Writing Processes

All writing and research has a context. Just as the different elements of the rhetorical situation (purpose, audience, author, and topic) affect a topic or research question, the rhetorical situation influences research processes and the writing of their results. For example, if your instructor says that you will need at least two academic journal articles to support the argument you present in your paper, then your research will probably focus (at least at first) on finding academic journal articles. Similarly, in the example on the next page, if Qi knows that he wants to attend a school in New York City, his research will be limited to schools within that area.

You will also likely be influenced by the subject matter that you are researching and writing about. Imagine that you are conducting a study in a physics class on the Doppler effect. Your research process will be influenced by the accepted research practices in the field of physics, and your final written product will probably need to follow a specified format for a laboratory report.

We'll explore

- myths about writing and research processes
- classical writing processes
- contemporary writing processes
- basic research processes

Research in Action

Author: Qi wants to come to the United States, New York City (NYC) specifically, to go to college. He has time to do research before coming to NYC, and he will be in NYC for six months before starting school.

Topic: Of the multitude of colleges in NYC that Qi could attend, which one should he choose and why?

Audience: Although Qi is the primary audience for his research and decision making, there are other stakeholders who are invested in his topic. Qi's family, especially if they are paying for a portion of his schooling, care tremendously about which school he attends. Also, many other international students who may want to come to the United States for college might be interested in his ultimate decision as well as his criteria and processes for selecting a college.

Purpose: Qi has to select the most appropriate college to attend with some of the following considerations: cost of tuition for an international student, language instruction and support because he is still learning English, commute time because he will not live in NYC proper, and curriculum—he wants to study to be an engineer.

Questions

1. What elements of Qi's rhetorical situation affect his research process?

2. What is going on in Qi's life that affects his research process? What resources does Qi have that will help him?

3. What obstacles might Qi have in his research process? What unexpected opportunities?

4. Can you imagine other aspects of the rhetorical situation that would affect researching, writing, and sharing the results of research in this case?

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Myths about Writing and Research Processes

Writing and research processes are often described in simple, one-size-fits-all formulas, but no formula will fit every writing and research situation you might encounter. Although it can be helpful to start a project by following a formulaic research and writing process, you will often discover that you need to repeat some steps, skip others, and occasionally loop back to the beginning again. Not all research follows the scientific method, and even when it does, the scientific method is often a much messier process than the charts in elementary school led us to believe. Similarly, not all writing follows the step-by-step process of prewriting, drafting, revising, editing, and publishing. You might get to the editing stage, show the paper to a friend, and then realize that you need to start over from square one. Writing and research processes need to be flexible enough to meet the needs of each rhetorical situation. This research guide will introduce you to a variety of strategies and tools that you can use in research and writing. Our hope is that you will adapt these tools to help you address your specific research projects.

Before you get started, however, you should have realistic expectations of what your research and writing processes might look like. Many of us carry around common myths about writing and research in our minds, but those myths don't measure up to the reality of what we encounter as we start working. If you first recognize those myths as unrealistic, then you can avoid a lot of frustration later.

▷ **Myth 1: You must complete each step in the writing process.** The writing process is often described as linear, as shown in Figure 2.1. In this representation, writing is a simple process where you start at the top, with prewriting (or invention), systematically work your way down through each step, and finish with a perfectly written product. Writing often does not happen this way, though. We don't intend to say that people cannot, or do not, sometimes follow these steps in this order and finish with an effective piece of writing. In fact, this textbook presents a process of working through a major research project that appears to be linear, presenting one step at a time, chapter by chapter. Although we have a plan in mind, most of the time the actual process is much messier.

You already know that many casual writing situations do not require every step outlined in Figure 2.1. For example, a grocery list might require revising, especially to make sure everything is on the list. If someone else is going to do the shopping, you might also proofread the list before giving it to him or her, revising the list for clarity based on the new audience. But your prewriting and researching might be collapsed into one step as you flip through your stack of recipe cards and start to draft the list. One way you can make the writing process flexible enough to work for a specific rhetorical situation is by following the steps that are needed for a given writing task. Give yourself the freedom to skip steps if they are not necessary or to repeat steps if some require additional time (Figure 2.2).

Figure 2.1 Mythical Writing and Research Process

Myth 2: Each step is equally important and time-consuming. The linear image of the writing process also gives the faulty impression that each step involved in the process will take the same amount of time, energy, and work. Depending on the demands of the writing project and the rhetorical situation, you may spend lots of time in one area and very little in another (Figure 2.2). A student writing an essay in an exam for school may not spend as much time editing as drafting and revising. If you were conducting research on an upcoming election to determine which candidates to vote for, you might casually publish results in a posting on Facebook for your friends (if you choose to publish the results at all). For a sociologist studying demographic trends in elections, the majority of time might be spent conducting surveys and collecting empirical data, making the research portion of the process much larger and more time-consuming than other steps. Finally, not only can the steps of the process take varying amounts of time and energy, but your process could also change or shift in the middle of a project as a result of the process itself and what you have found in your research so far.

