CHAPTER 15

Analyzing Causes and Effects

“The act of writing is one of the most powerful problem-solving tools humans have at their disposal.”

—TOBY FULWILER

We are born with a natural curiosity. Wanting to know why things happen is one of our earliest, most basic instincts: Daddy, why is the sky blue? Closely related to this desire to understand why is our interest in what will happen as a result of some particular action: If I stay outside much longer, will I get a bad sunburn? In fact, thinking about causes and effects is not only part of human nature but also an advanced mental process and the basis for most decisions we make in life. When faced with a decision, we naturally consider it from different perspectives. If we choose option A, what will happen? What if we choose B—or C? In other words, we look at the possible results—the effects—of the choices and then make up our minds.

Analyzing causes and effects is also an essential part of our writing lives. We use cause-and-effect writing in our personal lives, in college, and in the marketplace:

• A volunteer for a mayor’s campaign designs a poster explaining how a vote for this candidate will benefit the city.

• In a paper for a psychology course, a student discusses the causes of schizophrenia.

• A student explains the effects of the Civil Rights Act of 1964 on a history exam.

• A sales representative writes a report to her manager explaining why she didn’t meet her sales
projections.

- The owner of a florist shop writes a letter of complaint to one of his suppliers about the negative effect of late deliveries on sales.

Analyzing causes and effects requires the ability to look for connections between two or more items or events and to analyze the reasons for those connections. As the name implies, this writing strategy is composed of two parts: cause and effect. To understand causes, we look in the past for reasons why something happened. To discover effects, we look to the future for possible results of an action. In other words, we break a situation into parts so we can look at the relationships between its parts and then reach conclusions that are logical and useful.

Understanding Cause and Effect

By now, you know the basics of analyzing causes and effects. To enhance your understanding, go to MyWritingLab.com, and click on Analyzing Causes & Effects. Then, watch the video(s) explaining this concept in more detail. When you feel you comprehend this method of thinking, test your level of understanding by completing the Recall, Apply, and Write activities in MyWritingLab. The Recall activity asks you to answer some general questions about what you just learned in the video(s); the Apply exercise requires you to read a cause/effect essay and answer questions about it; and the Write task provides you with several opportunities to practice using this new skill in your own writing. When you can write a good cause/effect essay, you are showing you have mastered this pattern of thought.

PREPARING TO WRITE A CAUSE/EFFECT ESSAY

In this book, preparing to write starts with reading. Learning how to read cause/effect essays
analytically will benefit your writing. Understanding how a reading selection actually works (in both form and content) will show you how to develop your own writing assignments. So, in the next few pages, you will read an effective cause/effect essay and then answer some questions to help you discover for yourself how the essay communicates its message.

**Reading a Cause/Effect Essay**

In “Why Do Schools Flunk Biology?,” Lynnell Hancock makes the point that education in the United States is stuck in the nineteenth century. She deals with both the causes and the effects of students’ ability to learn. What do you think of our educational system on the high school level? What do you think of the high school you attended?

Using a reading strategy is an effective way to learn how to read analytically. If you read analytically, you will more likely be able to write analytically. Reading analytically or critically will help you understand not only *what* the essay is saying but also *how* the author is saying it. The strategy you will apply to all the reading tasks in this chapter involves making connections among ideas in your reading material.

**READING CRITICALLY: MAKING CONNECTIONS IN A PROFESSIONAL ESSAY**

Distinguishing causes from effects is an important part of understanding a cause/effect essay. After the first reading of a cause/effect essay, divide a sheet of paper into two parts with a vertical line. Then as you read the essay for a second time, record the causes in the left column and the results on the right. Draw lines from each cause to its related effect (if applicable). Be prepared to explain the connection between your lists and the details in the essay.

**WHY DO SCHOOLS FLUNK BIOLOGY?**
Biology is a staple at most American high schools. Yet when it comes to the biology of the students themselves—how their brains develop and retain knowledge—school officials would rather not pay attention to the lessons. Can first graders handle French? What time should school start? Should music be cut? Biologists have some important evidence to offer. Not only are they ignored, but their findings are often turned upside down.

Force of habit rules the hallways and classrooms. Neither brain science nor education research has been able to free the majority of America’s schools from their nineteenth-century roots. If more administrators were tuned in to brain research, scientists argue, not only would schedules change, but subjects such as foreign language and geometry would be offered to much younger children. Music and gym would be daily requirements. Lectures, worksheets, and rote memorization would be replaced by hands-on materials, drama, and project work. And teachers would pay greater attention to children’s emotional connections to subjects. “We do more education research than anyone else in the world,” says Frank Vellutino, a professor of educational psychology at State University of New York at Albany, “and we ignore more as well.”

