Unit One

An Approach to Academic Writing

As graduate students, you face a variety of writing tasks throughout your chosen degree programs. Naturally, these tasks will vary from one degree program to another. They are, however, similar in two respects. First, the tasks become progressively more complex and demanding the farther you go in the program. Second, in general they need to be written "academically," although certain assigned writing in some fields may require personal reflection (such as teaching reflections) and thus may be somewhat more informal. In Units Two through Six of this textbook, we focus on the writing tasks that may be required in the earlier stages of a graduate career. In the last two units, we look a little farther ahead.

This opening unit is different from the others since it does not focus on a particular type of text. Instead, we try to help you reflect upon a variety of aspects of academic writing, ranging from style to some sociological, cultural, and rhetorical issues. Overall, we are primarily concerned with your "positioning" as a writer—the means by which you create in writing a credible image as a competent member of your chosen discipline. We begin with a focus on your writing strategies.

TASK ONE

Discuss these possible writing strategies with a partner. Put a check mark (✓) next to those writing strategies that you use a lot. If you rarely or never use some of the strategies, discuss why you do not.

_____ 1. Translating, if you use English as an international language

_____ 2. Spending a lot of time on gathering information or doing research and then quickly writing your paper from your notes, data sources, or outlines

_____ 3. Referring to one or more "model" papers in your discipline, noticing in particular such matters as how the papers are organized, how phrases are used, and where and why examples or illustrations are provided

_____ 4. Relying on a mentor (either native or non-native speaker) who "knows the ropes" and can anticipate how a particular written text might be received by a particular set of readers or reviewers, who may also be able to offer advice on which journal or conference a piece might be submitted to and why

_____ 5. Relying on friends who are not in your field to help you with phraseology

_____ 6. Developing a sense of the anticipated audience, particularly with regard to what needs to be said and what does not

_____ 7. Recognizing the need for some stylistic variation and acquiring the linguistic resources to achieve this

_____ 8. Finding useful phraseology from other, possibly published papers and using it to string your ideas together

_____ 9. Constructing an appropriate author "persona," so that you come across as a member of the disciplinary community

_____ 10. Concentrating on making sure your sentence-level grammar is accurate because that is the most important aspect of getting your ideas across

Understanding your writing strategies is important in becoming a confident writer. To help you explore your strategies further, we offer Task Two.

TASK TWO

Write a reflective paragraph in which you share your reactions to these questions.

1. **What is your main writing strategy? Why do you use it? What one other strategy apart from those on the list do you use? Are your strategies dependent on the type of text you are composing?**

2. **Which of the strategies that you do not use would you most like to develop? And how might you go about developing it?**

3. **Do you think strategies listed in Task One apply equally well to all fields? How might they vary in importance for an author in Physics, History, Economics, Public Health, or Engineering? Which of them is most important in your own field?**

As you may already realize, academic writing is a product of many considerations: audience, purpose, organization, style, flow, and presentation (see Figure 1).

FIGURE 1. Considerations in Academic Writing

```
        Audience
           ↕
        Purpose
           ↕
      Organization
           ↕
         Style
           ↕
         Flow
           ↕
      Presentation
```
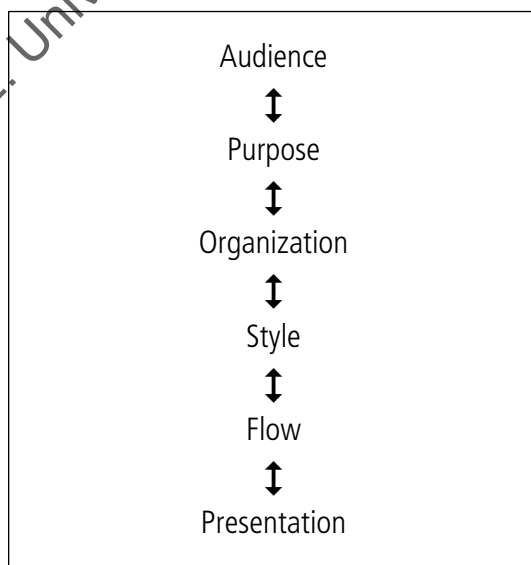
Audience

Even before you write, you need to consider your audience. The audience for most graduate students will be an instructor, who is presumably quite knowledgeable about the assigned writing topic and will have expectations with which you need to be familiar. Other possible audiences include advisors, thesis committees, and those who will review research you may want to present at a conference or publish in a paper. Your understanding of your audience will affect the content of your writing.