Myth 3: The steps are linear. Many people bounce back and forth among the steps, rather than proceed on a straight, one-way path (Figure 2.2). Your initial research might bring up some issues you had not considered, and so you need to move to a different step in the process. Likewise, many writers find that once they start drafting, or once someone else looks over their project, a large gap becomes evident and they need to go back to the invention or research stage. They might return to the peer review stage again after making revisions. The research of scientists publishing in the online journal *PloS One* (http://www.plosone.org), for instance, is subject to an initial peer review that determines whether the work is technically sound. Then the article is published online and opened up to peer review by the broader scientific community to determine the significance of the work. In this case, peer review happens at several stages, but the most public and significant portion of the peer review happens post-publication.

Although it is easier to teach and talk about writing and research as single, linear processes, in reality, writing and research processes are all variations on the theme of the mythical, linear process. Very rarely does research happen in a linear fashion and when it does, the researcher has usually missed something. Take this example from everyday life: While answering "What do I need from the grocery store?" you might refer to the household's weekly menu and refer to cookbooks for items on that menu. However, if you do not also check what is, or is not, in the refrigerator or cupboard, you could find multiple trips to the grocery store in your future. You might go several times from the list, to the refrigerator, to a couple of recipes, and to the coupons in the newspaper before finally answering your original question.

Good writers and researchers are aware of these recursive steps and even more aware of their rhetorical situations. Effective writers and
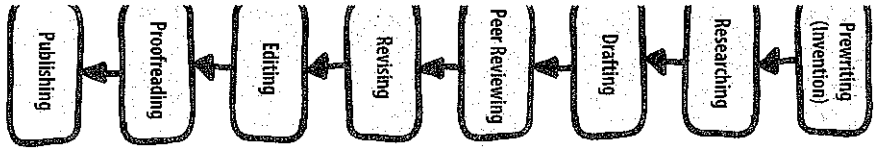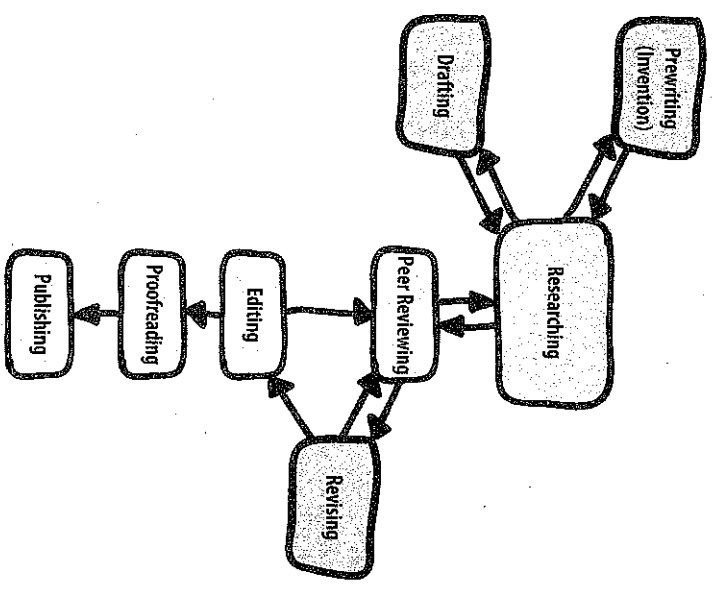

Figure 2.2 More Realistic Version of Writing and Research Process (Actual Experience May Vary)

researchers allow the individual rhetorical situation to influence their processes for every project and help them determine what step to take next. Writers have several processes to choose from when working on a writing project. The more you know about the options you have in tackling a research and writing project, the more successful you can be in completing it.

Elements of Writing Processes

You may have encountered descriptions of "the writing process" in classes you have taken. A listing of the steps of the writing process might include those shown in Figure 2.1: invention or prewriting, researching, drafting, peer reviewing, revising, editing, proofreading, and publishing. Some of these steps relate loosely to principles of classical rhetoric, and it is helpful to understand where some of these ideas came from. As you develop your own successful writing processes, you might find that a combination of some of these approaches will work best in certain situations.

Foundations in Classical Rhetoric

Aristotle defined rhetoric as "finding the available means of persuasion." He acknowledged that although you may not use all of the information and materials you have discovered and developed, it is important to identify a wide range of choices. Ancient Greek and Roman rhetoricians kept the purpose of writing (or speaking) in mind and the

audience to whom it would be delivered, and this understanding of the rhetorical situation governed the ways they developed an argument. The Five Canons of Rhetoric these rhetoricians developed address important aspects of writing that you will need to consider as you work on your own research project.

- *Invention* refers to discovering and developing the possible arguments that might persuade an audience. Invention was of the utmost importance to ancient rhetoricians because it is the stage where the author discovers what he or she will say.
- *Arrangement* refers to the order in which an author might present the information found during the invention stage.
- *Style* addresses how the author says what he or she has to say.
- *Memory* refers both to the memorization of a speech that will be delivered or performed and to the memorization of the commonplaces that the author can recall to assist with the first stage of invention.
- *Delivery* deals with how something is presented, or delivered, to the audience. Today we might relate delivery to the publishing of a piece of writing. (Presenting a piece of writing is discussed in the Part 3 DIY on pages 215–240.)