Plato once said that music “is a more potent instrument than any other for education.” Now scientists know why. Music, they believe, trains the brain for higher forms of thinking. Researchers at the University of California, Irvine, studied the power of music by observing two groups of preschoolers. One group took piano lessons and sang daily in chorus. The other did not. After
eight months the musical 3-year-olds were expert puzzlemasters, scoring 80 percent higher than their playmates did in spatial intelligence—the ability to visualize the world accurately.

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This skill later translates into complex math and engineering skills. “Early music training can enhance a child’s ability to reason,” says Irvine physicist Gordon Shaw. Yet music education is often the first “frill” to be cut when school budgets shrink. Schools on average have only one music teacher for every 500 children, according to the National Commission on Music Education.

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Then there’s gym—another expendable hour by most school standards. Only 36 percent of school children today are required to participate in daily physical education. Yet researchers now know that exercise is good not only for the heart. It also juices up the brain, feeding it nutrients in the form of glucose and increasing nerve connections—all of which make it easier for kids of all ages to learn. Neuroscientist William Greenough confirmed this by watching rats at his University of Illinois at Urbana–Champaign lab. One group did nothing. A second exercised on an automatic treadmill. A third was set loose in a Barnum & Bailey obstacle course requiring the rats to perform acrobatic feats. These “supersmart” rats grew “an enormous amount of gray matter” compared with their sedentary partners, says Greenough. Of course, children don’t ordinarily run such gantlets; still, Greenough believes, the results are significant. Numerous studies, he says, show that children who exercise regularly do better in school.

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The implication for schools goes beyond simple exercise. Children also need to be more
physically active in the classroom, not sitting quietly in their seats memorizing subtraction tables. Knowledge is retained longer if children connect not only aurally but emotionally and physically to the material, says University of Oregon education professor Robert Sylwester in *A Celebration of Neurons*.

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Good teachers know that lecturing on the American Revolution is far less effective than acting out a battle. Angles and dimensions are better understood if children chuck their work sheets and build a complex model to scale. The smell of the glue enters memory through one sensory system, the touch of the wood blocks another, the sight of the finished model still another. The brain then creates a multidimensional mental model of the experience—one easier to retrieve. “Explaining a smell,” says Sylwester, “is not as good as actually smelling it.”

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Scientists argue that children are capable of far more at younger ages than schools generally realize. People obviously continue learning their whole lives, but the optimum “windows of opportunity for learning” last until about the age of 10 or 12, says Harry Chugani of Wayne State University’s Children’s Hospital of Michigan. Chugani determined this by measuring the brain’s consumption of its chief energy source, glucose. (The more glucose it uses, the more active the brain.) Children’s brains, he observes, gobble up glucose at twice the adult rate from the age of 4 to puberty. So young brains are as primed as they’ll ever be to process new information. Complex subjects such as trigonometry or foreign language shouldn’t wait for puberty to be introduced. In fact, Chugani says, it’s far easier for an elementary-school child to hear and process a second language—and even speak it without an accent. Yet most U.S. districts wait until junior
Reform could begin at the beginning. Many sleep researchers now believe that most teens’ biological clocks are set later than those of their fellow humans. But high school starts at 7:30 a.m., usually to accommodate bus schedules. The result can be wasted class time for whole groups of kids. Making matters worse, many kids have trouble readjusting their natural sleep rhythm. Dr. Richard Allen of Johns Hopkins University found that teens went to sleep at the same time whether they had to be at school by 7:30 a.m. or 9:30 a.m. The later-to-rise teens not only get more sleep, he says; they also get better grades. The obvious solution would be to start school later when kids hit puberty. But at school, there’s what’s obvious, and then there’s tradition.

Why is this body of research rarely used in most American classrooms? Not many administrators or school-board members know it exists, says Linda Darling-Hammond, professor of education at Columbia University’s Teachers College. In most states, neither teachers nor administrators are required to know much about how children learn in order to be certified. What’s worse, she says, decisions to cut music or gym are often made by noneducators, whose concerns are more often monetary than educational. “Our school system was invented in the late 1800s, and little has changed,” she says. “Can you imagine if the medical profession ran this way?”