TASK THREE

Read these excerpts from two longer texts that discuss obtaining drinking water from salt water. Answer these general questions with a partner. For whom were they written? What aspects of each text helped you decide the audience? In what kind of publication would you expect to find these texts? Sentence numbers have been added here (and in subsequent texts throughout the book) for ease of reference. Then answer the more specific questions that appear on page 5.

A. ❶ People have been pulling freshwater out of the oceans for centuries using technologies that involve evaporation, which leaves the salts and other unwanted constituents behind. ❷ Salty source water is heated to speed evaporation, and the evaporated water is then trapped and distilled. ❸ This process works well but requires large quantities of heat energy, and costs have been far too high for nearly all but the wealthiest nations, such as Kuwait and Saudi Arabia. ❹ (One exception is the island of Curaçao in the Netherlands Antilles, which has provided continuous municipal supplies using desalination since 1928.) ❺ To make the process more affordable, modern distillation plants recycle heat from the evaporation step.

❻ A potentially cheaper technology called membrane desalination may expand the role of desalination worldwide, which today accounts for less than 0.2 percent of the water withdrawn from natural sources. ❼ Membrane desalination relies on reverse osmosis—a process in which a thin, semipermeable membrane is placed between a volume of saltwater and a volume of freshwater. ❽ The water on the salty side is highly pressurized to drive water molecules, but not salt and other impurities, to the pure side. ❾ In essence, this process pushes freshwater out of saltwater. (Martindale, 2001)

B. ❶ Reverse osmosis (RO) membrane systems are often used for seawater and brackish water desalination. ❷ The systems are typically installed as a network of modules that must be designed to meet the technical, environmental, and economic requirements of the separation process. ❸ The complete optimization of an RO network includes the optimal design of both the individual module structure and the network configuration. ❹ For a given application, the choice and design of a particular module geometry depends on a number of factors, including ease and cost of module manufacture, energy efficiency, fouling tendency, required recovery, and capital cost of auxiliary equipment. ❺ With suitable transport equations to predict the physical performance of the membrane module, it should be possible to obtain an optimal module structure for any given application. (Maskan et al., 2000)

1. How do the texts differ in terms of vocabulary?

2. How do the texts differ in terms of detail?

3. Where do the definitions of *reverse osmosis* appear? How do these definitions differ?

4. Do the texts appear to be well written? Why do you think so?

The differences in the two texts reflect some of the assumptions that the authors have made about the typical reader's familiarity with the subject. In the first text, the author assumes the reader is probably not familiar with reverse osmosis and thus provides a fair amount of background information along with a clear definition of the process.

TASK FOUR

Now write a short definition of a term in your field for two different audiences. One audience could consist of graduate students in a totally unrelated field, while the other could be students in your own graduate program. Exchange your definitions with a partner and discuss how they reflect differences in your chosen audiences.

Purpose and Strategy

Audience, purpose, and strategy are typically interconnected. If the audience knows less than the writer, the writer's purpose is often instructional (as in a textbook). If the audience knows more than the writer, the writer's purpose is usually to *display* familiarity, expertise, and intelligence. The latter is a common situation for the graduate student writer.

The interesting question that now arises is what strategy (or strategies) can a graduate student use to make a successful display. To explore this, let's consider the case of an international student who calls himself Sam in the United States. Sam is enrolled in a master's program in Public Health. He has nearly finished his first writing assignment, which focuses on the impact of video games on the cognitive development of children in the United States. This is a short five-page assignment rather than a major research paper. The deadline is approaching, and there is no more time for further data analysis. He wants to make a good impression with his concluding paragraph. He believes (rightly) that final impressions are important.