Some of the canons may be more important to you than others, and in writing classes we often use specific strategies to break them down into manageable chunks.

Invention

Aristotle's emphasis on finding the "available means of persuasion" places a high importance on the canon of invention, and this book helps you work through the stages of invention in your own research and writing. Invention is similar to what you might have referred to as prewriting, a stage where the author (or *rhetor*) brainstorms, researches, and "invents" possible ideas and arguments. In this book, we prefer the term *invention* to *prewriting* because these kinds of activities can be useful at several stages of the writing process—not just before you start drafting. If we return to Qi from the beginning of the chapter, he might do some brainstorming about schools that he has heard of or read about at the beginning of his research process. But imagine that he has started drafting a letter to his parents about his top three schools after arriving in the United States, and then a friend mentions another school and program that he has not heard of. He might go back to the invention stage and do a little more brainstorming before he continues to draft his letter.

Careful and thorough invention leads to effective writing. You might have noticed that much of the research process contributes to invention—research itself is a means of discovering what you want to say. As you work through the activities in this text, you'll notice that many of the "Write" activities help you with invention. We want to encourage you to think thoroughly about what you are going to say before you commit to a finished written product, and we believe that invention provides support for all stages of a writing process.

If you have ever been asked to write definition, comparison, or cause/effect papers, your instructor was relying on common topics, or *commonplaces*, derived from ancient rhetoric. (These topics are also called *topoi*.) The commonplaces help you generate ideas and argument by prompting you to think about how you might define your issue, what you might compare it to, and what the causes and effects are. Patterns of development based on commonplaces are discussed in more detail in Chapter 10.

During invention, writers try to explore and focus their topics. Even with the common use of computers and word-processing programs, many writers do a lot of their invention by hand with pen and paper. Exploring a topic or idea in a different modality from text can help the author "see" the topic in a different way, so many invention activities are visual.

Common invention activities that you might be familiar with include brainstorming or listing, journaling, freewriting, looping, cluster mapping, asking journalistic questions, and outlining. You may be used to thinking about using these kinds of activities only at the beginning stages of working on a research or writing project, but the majority can be used at the many points in your writing process. Because several of these activities can be particularly useful at specific stages of a writing process, we'll suggest certain invention activities as we discuss each stage. Keep in mind that invention activities can be mixed and matched as well.

Brainstorming or Listing   Brainstorming, or listing, is generating a list of ideas on a certain topic. Sometimes brainstorming takes place for a set period of time, and sometimes the goal is to come up with a certain number of possible ideas (or as many as possible). When we brainstorm, we know that some of the ideas might be discarded, but the purpose is to open up our minds to possibilities.

Many writers use brainstorming or listing activities to explore what they already know about a given topic. For example, when a student is first assigned a paper topic, she might brainstorm everything she knows about it. While brainstorming or listing, do not let your internal censor keep you from adding something to your list; in other words, keep your mind open to all ideas that might relate to your topic.

Brainstorming or listing can be helpful at the beginning of a project to choose a topic or to identify what you already know. It can also be useful during the middle of a research project so that you can list everything you have learned. It may even be useful to compare your pre-research brainstorming with your post-research listing; you will be able to identify what you've learned, what you may still want to research, and how your thinking has begun to shift.

Imagine that you are researching air pollution in the city that you live in. You could try brainstorming a list of possible causes that you know about, and it might look something like this:

- car exhaust
- poor mass transit in city
- lack of rain this year
- increased population
- industrial emissions

Once you have this initial list, you might also look at a few resources to see what you should add to your list.

Listing can also be useful when thinking about your writing project's purpose and audience, especially when identifying all of the purposes and audiences that your topic might address. Lists can then become checklists to verify that your writing project includes all of the information that your specific purpose and audience might require.

Brainstorming and listing can easily be done with traditional pen and paper or on the computer. Either way, it's a good idea to save your results in a notebook or computer file so that you can return to them later in your project.

The following are examples of brainstorming or listing activities that you might find helpful in your research process.

- Chapter 3: page 41, "Write: Analyze the Rhetorical Situation" is an example of using listing within a structured space; the activity asks you to fill in the blanks of a chart.
- Chapter 3: page 42, "Write: Find Out What's Important to You"
- Chapter 3: page 46, "Write: Focus Your Research Topic"
- Chapter 4: page 75, "Write: Develop a List of Search Terms"

Researching

Much like invention, research can be useful at any stage of your writing process. Research might include gathering information from resources found online or in the library, in the form of secondary research, or it might include gathering data firsthand through activities such as interviewing people, observing, or distributing and collecting questionnaires, as in primary research. As we discuss in more detail in Chapter 7, tracking your research is an important part of this step.

