to proofread; then set aside time for a final revision—at least two working sessions for a paper under seven pages, twice that for a longer one. Depending on how long your paper is and how quickly you draft, set aside enough time to compete a draft, then add 20 percent. You'll

need at least a day before that to review and revise your argument. Next, set aside the time you'll need for finding and reading sources, then add 20 percent. Finally, you'll need a day or two to find and test your research question. Plot these interim deadlines on a calendar, and keep track of your progress as you go. If you need a deadline to motivate you to work, find someone who will get on your case if you miss one of these interim deadlines.

One of the pleasures of a research project is the opportunity to discover something new, at least to you, perhaps to everyone else. It's a *thoughtful* process that requires you to consider and reconsider what you learn, both when you first find it out and again when you pull everything together. That kind of reflection takes time. To get the time you need, you need a plan that lets you start early, progress steadily, and reflect regularly.

## 2: Finding a Research Question

- 2.1 Questions and Topics
- 2.2 How to Choose a Topic
  - 2.2.1 How to Work with an Assigned Topic
  - 2.2.2 How to Find a Topic Based on Your Personal Interests
  - 2.2.3 Make Your Topic Manageable
- 2.3 Question Your Topic
  - 2.3.1 Ask Your Own Questions
  - 2.3.2 Borrow Questions
- 2.4 How to Find a Topic and Question in a Source
  - 2.4.1 Look for Creative Disagreements
  - 2.4.2 Build on Agreement
  - 2.4.3 Look for Surprises
- 2.5 Evaluate Your Questions

A research project is a lot more than collecting data. You start it before you log on to the Internet or head for the library, and you continue it long after you have all the data you think you need. In that process, you complete many tasks, but they all aim at just five general goals:

- Find a question worth answering about a topic you care about.
- Find an answer that you can support with good reasons.
- Find reliable evidence to back up your reasons.
- Write a first draft that makes a good case for your answer, explains its significance, and anticipates your readers' questions.
- Revise that draft until readers will think you have been clear, complete, and convincing.

(You might even post those goals over your desk.)

A research project would be easy if you could march straight through those steps. But as we've said, research is looping, messy, and unpredictable. You can manage it with a plan, as long as you are prepared to depart from it. The first step in that plan is one you cannot put off: to find a good research question.

### CAUTION

#### Start with a Question, Not Your Favorite Answer

Students sometimes think that a short cut to a research paper is to argue for something they already believe so strongly that nothing could change their mind. Big mistake. Not only will you lose the benefits of the research experi-

ence, but you'll come to your paper with the wrong frame of mind: to say whatever's necessary to support your position rather than to find out what will help you discover the truth. Even when they are confident that they know what the answer will be, true researchers follow where the facts lead them rather than force the facts to go their way. Plan to answer a question, not defend an opinion.

### 2.1 Questions and Topics

Most students start a research project without a good question, often without even a topic. That puts them a couple of steps behind most professionals, who start with their research question in mind.

Often researchers start with a question that others in their field already think is worth answering: *Did Native Americans cause the extinction of North American woolly mammoths?* Because it's a familiar question, they also know why their colleagues think it is important. *So what? Well, if we knew why the woolly mammoths disappeared, maybe we could answer a bigger question that puzzles many historical anthropologists: Did early Native Americans live in harmony with nature, as some believe, or did they hunt its largest creatures to extinction? (And if we knew that, then we might also understand . . .)*

Other times researchers start with a question that just pops into their mind with no hint of where it will lead, sometimes about matters so seemingly trivial that only the researcher thinks they're worth answering: *Why does a coffee spill dry up in the form of a ring?* Such a question might lead nowhere, but you can't know that until you see its answer. In fact, the scientist puzzled by coffee rings discovered things about fluids that others in his field thought important—and that paint manufacturers used to improve their products. So who knows where you might go with a silly question like *How many cats slept in the Alamo the night before the battle?* You can't know until you answer it.