Sam (quite appropriately) begins his last paragraph by reminding his audience (i.e., his instructor) of what he has done in the paper.

He begins as follows:

Conclusion

The aim of this paper has been to examine the impact of video
games on the cognitive development of pre-adolescent children in
the United States. In particular I have examined the effects of video
games on visual attention.

So far, so good. His first attempt at concluding his paper is as follows:

As I have explained, video games can indeed account for differ-
ences in cognitive abilities of pre-adolescents, specifically the
ability to switch attention from one task to another.

He thinks, "This just repeats what I have already written; repeating makes it
seem that I have nothing new or interesting here; my paper falls flat at the
end." Sam tries again. "This time," he says to himself, "I will take my results,
summarize them, and then try to connect them to some wider issue. That's
a better strategy." Here is his second version.

As the tables show, pre-adolescent children who play video games
score better on tests of visual attention than those who do not.
This relationship was quite strong among children between 10 and
12 years of age, while for children aged 6 to 9 the association was
not so pronounced. Children who were very good at playing video
games, mostly those who are older, appear to be able to effectively
switch attention. These findings support the conclusion of other
studies that playing video games may not simply be a mindless
activity; instead video games can enhance the cognitive skills of
gamers.

Sam likes this version; however, he is also worried. He knows—but he has
not said so anywhere in the paper yet—that there is a problem with the data
he has been using. He knows that there are many types of video games and
so the effects of one game on cognitive development may be quite different
from those of another. For instance, shooting video games are not the same
as sports video games. And even within the same game genre there is varia-
tion in terms of the skills that are needed to play. Luckily, he is not using his
own research data for this assignment; he is using data that he has found in
journal articles.

He now adds this to his concluding paragraph.

The conclusions presented here, however, should be interpreted cautiously. This is because the data presented here are based on analyses of two sports video games, which differ in terms of visual attentional demand from other types of video games, such as first-person shooting games that require an awareness of a full screen.

Sam is feeling somewhat unsure of his conclusion and is now asking himself the following questions: "Have I been too cautious in my conclusion when I use *appear to, may,* and *can*? Is it actually better to clearly state that there are problems with the data or to not mention this at all? Which strategy is better? Will I appear more or less capable by discussing the limitations of the data? And if I do discuss them, should I do so right at the end or at the beginning of my conclusions? In effect, how should I *position* myself as a junior graduate student?"

TASK FIVE

What advice would you give Sam? Consider the questions he raises about the strength of his points and the inclusion of limitations. Write this in a paragraph or two. Then edit or re-write his final paragraph to reflect your advice.

Organization

Readers have the expectation that information will be presented in a structured format that is appropriate for the particular type of text. Even short pieces of writing have regular, predictable patterns of organization. You can take advantage of these patterns, so that readers can still follow, even if you make some language errors.

Although our goal in this text is not to work on letter writing, we would like to begin our discussion of organization by looking at two letters that may, in fact, resemble letters or email you have received at some point in your academic career. Each letter has a clear, predictable pattern of organization. The first is a good-news letter.

	Parts
Dear Ms. Wong:	Greeting
Thank you for your interest in our university.	Acknowledgment
On behalf of the Dean of the Graduate School, I congratulate you on being accepted to the program in Aerospace Engineering to begin study at the master level. This letter is your official authorization to register for Fall 20XX. As a reflection of the importance the Graduate School places on the ability of its students to communicate effectively, the Graduate School requires all new students whose native language is not English to have their English evaluated. Specific details for this procedure are given in the enclosed information packet.	Good news Administrative matters
We look forward to welcoming you to Midwestern University and wish you success in your academic career. Sincerely,	Welcoming close that points to the future

TASK SIX

Read the bad-news letter, and label the four parts: greeting, preparation for bad news, bad news, and close. Where does the most important news appear (first? second?)? How does this compare to the good-news letter? How do the different purposes of the two letters influence the kind and placement of information?