Journaling Journaling can be very helpful in organizing a research project, and it can be an effective way to track your research. A journal is a collection of writing, composed of multiple entries, all generally related to the same topic. Therefore, it is a good idea to start a journal for any major research project that you undertake. In the journal (or you might try a blog if you would like to journal electronically), you can keep the following types of entries:

- any of the other writing activities suggested in this chapter
- an annotated bibliography or other notes about the resources you find
- timelines and checklists to help organize your research process
- reflections on research and/or writing sessions
- notes about discussions you've had with other people on the topic
- drafts of your writing
- any other ideas that you find relevant or interesting as you work through your research

By using a journal, you will keep everything related to your research project in one place. Whenever you are stuck on your project, look over the various entries in your journal to remind yourself of what you need to do and why this project is important to you.

To help keep your journal entries organized, it is generally a good idea to include the following information in every entry:

- the date of your entry
- a title that briefly describes your entry
- blank space to make more comments about the entry at a later date

Nearly all of the activities included in the "Reflect" and "Write" sections in this book could be considered journaling activities. Here are a few examples that could help you get started on journaling and see some of the ways that it can be used in your research.

- Chapter 1: page 6, "Reflect: How Have You Conducted Research Before?"
- Chapter 2: page 35, "Reflect: What Are Your Writing Idiosyncrasies?"
- Chapter 1: page 14, "Write: Discover Disciplinary Patterns and Conventions"
- Chapter 3: page 39, "Write: Identify Kairos"
- Chapter 3: page 45, "Reflect: How Can I Make a Topic Manageable?"
- Chapter 5: page 110, "Reflect: What Does Your Research Plan Look Like Now?"

Drafting

Depending on your rhetorical situation and writing preferences, you might find that you like to start with drafting and that sitting down to write actually helps you generate ideas. Drafting includes any part of your writing process that involves generating text that you could imagine ending up in a final version.

As you draft, you might prefer to start with a blank screen. Or, you might take all of the relevant invention activities that you've completed and try to weave them together (thus avoiding the blank screen). Invention and drafting are very closely related, and if you are doing invention from the beginning of your writing process, you probably are doing some drafting as well.

Freewriting At one point or another, most writers have had writer's block. And almost all writers agree that the way to get over writer's block is just to write. Freewriting is a strategy to get yourself "just writing"—you simply sit down at your computer (or with a pen and paper) and write anything that comes to mind on your topic. During freewriting sessions, like brainstorming and listing, turn off your internal censor and just get words on the page or screen.

To get going, many writers give themselves a brief topic or question and then set a time limit (usually five to fifteen minutes). Then they force themselves to write the entire time, no matter where their mind wanders. And if they get stuck, they can just write the same word or phrase over and over until they get new ideas or go back to the beginning idea or question and start over. The purpose of freewriting is just to get words down on paper or on screen.

Much of the writing produced during a freewriting session will never see final print or publication. Instead, this writing is meant to help the author think through elements of his or her project. At the beginning stage of a project, freewriting can be useful for exploring initial thoughts and feelings about a topic. During the research process, freewriting can help researchers make connections among multiple resources. And during the drafting stage, freewriting can help authors work through writer's block and get started with different sections of their projects.

Although you can easily freewrite with pen and paper, freewriting with a word processor on the computer definitely offers some advantages. For example, some writers turn off the monitor when they freewrite, or they might make the font color white so that they can't see what they are writing on the screen. When the text is not visible, writers are not distracted by what they've already typed, and they are not looking for misspellings or grammatical errors.

The following are examples of freewriting activities that you might find helpful in your research process.

- Chapter 3: page 43, "Write: Consider Audience and Purpose"
- Chapter 3: page 44, "Techno Tip: Use the Internet to Explore a Possible Topic"
- Chapter 10: page 210, "Write: Draft an Effective Introduction"
- Chapter 10: page 211, "Write: Develop Closure"

Looping Looping is an activity that writers usually use after freewriting, brainstorming, or listing. Once a writer has concluded one of these writing sessions, she could read the paragraph or list and look for one or two "hot spots" that resonate with her. They might spark her interest or surprise her. The point of looping is to discover a new perspective on your topic or to focus your thinking by taking that idea or phrase and making it the focal point for another round of freewriting, brainstorming, or listing. Looping is also another way to combat writer's block, and it's a good way to focus a topic if your initial subject matter is too broad. Looping might also help you work through connections in ideas and resources so that you can better arrange them in your writing.

Let's imagine that you were going to do a looping exercise with your list about air pollution from earlier in the chapter. The list of possible causes for air pollution looked like this:

- car exhaust
- poor mass transit in city
- lack of rain this year
- increased population
- industrial emissions

After completing this list, you might choose one of these to explore in more detail. You could copy and paste it and then freewrite or list for a while and see what you come up with. For example, if you chose to pursue increased population, you might write something like this:

Phoenix, Arizona, has one of the fastest growing populations in the country, especially in the suburbs surrounding the city. Several of the other items on the list come from the increase in population. For example, with more people driving, we have an increase in car exhaust that is contributing to the pollution problem. People are also resistant to carpooling here.