### QUICK TIP

A researcher's most valuable asset is the ability to be puzzled by seemingly obvious things, like the shape of coffee rings or that the hair on your head keeps growing while body hair doesn't. Cultivate the ability to question the commonplace and you'll never lack for research projects. Questioning the obvious is also the first step in critical thinking, which is a skill much prized in the workplace. But you won't do it well then if you don't start practicing it now.

If your assignment allows it, you too can start with a question that's been eating at you, especially if you can discover something of use to someone you know. One source of questions might be a problem that you or a family member has faced. If your neighborhood is near a chemical plant, research the health

risks. If you know someone afflicted with a disease, research any new or experimental treatments. Another source might be a cause to which you are devoted. If you volunteer for Habitat for Humanity, research how well those houses suit their owners ten years after they are completed. A third source might be something you love to do. If you are addicted to fashion and hope to be a designer, research the economic challenges for a start-up design company.

If you begin with only a topic, you should still consult your interests. Is there some mental itch you'd like to scratch? *I've collected Mardi Gras masks for years, but I have no idea where they came from.* You might not know exactly what will puzzle you about the origins of the masks, but your project gives you a chance to find out, to scratch that itch. Even if you must begin with a topic so unfamiliar that you can't imagine what could be puzzling about it, look hard for something that sparks your interest. The more you care to have an answer to your research question, the easier it will be to show why your readers should care too, and the longer you can work on finding it before you weary of the search.

#### How to Use the Rest of This Chapter

If you are reading this chapter before you start your project, to learn how research questions work, read on from here to the end. But if you are using it to develop a question for a project, go to the section designed for your stage in the process:

1. If you already have a promising research question, skip to 2.5 to learn how to test it.
2. If you are working from a text, skip to 2.4 to learn how to find a research question in your response to it.
3. If you have a general topic, skip to 2.3 to learn how to find a question in it.
4. If you are starting from scratch, move on to the next section.

**Watch for the blue examples.** You will find lots of questions in this chapter. Some are questions you should ask to help yourself find a good research question: those are in regular type. Some are examples of the kind of research questions you might use in your paper: those are in blue. Your goal is to find a question of the sort you find in the blue examples.

## 2.2 How to Choose a Topic

Most teachers and handbooks tell students that what they must do with a topic is to narrow it. That's not wrong, but it is misleading. What makes your paper work is a focused research question, not how narrow your topic might be. So as you work through this section, keep in mind that at every stage you

are looking for a good, focused research question. As soon as one comes to mind, skip to 2.5 to test it. Until you find a question, keep narrowing that topic—a specific topic is a better source of questions than a general one. But remember, it's the question, not the topic, that matters most.

#### QUICK TIP

##### The Value of Surprise and Disagreement

Keep in mind as you look for a research question that what is surprising or wrong catches our attention most easily. Look for ideas, claims, facts, or anything that makes you think, *Wow, I didn't know that!* or *How can that be true?* Not only will those matters hold your attention longer, but they will make it easier to get the attention of your readers.

### 2.2.1

#### How to Work with an Assigned Topic

In most cases, you will be expected to find a research question related to the subject matter of your class, no matter what your plans or interests. Even if you are passionate about military history, you may be hard-pressed to write about it in a class on Buddhism. But you should still look for a topic that might engage you, even if only for a short while.

If your assignment specifies a general topic—for example, *Buddhism and war*—skip to section 2.2.3 to narrow it. But if you are free to choose any topic related to the theme of your class, look for one that interests you in the following places:

- Do any of your personal interests overlap with the class theme?
- Review your books and notes. What has surprised or irritated you?
- Look over any books or chapters that your teacher skipped.
- Skim other books by the authors of your assigned texts, looking for matters related to your class. Did an author write an earlier work that is inconsistent with the assigned text? Did she apply some of the same ideas in a wholly different context?
- Skim a textbook for a more advanced class on the same or a related subject.
- Look through the archive for an online discussion list that covers the subject of your class. What topics have been discussed?

#### CAUTION

##### What Teachers Say and What They Really Mean

Some teachers walk with you step-by-step through the process of developing a research question, so that you can't miss finding a good one. Other teachers will give you just a written assignment sheet and expect you to find a



question on your own. If so, you'll have to learn to read between the lines of your assignment.