	Parts
Dear Mr. Lee: Thank you for your interest in the graduate program in Industrial and Operations Engineering. We have now finished our rigorous review process for Fall 20XX applications. We received an unusually high number of applications for the Fall term and we unfortunately had to limit the number we could accept. While your background is impressive, I regret to inform you that your application to the program has not been accepted. Given your excellent qualifications, I trust you will be able to pursue your academic interests elsewhere and wish you luck in your further endeavors. Sincerely,	

You are already likely aware that academic writers employ a variety of organizational patterns. You are already familiar with external organization features, such as chapters, sections, and paragraphs. As you work your way through this book, you will become familiar with the various approaches to internal organization as well. One very common strategy that is founda-

tional to academic writing is to organize information in terms of problems and solutions (Hoey, 1983). This pattern usually has four parts. Can you identify them in this next task?

TASK SEVEN

Draw boxes around and label the four parts of this problem-solution text (situation, problem, solution, and evaluation). After marking the text, answer the questions on page 12.

❶ As standards of living rise and the world's population grows, the demands for freshwater have been increasing. ❷ Along with this increase is growing pressure to protect this precious resource. ❸ Efforts to protect the water supply have traditionally focused on regulating industrial and municipal waste that is discharged into rivers and lakes. ❹ However, in recent years researchers have identified a new threat to world freshwater supplies. ❺ Studies have identified in freshwater around the world a number of medicinal drugs, ranging from painkillers such as acetaminophen, to antibiotics, to cholesterol absorption inhibitors. ❻ These drugs easily enter the water supply when they are eliminated through digestion or improperly disposed of by directly flushing them down a toilet. ❼ Although the amount of these drugs in freshwater supplies is small (a few parts per billion or trillion), their impact on the freshwater supply and on human health has yet to be established. ❽ Given this uncertainty, efforts are underway to address this problem. ❾ One simple, inexpensive approach involves educating consumers about proper medication disposal methods. ❿ This effort involves educating consumers to be made aware that medicines should not be poured into a sink or flushed, but should be discarded through local drug collection programs. ⓫ For example, many pharmacies collect unused or unwanted medicines and some communities have special medicine collection sites. ⓬ With increased education, consumers can dispose of medication properly and help protect freshwater resources.

1. **How serious does the author perceive the problem to be? How did you determine this? To what extent is this a global problem?**

2. **What does the author think of the solution? What do you think of the solution?**

3. **What is one major problem in your field of study? Why is it important?**

TASK EIGHT

Here is another passage with the same structure. Read it and answer the questions on page 13.

❶ Ghana is located on West Africa's Gulf of Guinea just north of the Equator. ❷ Unlike many poor West African countries, this country of 24 million has a growing economy that is expanding over 10% annually. ❸ This growth has largely been attributed to the 2007 discovery of a major oil field off the coast and to Ghana's position as a leading gold producer. ❹ Ghana has also emerged as an important center for e-waste recycling and disposal, an industry that contributes more than US$200 million into the economy. ❺ E-waste consists of electronic devices typically from Europe and North America that have been discarded, but still have some value. ❻ E-waste has been said to provide opportunities for employment, poverty alleviation, recycling business developments, and may even bridge the digital divide by contributing to the country's growing demand for information technology. ❼ However, this industry also poses environmental and health risks that cannot be ignored.

❽ The largest e-waste recycling and disposal center is located in the capital city of Accra and is adjacent to the Agbogbloshie Food Market. ❾ At this site recyclers disassemble electronics to retrieve valuable metals (for example, gold) or burn items covered with plastic (for example, computer wires) to recover metals such as copper and aluminum. ❿ These processes expose workers and others living near the e-waste site to toxic materials including plastics, lead, aluminum, and silica that are known to cause cancers and central nervous system damage among other health problems.