You can see that some of the ideas in this section overlap with ideas in the original list—that's okay. A looping activity might reveal ideas you hadn't considered, and it might help you come up with connections between ideas that you hadn't thought of before.

You can use any writing tool for looping: paper and pen, computer, blackboard, or whiteboard. Loop with whatever tools you used for your initial writing. If you use a word processor, you can use different colors, fonts, or highlighting options to identify hot spots, and then you can cut and paste before you start writing again.

The following are examples of looping activities that you might find helpful in your research process.

Cluster Mapping Clustering is a more visual activity than the methods already discussed; it helps writers see their work in a different manner. After producing a brainstorm or list, writers group like elements from their lists. After conducting research, writers
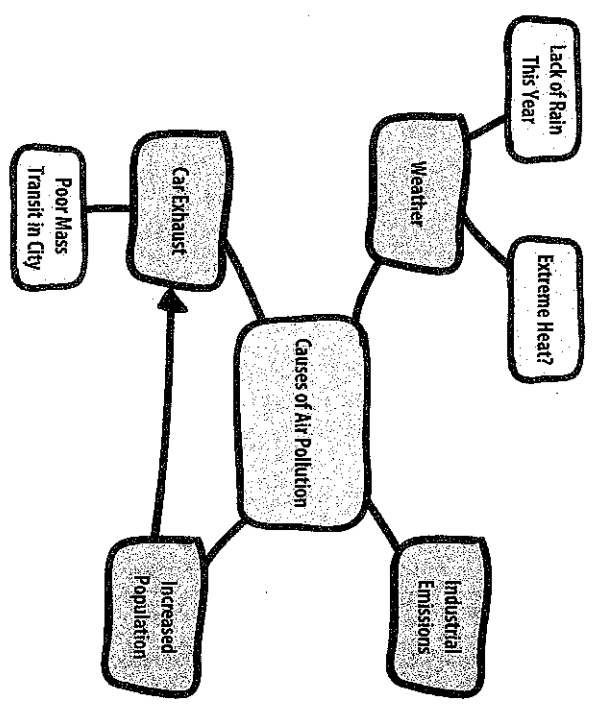
Figure 2.5

cluster resources that contain similar perspectives or ideas. If juggling multiple purposes and audiences, writers cluster the results of a detailed analysis of wants and needs.

Cluster-mapping exercises help writers and researchers not only to group like elements but also to understand connections among the groups. After grouping like elements, writers can draw lines connecting groups and describe the types of connections. Some cluster maps show hierarchies, like family trees. Others show working relationships, like flow charts. Some writers represent the size of each cluster in relation to other clusters so they know whether an area might not have enough ideas or examples to support it.

If we were to draw a cluster map of our air pollution example, it might look something like Figure 2.5. Cluster mapping can be done in a variety of modes. You can easily use paper and pen, maybe even many different colored pens, to group elements and map out connections. There are also a variety of computer and web-based programs that allow you to develop different types of cluster maps. Sometimes it helps to physically work with the elements, or groups of elements, by putting them on index cards or sticky notes that you can shuffle and rearrange as you explore different groups and connections.

The following are examples of cluster-mapping activities that you might find helpful in your research process.

reflect

How Do You Write Best?

Answer the following questions as you think about your writing preferences. You might consider all kinds of situations, but especially focus on intense writing tasks that you have completed such as academic writing and research assignments. Understanding your preferences might make it easier to tackle the drafting stage.

▷ Where do you like to write? Do you like to write at home? in a certain room? Do you like to go somewhere specific to write? Would you rather write indoors or outdoors?

▷ What kind of environment do you like to write in? Do you like to be around other people? Do you like to be alone? Do you like to have "noise" in the background (such as music, television, other people), or do you like to have a quiet environment?

▷ When do you like to write? At what time of day do you like to write?

▷ Do you prefer to write on the computer or on paper? Why?

▷ If you prefer to write on the computer, what software program do you use? Do you have other programs or applications open when you write? If so, which ones?

▷ If you prefer to write on paper, what kind of paper do you use? Do you write in a notebook? Do you use pen or pencil?

▷ Do you follow any special rituals when you write? Do you have a favorite place to sit? Do you like to have a cup of coffee next to you?

▷ Do you generally share your writing with others?

▷ If you share writing with others, what do you do with their comments? What kind of comments do you expect?

▷ Do you like to outline your ideas first? Do you draft first? In other words, what is the first step you take when you write?

▷ Where do you start writing? Do you start at the beginning? the end? somewhere in the middle? If there's a title, do you write it first or last?

▷ How do you know when you are finished writing?

Share your preferences with a classmate or friend, and see if you gather any new ideas about writing situations that might work well for you. Keep these preferences in mind as you draft because you'll do your best writing in *your* optimal circumstances.

techno tip

Dictate Your Writing

If you have difficulty getting started on your writing, or if you struggle with getting your thoughts onto the page or screen, you could try using a voice recognition software program to dictate your thoughts and have them translated onto the screen into text. Many writers with dyslexia and dysgraphia find it useful to use a voice recognition software program at the beginning of the writing process. Dragon NaturallySpeaking is a popular voice recognition software program that is often used for dictating writing. You can download a free trial to see if it works well for you.