When experienced researchers like your teachers talk to one another, they use a shorthand that can mislead those with less experience. You'll know that your teacher is using that shorthand in your assignment sheet if you see phrases like these:

explore X	discuss X	analyze X
explain X	critique X	investigate X
compare X with Y		discuss X in light of Y

In each case, your assignment will really be something more like this:

*Find an issue in X that raises a question about a specific aspect of X, whose answer will help us understand some larger theme, feature, or quality of X.*

In using the shorthand, your teacher is not trying to fool you. She's just assuming that you already understand what she means. If you keep our advice in mind, then in fact you will.

### 2.2.2 How to Find a Topic Based on Your Personal Interests

If you can pick any topic, look for things that surprise, irritate, or otherwise interest you.

- What do you love to think about—sailing, the blues, finches, old comic books? The less common, the better. Investigate something about it you don't know: its origins, technology, place in another culture, and so on.
- What would you like to know more about? A place? A person? A time? An object? An idea? A process?
- Is there an important problem you can't solve now, but you can learn more about? Would you like to know more about twelve-step programs? About affordable green housing? About the health risks of gluten-heavy diets?

Look in these places for things that spark your curiosity:

- Wander through a museum with a special collection—cars, dinosaurs, photography. If you can't go in person, browse a "virtual museum" on the Internet. Stop when something catches your eye.
- Wander through a shopping mall or store, asking yourself, *How do they make that?* or *I wonder who thought up that product?*
- Browse a large magazine rack. Look for trade magazines or those that cater to specialized interests. Investigate what catches your eye.
- Use a search engine to find websites about something people collect. (Narrow the search to exclude dot-com sites.) You'll get hundreds of hits, so look only at the ones that surprise you.

You might find a topic in your disagreements with others:

- Is there an issue you have debated with others, then found that you couldn't back up your views with good reasons and evidence?
- Is there a common belief that you suspect is simplistic or just wrong? Do research to make a case against it.
- Tune in to talk radio or interview programs on TV until you hear a claim you disagree with. Can you make a case to refute it?

You might also find a topic if you think about your future:

- What courses might you take later? Find a textbook, and skim its study questions.
- If you have a dream job, what kind of research report might help you get it? Employers often ask for samples of an applicant's work.

Keep in mind that you may be living with your topic for a long time, so be sure it interests you enough to get you through the inevitable rocky stretches.

### 2.2.3 Make Your Topic Manageable

If you pick a topic whose name sounds like an encyclopedia entry—*bridges*, *birds*, *masks*—you'll find so many sources that you could spend years reading them. You have to carve out of your topic a manageable piece. You can start by limiting it: What is it about, say, masks that made you choose them? Think about your topic in a special context that you know something about, then add words and phrases that name what's special about that context:

masks

masks in religious ceremonies

Hopi masks as symbols in religious ceremonies

Hopi *mudhead* masks as symbols of sky spirits in fertility ceremonies

You might not be able to focus your topic until after you've read something about it. That takes time, so start early. Begin with a general encyclopedia like the *Encyclopaedia Britannica* or even *Wikipedia* (but see the caution, below). Since you are just looking to prime your thinking, you can search the Internet for ideas without too much concern for the reliability of what you find (which, however, will be crucial later if you want to use a source as evidence). Your goal here is to put your topic into a context of what others think is important about it.

#### CAUTION

##### Watch Out for Wikipedia

When you need information quickly, *Wikipedia* can be a godsend. You can access it from any browser, and studies show that it is generally reliable. But it

is usually incomplete, and it does have errors, sometimes outrageous ones. As a result, many teachers ban its use as a source. If you have easy access to an established encyclopedia such as *Britannica*, use it. Otherwise, feel free to use *Wikipedia* for ideas or citations to pursue. But do not use it for information you must cite. When you access a *Wikipedia* article, check out its "Discussion" tab, which will help you decide how much confidence to place in that article.