❶ One way to address e-waste dangers is to install modern, sustainable recycling technology that can drastically reduce exposures to toxins. ❷ One drawback to this approach, however, centers around who should be responsible for the cost of installing such systems. ❸ Perhaps a more viable solution is for the manufacturers of electronics to reduce the amount of toxic materials used to make their products. ❹ Thus, rather than placing all of the responsibility for safe handling of e-waste on the recyclers, the manufacturers could be persuaded to examine their own practices to determine ways to lower the risks associated with e-waste.

1. For what type of audience was this written?

2. What assumptions does the author make about the background knowledge of the audience?

3. What is the author's purpose?

4. How is the problem introduced?

5. To what does *this growth* in Sentence 3 refer? What are *these processes* in Sentence 10? To what does *this approach* in Sentence 12 refer? What is the effect of these particular expressions on the flow of ideas?

6. What does the author think of the two solutions?

7. If the writer had thought that the second solution would not work, what might she have written for the last sentence? In such a case, would this last sentence be enough to complete the text? If not, what would need to be added?

In addition to the problem-solution structure, some other ways of organizing information include the following.

- Comparison-contrast (see Unit Five)
- Cause-effect (focusing on one cause and multiple effects as in an earthquake or describing multiple causes and one effect as in an economic downturn)
- Classification [categorizing, as suggested by this example: "Earthquake effects on underground structures can be grouped into two categories: (1) ground shaking and (2) ground failure such as liquefaction, fault displacement, and slope instability." Note the cause-effect aspect of this as well.]

Research paper introductions in your field might also follow an established organizational pattern. Introductions are addressed in Unit Eight.

Style

Academic writers need to be sure that their communications are written in the appropriate style. The style of a particular piece should not only be consistent but also be suitable both in terms of the message being conveyed and the audience. A formal research report written in informal, conversational English may be considered too simplistic, even if the actual ideas and/or data are complex.

One difficulty in using the appropriate style is knowing what is considered academic and what is not. The grammar-check tool on your word processing program is likely not of much help in this matter since such programs are written primarily to find spelling and basic grammar errors and not to offer stylistic advice for *academic* writers. Moreover, what little stylistic advice is offered may not be right for what you are writing. For example, contrary to what your grammar checker might suggest, if you are describing a procedure or process, you *can* and probably even *should* use passive voice in many cases.

Deciding what is academic or not is further complicated by the fact that academic style differs from one area of study to another. For instance, contractions (e.g., *don't*) may be used in Philosophy but are not widely used in many other fields. And, as noted in a study by Chang and Swales (1999),

some authors often use informal elements such as sentence-initial *but;*
imperatives (as in the common expression *consider the case of . . .*); and the
use of *I*. In the case of *I,* we see quite a bit of disciplinary variation. It is less
commonly used in Computer Science papers (5.6 per 10,000 words in the
Michigan Corpus of Upper-level Student Papers—MICUSP) but is frequent
in Philosophy (53.9 occurrences per 10,000 words in MICUSP). Other
fields lie somewhere in between those two. All this variation contributes to
even more confusion when trying to determine what is "academic."

Finally, academic style is not used in all academic settings. Research based
on the Michigan Corpus of Spoken Academic English (MICASE) shows
that academic and research speech, in linguistic terms, is much more like
casual conversation than written academic English. It is not uncommon to
hear U.S. lecturers use words and phrases like *stuff, things, a bit, bunch,* or *a
whole lot of,* which we would not expect to find in a written academic text.
They may also use elaborate metaphors and other vivid expressions to
enliven their speaking style. (For some examples of spoken academic Eng-
lish, check MICASE at www.elicorpora.info/.)