Asking Journalistic Questions   Whereas brainstorming is an open form of idea generation, journalistic questions focus writers and researchers on specific aspects of their topics. Traditional journalistic questions use the following words to develop a list of information-seeking questions.

▷ who

▷ what

▷ when

▷ why

▷ where

▷ how

Dedicated writers and researchers might critically explore their topics with multiple questions from each category. The purpose of using journalistic questions is to try to see and understand the topic from a variety of perspectives. Journalistic questions can also be used by a peer reviewer to help focus response to a draft.

The invention tactic of asking questions can be generalized beyond the traditional journalistic approach, however. Exploring the topic in any structured manner will help a writer and researcher get to know a topic and the relevant resources much better. Other organized methods of exploring include the following perspectives:

▷ spatial: inside to outside, top to bottom, left to right

▷ oppositional: for and against, compare and contrast, denotation and connotation

▷ relational: cause and effect, parts to a whole

As you are writing and researching, be sure to keep and revisit any focused questioning activity. Many times thinking gets stuck in a rut; however, if you revisit your focused activity a few hours or days later, you might come up with different questions as well as different answers.

The following are examples of activities that use journalistic questions that you might find helpful in your research process.

Peer Review

During the peer review stage you get to see your writing through the eyes of your audience, or an approximated audience, a luxury that you often don't have when you hand in writing for an assignment or send it out to be published. In a peer review workshop, you might be asked to read and comment on the work of another classmate while he or she reads and comments on yours. If you are in a work environment, you might share what you have written with a colleague who is knowledgeable about your project or who will be able to help you imagine how your audience would respond to what you have written. You might even share writing with friends or family members for feedback. Anytime you ask someone who is not formally evaluating your work to read it with the intention of commenting on it or helping you to see it from another person's perspective, you are participating in a kind of peer review.

Peer review is not the same thing as proofreading. Peer review includes reading and commenting on more global features of a piece of writing, like the development of ideas or the evidence used to support an argument; proofreading generally focuses on surface features such as correct use of grammar and consistent adherence to a particular citation style. The three types of changes you might make to your draft as you polish and refine it for publication are typically revising, editing, and proofreading. Peer review could include gathering comments and feedback on all three of these areas.

You might already have experience with peer review from a previous class. Unfortunately, many students report having unfavorable impressions of peer review, often because they didn't receive useful feedback from their peers. If you have ever had a classmate write something like "This looks good to me," during a peer review, or if you've had peers give you conflicting feedback, you might have an unfavorable impression as well.

The key to good peer review is asking the right questions of your peers and helping them understand what kind of feedback you need. Depending on your stage in the writing process, you might need different kinds of feedback. If you are at an early stage of writing, or if you don't have any specific criteria for the project you are working on, you might try variations of the following questions:

- What works well in this piece of writing?
- What did you want to know more about as you read?
- What was unclear in this piece of writing?
- What suggestions would you make for a revision?

These questions will prompt peer reviewers to give a balanced response, discussing things that you did well and things to consider in a revision. You might also draft some questions based on the specifics of your rhetorical situation. For example, have you done an adequate job of addressing the interests and expectations of your audience? If you were writing an annual report for your job, did you provide the information your superiors would be expecting? Are there other issues they might want to see addressed in the report?

Try following these guidelines the next time you participate in a peer review:

- Ask for both positive comments and constructive feedback. It's helpful to know what you're doing well—not just what you should revise.

- Ask your peer to ask questions if there are things he or she finds confusing in the text. Questions invite a response, and responding to questions written on your draft during a peer review will help you begin revising.

- If you have specific criteria for an assignment or project you are working on, ask your peer to address each of the criteria in his or her review. If there are numerous criteria to consider, perhaps have several peers read your work and have each one look at separate criteria.

- Finally, offer to review your peers' work as well. When you write a response for one of your peers, write the kind of review that would be helpful to you.

Outlining   Like cluster mapping, outlining is an activity that helps you to organize materials into meaningful patterns and relationships. Outlines can also be an effective method of peer review, helping a peer reviewer think about the arrangement of an argument. Outlines hierarchically group like topics, and detailed outlines begin to describe relationships between the groups. Writers might take the results of an initial brainstorming activity that explored what they already knew about a topic and try to outline the results so they can identify areas they need to learn more about. Many researchers use outlines as a predrafting technique to lay out what they are going to say and then plug in the various resources that they will include. A writer could then take that outline and start writing from easily manageable parts. For example, Chapter 7 of this book developed from this outline:

Formal Outline of Chapter 7

I. Copyright
   A. Fair Use
   B. Ideas vs. Words
II. Plagiarism
   A. Blatant Plagiarism
   B. Careless Plagiarism
III. Integrating Resources into Your Argument
   A. Introduction of the Resource
   B. Incorporation of the Data
      1. Quotations from Resources
      2. Summarizing and Paraphrasing Revisited
   C. Interpreting the Resource
   D. Documenting the Resource
      1. What to Cite
      2. How to Cite
      3. In-Text Citations
      4. Full Bibliographic Citations

By breaking the chapter into smaller parts, the authors were able to make the task manageable instead of being overwhelmed by it.