**2.3 Question Your Topic**

This is a crucial step. Once you have a topic, question it. Make a list of all the questions that you can imagine answering.

**2.3.1 Ask Your Own Questions**

Here are some questions you can ask for yourself. The categories are loose and overlap, so don't worry about keeping them straight.

1. Start by asking how your topic fits into larger contexts: a larger history, a larger system, or a category that includes things like it.

- How does your topic fit into a larger history?  
What came before masks? How did masks come into being? What changes have they caused in their social setting? Why have masks become a part of Halloween? Have masks helped make Halloween the biggest American holiday after Christmas?

- How does your topic work as a part of a larger system?  
How do masks reflect the values of specific societies and cultures? What roles do masks play in Hopi dances? In scary movies? In masquerade parties? For what purposes are masks used other than disguise? How has the booming market for kachina masks influenced traditional designs?

- How does your topic compare to and contrast with other things like it?  
How are masks like or unlike other things that cover the face—masks to prevent disease, welders' masks, hockey masks, snorkeling masks? How are masks and cosmetic surgery alike? Is face-painting at sports events a kind of mask?

2. Next, ask questions about the parts of your topic.

- How do the parts of your topic work together as a system?  
What parts of a mask are most significant in Hopi ceremonies? Why? Why do some masks cover only the eyes? Why do so few Halloween masks cover just the bottom half of the face?

- How many different categories of your topic are there?

What are the different kinds of Halloween masks? What are the different qualities of Halloween masks? What are the different functions of Halloween masks?

3. Next, set your imagination loose with speculative questions.

- What's *not* true about your topic?

Why are masks common in African religions but not in Western ones? Why don't hunters in camouflage wear masks? Why don't Catholics wear masks when they go to confession?

- Ask *What if?* questions:

What if no one ever wore masks except for safety reasons? What if everyone wore masks in public? What if movies and TV were like Greek plays and all the actors wore masks? What if it were customary to wear masks on blind dates?

4. Finally, turn positive questions into a negative ones:

Why have masks not become a part of Christmas? How do Native American masks not differ from those in Africa? What parts of masks are typically not significant in religious ceremonies?

**2.3.2 Borrow Questions**

Researchers often study questions first raised by others. Unless your teacher specifically says you must devise your own question, you too are free to find your question wherever you can. If you are concerned about plagiarism, you can cite the source of your question, but you do not have to.

Some questions you can find online:

- Find a web discussion list on your topic, then "lurk," just reading for the kinds of questions those on the list raise. If you can't find a list, ask a teacher or visit the websites of professional organizations. Look for questions that also interest you.
- Look for study guides related to your topic. You can find them both in textbooks and online. Many questions will be unsuitable because they ask for a rehash, but some will be thought-provoking.
- Find online syllabi for classes on topics like yours. Some of them will list proposed questions for papers.

You can also find questions in your classroom. Listen for issues that are left unresolved in discussions, matters on which a classmate seems confused or mistaken, things that you cannot accept. All of these can be turned into potential research questions.

### How to Find a Topic and Question in a Source

You may need to find your topic and question in relation to something you read, either because your teacher assigned a text or because you have found a writer or a work that interests you. In that case, look for surprises, puzzles, or disagreements. Or you can also look for ways to make the text itself your guide.

#### 2.4.1 Look for Creative Disagreements

Nothing motivates us to argue more than disagreement, and our quarrels with a source often generate some of our best ideas. But your readers won't like disagreement for its own sake, and you don't want them to think you are merely disagreeable. But they will, if you set out only to show that a source is wrong, wrong, wrong. So look for *creative* disagreements, the kind that lead you to think hard not just about what your source says, but also about what you think in response. You'll know you've found a creative disagreement when you show not just that a source is wrong but that something else is right.

#### USEFUL FORMULA

##### Smith claims . . . , but I will show . . .

When you find a creative disagreement, you state your research question in terms of the difference between what a source says (in the first blank) and what you will show (in the second).

Smith claims that \_\_\_\_\_ is true, but I will show that \_\_\_\_\_ is really the case.