TASK NINE

**Find and download two or three journal articles from your field that
you think are well written. The articles do not necessarily have to
be written by native speakers of English; however, they should be
typical research articles in your field—not book reviews, editorial
commentaries, or trade magazine articles from a publication with
extensive advertising. If you are having difficulty deciding whether
you have the right kind of article, ask your instructor for assistance.
Bring your articles to class so that you can reference them and gain
an understanding of the writing conventions in your field.**

Cross-Cultural Differences in Academic Language

Over the past two decades, there has been considerable interest in tracing similarities and differences in academic language. Because of the dominating position of academic English prose and because of the wish of many people to acquire this variety of the language, the great majority of studies to date have compared some other academic languages with English academic prose. These languages include Arabic, Chinese, Finnish, French, German, Japanese, Korean, Malay, Polish, Spanish, and Swedish. Simplifying somewhat, the overall conclusions point in one basic direction: academic English, especially U.S. academic English, has several features that place it toward one end of a number of continua.

TASK TEN

Put a check mark (✓) next to the items that you think are typical of academic writing in English. If you are familiar with another academic language, also mark those points that you think are consistent and inconsistent in academic writing in that other language. Are the differences, if any, strong, or does it seem to you that the academic languages are more similar than different? To what extent should you incorporate the features in the list into your own writing?

U.S. academic English, in comparison to other academic languages, can be considered to

_____ 1. be more explicit about its structure and purposes (i.e., contains a noticeable amount of metadiscourse)

_____ 2. be less tolerant of asides or digressions

_____ 3. use fairly short sentences with less complicated grammar

_____ 4. have stricter conventions for subsections and their titles

_____ 5. contain more citations

_____ 6. rely more on recent citations

_____ 7. have longer paragraphs (in terms of number of words)

_____ 8. point more explicitly to "gaps" or "weaknesses" in the previous research

_____ 9. use more sentence connectors (words like *however*)

_____ 10. place the responsibility for clarity and understanding on the writer rather than the reader

Now let's explore some additional points that you can think about when working on your writing style. If you search for "academic style" on the internet, you may or may not be surprised at the roughly 260,000 hits. Clearly, a lot of people have a lot to say about this topic. You will find pages of things to do and not do (for instance, never use *I*, but do use references to support your points); pages telling you to forget about the "rules"; and other pages that describe what academic style is and is not (e.g., academic style is formal and not casual; it is not about using big words). Although many perspectives on academic style are available, much of the advice is vague, conflicting, and often based on personal preference rather than research. Thus, it should come as no surprise that, despite a sizeable amount of research, academic writing is in fact "poorly understood by teachers and students alike" (Lillis, 1999). So, where do we begin?

In this Language Focus section, we will present some more specific ideas about the characteristics of academic style for you to consider. You may wish to incorporate some of these points into your writing and ignore others. In the end, our purpose here is for you to think more about your stylistic choices as you write and to help you realize that good academic writers make many stylistic choices as they write.

Language Focus: The Vocabulary Shift—Verbs

English often has two (or more) choices to express an action or occurrence. The choice is often between a phrasal (verb + particle) or prepositional verb (verb + preposition) and a single verb, the latter with Latinate origins. In lectures and other instances of everyday spoken English, the verb + preposition is often used; however, for written academic style, there is a tendency for academic writers to use a single verb when possible. In some fields this is a very noticeable stylistic characteristic. Here is an example.

Given our fast-paced society, people must routinely **put** creative solutions to unexpected problems **into practice.**

Given our fast-paced society, people must routinely **implement** creative solutions to unexpected problems.

TASK ELEVEN

Choose a verb from the list to replace each verb in italics to reduce the informality of the sentence. Note that you may need to add tense to the verb from the list. Write down any other single verbs that you think could also work in the sentences.

consider	decrease	develop	investigate	reach
constitute	determine	eliminate	maintain	tolerate

1. Many software manufacturers in developed countries *put up with* widespread copyright violations in less developed countries and often even offer local versions of their products.