**Discovering How This Essay Works**

To help you recognize the elements that make this an effective cause/effect essay so you can
use them in your own writing, answer the following questions in as much detail as possible.

1. What is Hancock analyzing in this essay?

2. List two details or examples from this essay that support the essay’s main point.

3. List two cause/effect relationships that Hancock explains.

4. Do you feel Hancock gets to the real problems connected with why our educational system is lagging behind the times? Explain your answer.

5. How does Hancock organize the topics in her essay? Go to pages xxx–xxx in Chapter 6 to help you identify her method of organization.

WRITING A CAUSE/EFFECT ESSAY
Now that you have read and studied an essay, you will be writing one of your own. This section will help you generate a draft that you will then revise and edit in the third section of this chapter. It will guide you here through a careful reading of the writing assignment, give you several ways to generate ideas and choose a topic, and finally furnish you with concrete guidelines for writing an effective cause/effect essay. We encourage you to write notes and lists throughout this process so you can use them when you write a draft of your essay at the end of this section.

**Reading the Prompt**

Writing any essay starts with making sure you understand the writing assignment or “prompt.” An assignment attempts to “prompt” you to respond to a specific issue or question. The more completely you understand the prompt, the better paper you will create. So you want to learn how to read the essay assignment actively rather than passively. Applying the chapter reading strategy to your prompt is a good way to achieve this level of interaction.

**READING CRITICALLY: MAKING CONNECTIONS IN THE PROMPT**

What are the tasks you need to perform in the writing prompt that follows? Put a vertical line down the center of a blank sheet of paper, and list the assignment tasks on the left and what you need to do to complete those tasks on the right. Then write as many personal notes as you can in the margins of your lists. Finally, underline the key words for completing this assignment.

**Writing Prompt**

Write an essay analyzing one change you think is especially necessary in our high school
educational system. What caused the current problem as you see it? Why is this change necessary? What will be the results of this change? Write your analysis, following the guidelines for writing a cause/effect essay.

Thinking about the Prompt

Before you focus on a specific topic, you should generate as many ideas as you can so you have several to choose from. What can be improved in our educational system at the high school level? What do you want to change? What would be the possible results of these changes? What do you want to keep the same? Use one or more of the prewriting techniques you learned in Chapter 5 to generate ideas on this subject.

Guidelines for Writing a Cause/Effect Essay

When you write a cause/effect essay, your purpose is to give your readers some insight into the causes and effects of an event or a situation. Cause/effect writing is based on your ability to analyze. Good cause/effect essays follow a few simple guidelines. As you think about the topic you have chosen, read the following guidelines and continue to make lists and notes that you will use when you write your draft on this prompt. After each guideline is an explanation of how it functions in the reading selection at the beginning of this chapter so you can actually see how the element works in an essay.

1. Write a thesis statement that explains what you are analyzing. Cause/effect thinking requires you to look for connections between two or more situations. That is, you want to discover what caused an incident or what its results might be. Then you can focus on the causes (what made something else happen), the effects (the results), or some combination of the two.

   In the Reading: In her essay, Hancock puts her thesis statement at the end of her first paragraph: “Not only are they [the biology lessons] ignored, but their findings are often turned
upside down.” She goes on to say that if school administrators paid attention to research (the cause), we would see many changes (the effects), which she names. The rest of the essay examines each effect in detail.

**In Your Writing:** As you think about our educational system, what will you analyze in your essay? Write a rough draft of your thesis statement? Does this sentence say what you are going to analyze?

2. **Choose facts, details, and reasons to support your thesis statement.** Cause/effect essays are usually written to prove a specific point. As a result, your body paragraphs should consist mainly of facts, details, and reasons—not opinions. Your reader should be able to check what you are saying, and any opinions you include should be based on clear evidence.

**In the Reading:** Since Hancock sets out to prove that American education ignores research, she must name specific research studies that help prove her point. She breaks her subject into five areas: music, gym, teaching methods, curriculum (subjects studied), and school hours. She then cites evidence in each area. For example, in the area of music, she describes research at the University of California, Irvine; for gym, she discusses rat studies from the University of Illinois; for curriculum, she describes research done at Wayne State University’s Children’s Hospital.

Hancock also quotes many experts, such as Frank Vellutino, a professor of educational psychology at State University of New York at Albany (paragraph 2), and gives statistics from the National Commission on Music Education (paragraph 4). A reader could check every one of Hancock’s research studies, quotations, statistics, and observations (such as when most high schools begin classes in the morning). By providing facts and reasons rather
than opinions in her body paragraphs, Hancock proves her point—that American education is not paying attention to current research about learning.