(In all of these examples, our generic name for the source will be *Smith*.)

Here are a few of the many ways you can create a research question based on your disagreements with a source, grouped by the kind of disagreement:

##### Kind

1. Smith claims that \_\_\_\_\_ belongs in category A, but I will show that it really belongs in category B.

Smith claims that fringe religious groups are "cults" because of their strange beliefs, but I will show that those beliefs are no different in kind from standard religions.

2. Smith claims that \_\_\_\_\_ is normal/good/significant/useful/moral/etc., but I will show that it is really [something else].

Smith claims that organized religion does more harm than good, but I will show that it is the misuse of religion that does the harm, not religion itself.

(You can reverse all of the forms in this list: Smith claims that a religion is not a cult, but I will show that its beliefs are too strange to count as religious.)

##### Part-Whole

3. Smith claims that [whole] always has [part] as one of its defining features/components/qualities, but I will show that [part] is not essential.

Smith claims that competition is the essence of sport, but I will show that, even by her standards, competition is only incidental to the way most people actually play sports.

##### Change

4. Smith claims that \_\_\_\_\_ is changing in a certain way, but I will show that it is really the same as it was.

Smith claims that the Internet will kill off newspapers, but I will show that newspapers will find ways to survive because people still want what only newspapers can offer.

5. Smith claims that \_\_\_\_\_ is changing in a certain way, but I will show that it is really changing in a different way.

Smith claims that individualized marketing tools will let consumers get the products they want and need, but I will show that those tools will really let companies manipulate their customers more than ever.

6. Smith claims that \_\_\_\_\_ is a stage/process in the development of \_\_\_\_\_, but I will show that it not.

Smith claims that alcoholics must hit rock bottom before they can commit to change, but I will show that new early intervention programs can save people before they bottom out.

##### Cause and Effect

7. Smith claims that \_\_\_\_\_ causes \_\_\_\_\_, but I will show that it really causes \_\_\_\_\_.

Smith claims that persistent poverty causes crime, but I will show that it really causes despair, which sometimes leads to crime and sometimes does not.

8. Smith claims that \_\_\_\_\_ is caused by \_\_\_\_\_, but I will show that it is really caused by \_\_\_\_\_.

Smith claims that the collapse of the banking system was caused by greed and a lack of government oversight, but I will show that the real cause was that financial instruments became so complicated that no one could evaluate their risks.

9. Smith claims that \_\_\_\_\_ is sufficient to cause \_\_\_\_\_, but I will show that \_\_\_\_\_ is also necessary.

Smith claims that big-time athletics programs always debase the educational mission of a college, but I will show that athletics alone is not enough: there also have to be alumni and other stakeholders who are more passionate about success on the field than in the classroom.

### 2.4.2 Build on Agreement

If you find a source whose problem you care about and whose argument you find convincing, you can't create a paper out of that agreement alone. "Me too" is not a very interesting claim. But you may be able to build on that agreement by using the argument in your source as a model for a paper on a different, but closely related problem.

#### USEFUL FORMULA

**Smith claims . . . about this, and I will show . . . about that.**

When you build on agreement, you apply the problem and answer of a source to a different object of study. You state your research question in terms of how you can show that what Smith has shown to be true about one thing is also true (or not) about another:

Smith claims that \_\_\_\_\_ is true in the case of \_\_\_\_\_, and I will show that it is/is not true in the case of \_\_\_\_\_.

In one typical case, you replay the research of a source on a new subject. Suppose Sue reads an article about how med students learn and it interests her because she is premed. The article makes the following claim:

Medical students learn physiological processes better when they are explained with many analogies rather than by just one.

This result is interesting because it surprises her: Wouldn't it be confusing to get many different explanations rather than one good one? So she wonders, Could this be true of all professional students? And with that she has her research question. She starts with the general pattern:

S. claims that [many analogies are better than one] is true for [med students], and I will show that it is also true for [engineers].

Then she adds her own details:

In his study of medical students, Spiro shows that complex processes are learned better when they are explained with many analogies rather than just one. In

my paper, I will show that the same principle of learning applies to engineering students.