You might choose to write your outline in one of three ways: a formal outline, a sentence outline, or a scratch outline. The outline from Chapter 7 is a formal outline, with Roman numerals and carefully numbered headings and subpoints. You might choose instead to write a sentence outline, where each point is developed into a full sentence

Such an outline will really help you get started on drafting. Written as a sentence outline, the first part of the Chapter 7 outline would look like this:

Sentence Outline of First Part of Chapter 7

I. Copyright laws regulate the use of a particular expression of an idea.
  A. Fair Use allows individuals to copy small portions of texts so that they may use them in other contexts, especially research and education.
  B. Copyright technically protects the expression of an idea, not the idea itself.
II. Plagiarism is copying work from another resource without documenting it.
  A. Blatant plagiarism is knowingly copying sections of other resources and submitting them as your own work.
  B. Careless plagiarism is using information from an outside resource without documentation because you think it is common knowledge or you do not adequately document the source.

At early stages of your writing and research, you might find a scratch outline to be sufficient. A scratch outline casually lists ideas in the order that you would discuss them without concern for headers and subpoints. A scratch outline for that same section of Chapter 7 might look something like this:

Scratch Outline of First Part of Chapter 7

Copyright laws
Fair use
What copyright protects
What copyright doesn't protect
Types of plagiarism
Blatant
Careless

You might experiment with a more formal outline and a less formal one to see what works best for you, and you might find that different kinds of outlines work at different stages of your research and writing process. As a peer reviewer, you might try drafting a scratch outline or more formal outline of the paper you are reviewing. An outline done during peer review can help you let the author know how you are reading his or her argument, whether you are making the connections he or she hopes you will, and whether each premise is supported by appropriate evidence.

As with cluster mapping, outlining helps you not only to organize your materials but also to evaluate the amount of ideas, resources, or support that you have for each category. If you only have one or two pieces of evidence for a particular category, and all the rest have more support, you may need to do more research or alter your inclusion of that category in your final project.

The following are examples of outlining activities that you might find helpful in your research process. Keep in mind that most word processors have numbering or listing tools that begin to label subcategories that you make in your outline when you indent the appropriate lines.

techno tip

Conduct Peer Reviews

Several technological tools can facilitate peer review, either in a classroom setting or in a work environment. If you have access to different kinds of technology, you might try one of the following variations on peer review:

▷ If you are using a software program such as Microsoft Word®, try using the "Insert Comment" feature to comment on specific parts of the text. If you have time, have several peers electronically comment on the same document. If you switch computers, be certain to update your user information in the word processor before entering your comments.

▷ If you have access to a closed discussion board for your class or workplace, you could post a draft of what you are working on with specific questions for peer review. Then your peers can post their responses.

▷ If you are comfortable using instant messaging software, you could schedule a chat with the peer(s) who read your writing. Chats work best one-on-one or, if you have access to a chat room, in very small groups. If you include more than four people, the feedback can be difficult to process in a chat environment.

> For an interactive tutorial about peer reviewing technologies, go to *Student Resources* in your English CourseMate accessed through cengagebrain.com.

Revising

Revising your writing generally refers to larger-scale changes you make to a document. As you revise, you will probably focus on the content of your writing. Revision can be challenging, especially when you have worked very hard on your original draft. You might be reluctant to delete things that you spent time writing, but revising is an act of refining. Sometimes revision will require the addition of ideas, sometimes movement, and sometimes deletion. The Nobel Prize–winning writer Elie Wiesel wrote that "Writing is not like painting where you add. . . . Writing is more like a sculpture where you remove, you eliminate in order to make the work visible." The important thing is to keep an open mind, and sometimes that requires having distance from what you have written. Having some time between drafting and revising will also help you to see your writing with new eyes (re-vision).

Editing

Similar to revision, editing is a way of refining and polishing your paper. When you edit, however, your focus is not on the larger-scale issues of content and organization but rather on issues of style and fluidity. Editing might include looking at your use of transitions, for example, to help the reader follow your train of thought in a piece of writing. You also might look at sentence variety in your writing or the overall tone of your piece. As you edit, you could pay attention to consistency in your writing. Try reading your essay out loud to "hear" how it sounds and how the language flows.

It can be helpful to read your own essay aloud to hear how it sounds; and it can sometimes be even more beneficial to hear someone else read it: either reading will help you to notice things that you otherwise might not notice when editing silently. If you feel uncomfortable having someone read to you, however, or if you simply don't have someone you can ask to do it, you can have your computer read your essay to you. Granted, it's not quite the same thing, and the computer is not going to tell you when something doesn't "sound right." The computer also won't stumble over things that are awkward—it will just plow right on through. But hearing the computer read your writing is a very different experience from reading it yourself. If you have never tried it, you might find that you notice areas for revision, editing, and proofreading that you didn't notice before. You can download a free trial version of ReadPlease, a software package that will read your writing to you, at http://www.readplease.com.