In Your Writing: Use one of the prewriting techniques outlined in Chapter 5 to generate facts, details, and reasons on the topic you have chosen. Develop your notes as fully as possible so you can write a well-developed essay.

3. Do not mistake coincidence for cause or effect. If you get up every morning at 5:30 A.M., just before the sun rises, you cannot conclude that the sun rises because you get up. The relationship between these two events is coincidence. Confusing coincidence with cause and effect is faulty reasoning—reasoning that is not logical. To avoid errors in reasoning, you can look deeper into the issues connected with your subject. The more you search for real causes and effects, the less likely you will be misled by coincidence.

In the Reading: Hancock does not seem to mistake coincidence for cause or effect in any part of her essay. If, however, she had said that ignoring research on how teens learn has resulted in fewer students studying foreign languages today compared to 40 years ago, her reasoning would be faulty. She has no evidence to prove that the research about how students learn and the decline in students taking foreign languages in high school are related. It’s only a coincidence that the research has been ignored and that fewer students study foreign languages today.

In Your Writing: Annotate your prewriting notes with comments about causes and effects that are related. Make sure you are not basing any of your reasoning on coincidence.

4. Search for the real causes and effects connected with your subject. Just as you wouldn’t stop reading halfway through a good murder mystery, you shouldn’t stop too early in your
analysis of causes and effects. Keep digging. The first reasons or results you uncover often are not the real reasons or results. Suppose a character in a mystery novel dies by slipping in the shower. You should try to find out what caused the fall. A good detective who keeps digging might find that someone administered a drug overdose that caused the victim to fall in the shower. In other words, you are looking for the most basic cause or effect.

In the Reading: Through a large amount of evidence, Hancock shows us she has searched hard to discover the real causes and effects of why American education is lagging behind the times. She names two causes—administrators ignore research and noneducators make decisions about education—and then explains the effects of ignoring research in five areas of education.

In Your Writing: Do your prewriting notes include the real causes and effects for your topic? If you explore any of the items in your notes, would you discover deeper reasons for your conclusions about our educational system? Dig even further into this subject by making a list of causes and results related to your deductions so far.

5. Organize your essay so your readers can easily follow your analysis. Though it may be difficult to think through the causes and effects of a situation, organizing this type of essay is usually straightforward. Your thesis statement tells what you are going to analyze. Then your body paragraphs discuss the main causes or effects in the order they occurred, from one extreme to another, from general to particular, or from particular to general. You might, for example, use chronological order to show how one effect led to another and then to a third. Or you might move from the most important cause or effect to the least important. Your goal in a cause/effect essay is to get your readers to agree with you and see a certain issue or situation
the same way you do. To accomplish this purpose, your readers need to be able to follow what you are saying.

**In the Reading:** Hancock discusses five effects of ignoring research on how students learn, moving from particular to general. First, she deals with the two subjects school boards often cut for budgetary reasons—music and gym. From these specific classes, she moves to more general concerns—teaching methods and curriculum. Finally, she discusses high school hours, the most general topic of all. In other words, she organizes her essay from specific to general, moving from specific classes to the general logistics of the school day.

**In Your Writing:** How will you organize your essay: general to specific, specific to general, spatial, chronological, or from one extreme to another? (See Chapter 6 for explanations of these.) Is this method of organization the best choice for achieving your purpose? How will you arrange the details in your paragraphs? Reorganize your prewriting to fit your methods of organization so you are ready to write your essay.

**Writing a Draft of Your Essay**

Now is the time to collect all your reactions, your notes, your prewriting exercises, and your lists as you generate the first draft of your essay. You might want to review the professional essay, the writing assignment, and the chapter guidelines for writing cause/effect essays along with your notes and lists to help you write a draft of your essay. At this point, don’t think about revising or editing; just get your thoughts about the writing assignment down on paper.

**Helpful Hints**
Does your essay have a specific point? Cause and effect essays require you to make specific connections among ideas. If you are having trouble making these connections, go to Thesis Statement in MyWritingLab for help.

Not sure what should come next? There are a number of ways to organize an essay, and deciding which method is right for your essay should happen early. To review your options, see Essay Organization in MyWritingLab.

Do you have enough details? Including detailed definitions can help you convey a specific point. For more information about how to define your subject, see Defining Essays in MyWritingLab.