Another typical case is when you read an essay that analyzes a creative work in a way that you find convincing, so you apply it to a different work. Suppose John is a gamer who finds an interesting article arguing that the computer game *Age of Empires II* has racist tendencies in the way it defines its characters. John is persuaded by that analysis, so he uses it as model for his paper analyzing other computer games:

S. claims that [racist characterization] is true for [Age of Empires II], but I will show that it is not true for [three other computer games].

In his study of *Age of Empires II*, Columbia shows that there are elements of racism in the depiction of the characters. In my paper, I will show that there are several popular games that do not exhibit the same tendency to harmful stereotypes.

This approach involves lots of borrowing, but as long as you fully acknowledge the source, you are in no danger of plagiarism. Your paper may be less original than if you had thought up the problem yourself, but that is rarely a problem for beginners. In fact, professionals create research questions in this way all the time.

### 2.4.3

#### Look for Surprises

When you work from agreement or disagreement, you build on the *argument* of your source text. But you can't do that if you are working from a text that does not make an argument or if what interests you is not its argument but how it is put together. In that case, rather than ask whether you agree with the text, look for what seems puzzling, confusing, out of place, or otherwise a surprise.

When you look for surprises, try the three-step approach we call E-S-P:

**E:** When I first read this text, I **expected** to find \_\_\_\_\_.

**S:** So I was **surprised** when instead I found \_\_\_\_\_.

**P:** I have a **problem** because my old understanding of this text/author/argument makes sense only with [what you expected], not with [what you found].

This kind of problem gives you four ways to create an argument:

- Figure out how you have to change your understanding of the text:

At first it made sense to understand the text [the way you did], but I will show why we should really understand it in a different way.

- Figure out how and why you were wrong to expect what you did:

At first it made sense to expect the text to do [what you expected], but I will show why that is based on a mistaken understanding of the text.

- Figure out how and why what you found actually fits in:

When the text did not do [what you expected], I first thought that I was wrong to expect it. But I will show that [what you expected] would have fit perfectly.

- Show that the text would have been better, or at least more consistent, if the author had done what you expected rather than what you found:

At first it seemed surprising that the text did not do [what you expected], but I will show that it would have been better if it had.

Among the advantages of this approach is that it gives you an easy way to create a context that shows why your question is significant: you can use what you expected to set up a contrast that defines your question. Here is a compressed version (to learn how to expand it, see 13.1):

In view of the position Gonzalez takes on amnesty, education, and other issues concerning illegal immigrants, it would be natural to expect that he would favor, or at least not oppose, English-only legislation. But in fact, his fifth chapter not only criticizes English-only movements but makes a strong case for a multi-lingual society. In this paper, I will show . . .

#### WORKING IN GROUPS

##### Bounce Ideas Off Friends Rather Than Sources

You can use your classmates for all of the above strategies for finding questions in sources. Ask your writing group, or friends if you don't yet have a group, for their ideas about your topic. They may have ideas that are interesting but in your view wrong, that are in your view right but not properly developed, or that just plain surprise you. If so, plug their ideas into the appropriate formula and you have a candidate for a worthy research question.

## 2.5 Evaluate Your Questions

Finally, evaluate your questions and scrap those unlikely to yield interesting answers. What follows are some signs of a question you can't use.

You don't have a good question if no one would disagree with your answer: proving it is pointless.

1. You can answer the question too easily.
  - You can just look it up: *What masks are used in Navajo dances?*

2. No one could plausibly *disprove* the answer, because it seems self-evident. *How important are masks in Hopi rituals?* The answer is obvious: *Very*. You cannot make a good argument if you cannot identify the best evidence for it.
3. You can't find factual evidence to support the answer.
  - No relevant facts exist: *Are Mayan masks modeled on space aliens?*
  - It's a matter of taste: *Are Balinese or Mayan masks more beautiful?*
4. You would find so many sources that you cannot look at most of them: *How are masks made?* (This usually results from a question that's too broad).