Read Your Writing Out Loud

Proofreading

Many instructors combine editing and proofreading under one label. They are separated here, however, because we want to highlight that there are several different steps to polishing your writing. In addition to looking at issues of style and fluidity when you edit, you will also need to proofread your work, focusing on surface features such as grammar, punctuation, and citations. Obviously, you can do a first round of proofreading by yourself, perhaps referring to the spelling and grammar checkers that are built into most word-processing programs. However, you need to be aware that they will not catch all of the errors in your paper. For example, many of them are "dumb" and do not know whether your sentence needs *there, their,* or *they're.* Automated grammar and spelling checkers might be a good place to start proofreading your writing, but you won't want to stop there for most rhetorical situations. If you are working on a piece of writing that needs to be polished in its final draft, you definitely will want to proofread carefully yourself and also have someone else proofread your paper.

What Are Your Writing Idiosyncrasies?

Over time, most people realize that they have a writing style that tends to rely on certain words and sentence structures, and they tend to make the same errors over and over again. For example, when one of the authors was in college she had an instructor who repeatedly marked her papers for passive voice. She spent an entire semester focusing on learning what passive voice was, how it functioned in a sentence, how to identify it in a sentence, and how to correct it. Now she is very aware of when she uses passive voice and only uses it to make a specific point in her writing. This was a trouble spot that she identified and keeps track of in her writing.

Answer the following questions to start a list of the idiosyncrasies of your writing style.

» What have friends, family members, and instructors identified as strengths in your writing? What have they said that you do well?

» What words, phrases, or sentence styles do you find yourself repeating in your writing?

» What things do you always find yourself correcting in your own writing? What things have friends and family members politely corrected for you?

» If you still have them, pull out graded writing assignments from past classes. Read through the comments. What common themes run through the comments?

» What parts of your own writing (paragraphs, complex sentences, semicolons, passive voice, etc.) do you already know you should spend some time focusing on and improving?

If you know you have problems in a specific area, ask someone to pay close attention to it when he or she is peer reviewing your writing. If you tend to overuse certain words or sentence styles, consider checking to make sure that you add variety to your writing. Also use this list to help you select one aspect of your writing that you would like to work on improving during a specific amount of time (perhaps during a semester). Consider sharing this list with your instructor to discuss methods that might help you address specific trouble areas.

Publishing

Once you have brainstormed, researched, drafted, revised, rethought, edited, drafted again, edited, and proofread (whew!), you will be ready to publish your writing. Publishing could include a variety of ways of presenting your writing to your readers. For example, you might print a paper and turn it in to your instructor. Or you might upload your research onto a web site. Or you might send an article to a newspaper. Or you might turn in a report to your supervisor at work. Your choice of publication method will be influenced, of course, by your rhetorical situation. The final "publication" of Qi's research and writing at the beginning of the chapter would likely be quite different from the final form of a paper that you might turn in for a class in school.

Introduction to Research Processes

Although *research* is listed as one of the possible steps in the list of contemporary writing processes, that step can be broken down into a series of smaller steps, or processes. And as we did with *writing processes,* we'll describe *research processes* throughout this book; however, realize that individual research processes are just as variable and dependent on rhetorical situations as writing processes. Although we present the steps as a list, and we put them in a specific order in this textbook, you should always adapt the approach you use for the specific writing/research project you are undertaking.

In Chapter 1 we mentioned that the simplest way to understand research is to remember that research answers a question. Many writing tasks qualify as research because they require the answering of a question—What do I need from the grocery store?—even though they do not feel like major research projects. When you take on a research project larger than a grocery list, however, there are five basic steps in research that you should follow:

1. Identify your topic/problem and develop a focused research question. (Chapter 3)
2. Assess what you know and what you need to know and develop a research plan. (Chapter 4)
3. Locate and document resources. (Chapters 4–7 and 11–15)
4. Analyze resources and develop the answer to your research question. (Chapters 8 and 9)
5. Present the answer to your research question while carefully citing your resources. (Chapters 9–11)

Many students make the mistake of simplifying their research process by focusing on step 3, locating resources. Without the careful preparation of steps 1 and 2, however, as well as the careful analysis and presentation of the results of your findings in steps 4 and 5, the work in step 3 can be completely overwhelming and not well represented in the results of the research project. Another way in which many students simplify the research process is by assuming that the only product of their research is the final report or presentation of the results. We hope you noticed that each step above includes an actual product (such as a research plan) that researchers should be developing as they work through the step.

This textbook will help you work through the five key steps of the research process for a variety of contexts, but you will need to adapt them to fit specific rhetorical situations. Chapter 3 will help you analyze your situation more closely and choose and focus a topic and research question.