#### QUICK TIP

Don't reject a question because you think someone must already have asked it. Most interesting questions have more than one good answer. Don't reject a question because you think your teacher already knows the answer. You should target your paper not at an expert like your teacher but at someone whose knowledge is more like yours.

The crucial point is to find a question that *you* really want to answer. Too many students, even advanced ones, think that education means memorizing the right answers to questions someone else has asked and answered. It is not. Among your most important goals for your education should be to learn to ask your own questions and find your own answers.

## 3: Planning for an Answer

- 3.1 Propose Some Working Answers
  - 3.1.1 Decide on a Working Hypothesis
  - 3.1.2 If You Can't Find an Answer, Argue for Your Question
- 3.2 Build a Storyboard to Plan and Guide Your Work
  - 3.2.1 State Your Question and Working Hypotheses
  - 3.2.2 State Your Reasons
  - 3.2.3 Sketch in the Kind of Evidence You Should Look For

### 3.1 Propose Some Working Answers

Before you get far into your project, try one more preliminary step. It's one that many beginners resist but that experienced researchers rely on, so start practicing it now. As soon as you have a question, imagine some plausible answers, no matter how sketchy or speculative. At this stage, don't worry whether they're right. That comes later.

For example, suppose you ask, *Why do some religions use masks in ceremonies while others don't?* You might speculate:

- Maybe cultures with many spirits need masks to distinguish them.
- Maybe masks are common in cultures that mix religion and medicine.
- Maybe religions originating in the Middle East were influenced by the Jewish prohibition against idolatry.

You can look for evidence with only a question to guide you, if you stay on the alert for those data that suggest an answer. But it is more useful to research guided by possible answers. You will then see more readily which data might support (or contradict) a possible answer, helping you focus your reading even more.

#### QUICK TIP

##### Write, Don't Just Think

Even early in your project, write out your answers as fully as you can. It is easy to think that you have a clear idea when you don't. Putting a foggy idea into words is the best way to clarify it, or to discover that you can't.

#### 3.1.1 Decide on a Working Hypothesis

If one answer seems most promising, call it your *working hypothesis*. Even the most tentative working hypothesis helps you to think ahead, especially about the *kind* of evidence that you'll need to support it. For example, will you need numbers? Quotations? Observations? Images? Historical facts? If you can

imagine the kind of evidence you'll need before you start looking for it, you'll recognize the data you need when you see them.

Some new researchers are afraid to consider *any* working hypothesis early in their project, because they fear it might bias their thinking. There is a risk, if that hypothesis blinds you to a better idea or keeps you from giving it up when the evidence says you should. As in all relationships, don't fall too hard for your first hypothesis: the more you like it, the less easily you'll see its flaws. Even so, it's better to start with a flawed hypothesis than with none at all.

If you can't imagine any working hypothesis, consider changing your question. That might cost time in the short run, but it may save you from a failed project. Under no circumstances put off thinking about a working hypothesis until you begin drafting your report or, worse, until you've almost finished it. Drafting and revising can be acts of discovery, and as you develop your report, you may discover a better answer to your question. Just don't wait until the last page to make that discovery.

#### 3.1.2 If You Can't Find an Answer, Argue for Your Question

We have focused on answering questions so much that you might think that your project fails if you can't answer yours. In fact, many important researchers have argued that a question no one has asked should be, even though the researcher can't answer it. You can write a good paper explaining why your question is important and what it would take to find a good answer.

#### 3.2 Build a Storyboard to Plan and Guide Your Work

For a two- or three-page paper, you might not need much of a plan—a sketch of an outline might do. But for a longer project, you'll need more. The first plan that comes to mind is usually a formal outline, with its *I*'s and *II*'s and *A*'s and *B*'s and so on. An outline is better than no plan, but the problem with an outline is that it can force you to lock down your paper before you've done your best thinking. So if your teacher requires an outline, be ready to change it at the first sign that you can do better.

Many researchers, especially those outside the academic world, plan long reports on what is called a *storyboard*. A storyboard is like an outline broken into pieces and spread over several pages, with lots of space for adding data and ideas as you go. Storyboards are more flexible than outlines. You can leave storyboard pages unfinished until you are ready to fill them, and you can move pages around without reprinting every time you try out a new organization. Storyboards also help you think about organization. You can spread pages across a wall, group related pages, and put minor sections below major ones to create a "picture" of your project that shows at a glance the design of the whole and your progress through it.

### 3.2.1 State Your Question and Working Hypotheses

To start a storyboard, write at the top of its first page your question and working hypothesis as exactly as you can. At the bottom, add alternative answers so that you can see more clearly the limits and strengths of your favored one. Add new hypotheses as you think of them, and cross off those you prove wrong. But save them all, because you might be able to use a rejected one in your introduction (see *I used to think . . . , but . . .* in 7.2.2).

### 3.2.2 State Your Reasons

Imagine explaining your project to a friend. You say, *I want to show that Alamo stories helped develop a unique Texan identity*, and your friend asks, *Why do you think so?* Your reasons are the sentences that back up your answer: *Well, first, the stories distorted facts to emphasize what became central to Texan identity. Second, the stories were first used to show that Texas (and the Wild West) was a new kind of frontier. Third, . . .* and so on. List each of the reasons that might support your hypothesis at the top of a page, one reason per page.

If you have only one or two reasons, you'll probably need more. Make your best guess about possible reasons, and put them at the tops of separate pages: *Reason 3: Something about Alamo stories making Texans feel special?* If you know only *how* you want a reason to support your answer, state that: *Reason 4: Something about Alamo stories being more than just myth.* Each reason, of course, needs support, so for each reason, ask: *Why do I think that? What evidence will I need to prove it?* That will help you focus your search for evidence.

If you're new to your topic or early in your project, *all* of your reasons may be only educated guesses that you will have to change as you learn more. In fact, if you don't change any of your reasons, you might not be self-critical enough. But a list of reasons, no matter how speculative, is the best framework to guide your research and focus your thinking, and certainly better than no reasons at all.

#### QUICK TIP

##### Try Out Several Orders

When you plan a first draft, you will have to decide what is the best order for its parts, so you might as well try to find a good one now. Lay out your storyboard pages on a table or tape them to a wall. Then step back and look at their order. Can you see a logic in that order? Try out different ones—chronology, cause and effect, relative importance, complexity, length, and so on. (For more principles of order, see 7.2.5.) Don't be afraid to play around with this storyboard: it's not your final plan, just a way to guide your thinking, plan your research, and organize what you find.

### 3.2.3

#### Sketch in the Kind of Evidence You Should Look For

Every field likes to see its own kinds of evidence. Psychologists, economists, and sociologists look for numbers. Literary scholars want quotations. Field biologists like to see observations, pictures, and diagrams. So for each reason, sketch the *kind* of evidence that you think you'll need to support it.

Although you may be used to finding all of your evidence in the form of quotations from secondary sources, focus here on *primary* evidence from primary sources (see 4.1.1). Don't read *about* the Gettysburg Address; get a copy. And don't neglect quantitative data. You have more access to good data than ever before, and it is not acceptable to offer as evidence your mere observation that more women are attending college when with one quick search you can find U.S. census data showing that from 1994 to 2004 the number of women with a college degree increased by 7 percent.

If you can't imagine the kind of evidence you'll need, leave that part of the page blank.

#### WORKING IN GROUPS

##### Tell and Retell Your Elevator Story

As soon as you have a working hypothesis and a few reasons, create an elevator story. Imagine that you step in an elevator and find your teacher, who asks, "So, how's the paper going? What do you expect to say?" You have only a couple of floors to sum up where you are. Early on, you can use this plan:

I am working on the problem of [state your question].

I think I can show that [state your hypothesis] because [state your reasons].

My best evidence is [summarize your evidence].

If you have a writing group, have everyone tell their elevator story at the start of every meeting. If not, tell yours to anyone who will listen—even your dog will do. As you learn more and your argument develops, refine your elevator story and tell it again. The more often you encapsulate your argument in an elevator story, the sooner your paper will come together.