   _____

2. Scientists are *looking into* innovative drug delivery systems that can transport and deliver a drug precisely and safely to its site of action. _____

3. The purpose of this paper is to try to *figure out* what is lacking in our current understanding of corrosion and corrosion protection in concrete. _____

4. Researchers have *come up with* plug-in hybrid vehicles (PHEV) that can draw from two sources of energy: stored electrical energy from the grid and stored chemical energy in the form of fuel such as gasoline. _____

5. Rice and aquatic products *make up* a major part of the diet of the people in the Mekong Delta, Vietnam. _____

6. The use of touch screen voting systems could *get rid of* many problems associated with traditional paper-based ballots.

   _____

7. Worldwide consumption of pesticides has *gone up to* 2.6 million metric tons. _____

8. Although labor unions in the U.S. have been able to *keep up* their membership numbers over the last two decades, they have been losing their political strength. _____

9. The number of mature female green turtles that return to their primary nesting beach has *gone down* from 1,280 ten years ago to 145 today. _____

10. Many funding agencies worldwide are *thinking about* ways to give new researchers greater opportunities to receive grant money. _____

TASK TWELVE

In the space provided, write a few single verbs that could be used in place of the one in italics. In each case, try to find two or three possibilities and be prepared to discuss them.

1. Researchers have *come up with* a number of models to describe the effect of certain cola drinks on dental enamel erosion.

    _____

2. AIDS researchers have *run into* a variety of unexpected problems in their efforts to develop an effective vaccine.

    _____

3. Recent studies on car scrapping have *brought up* the important question as to whether CO_2 emissions can be significantly reduced by taking old cars out of service. _____
    _____

4. Problems with the new data management software *showed up* soon after it was launched. _____
    _____

5. In the past five years, many studies have *looked at* the effect of different grassland management practices. _____
    _____

Language Focus: The Vocabulary Shift—Nouns and Other Parts of Speech

English has a very rich vocabulary derived from many languages. Because of this, there may be more than one way to express an idea. When several alternatives are available, choose the one that most efficiently and accurately gets your point across.

You may have also noticed that in many academic texts there is an abundance of rather long noun phrases, which tend to carry a lot of meaning in a rather compact form. For instance, we can start with the word *language* and expand on the simple noun in this way.

language
↓
the language of scientific communication
↓
the international language of scientific communication
↓
English as the international language of scientific communication
↓
the emergence of English as the international
language of scientific communication

Thus, it is possible to write

The emergence of English as the international language of
scientific communication has been widely documented.

as opposed to

English has emerged as the international language of
scientific communication. This phenomenon has been
widely documented.

The first example contains a very long noun phrase, a nominalization. Which of the two sentences do you prefer? Why? Which do you think would be more similar to writing in your field? What, if anything, do you think is gained or lost by nominalizing?

TASK THIRTEEN

Which of the italicized expressions might be more suitable for an academic paper? Can you think of additional alternatives?

1. Crash test dummies are *really important for* / *an integral part of* automotive crash tests.

2. According to a recent study *just about* / *nearly* 25% of all cell phone users view text messaging as an important source of entertainment.

3. There has been *a lot of* / *considerable* interest in how background sounds such as music affect an individual's ability to concentrate.

4. We obtained *robust* / *nice* results using structural bamboo rather than timber.

5. Consumer interest in electronic billing and payment is *getting bigger and bigger* / *increasing.*

Of course, when you are offered the choice between two alternatives, the more academic choice may be fairly clear. The more difficult task is making good language choices on your own. We have helped you a bit in this next part of the task by italicizing the phrases that you could change. You may need to make other changes so that the sentence is still grammatical.

6. The competition faced by U.S. growers from imports of fresh vegetables has *gotten more intense.*

_____

7. Many urban areas *do not have enough* land to build new public schools.

_____

8. Allergic reactions to local dental anesthesia *do not happen very often.*

_____

9. The doors on these ferries were *made bigger to make it easier to load and unload* vehicles.

_____

Language Focus: Other Stylistic Features

While you may prefer to closely follow the stylistic conventions of your field, you may also want to seek ways to "push gently at the boundaries of convention" (Casanave, 2010), more strongly position yourself, and create your scholarly identity. What follows are some other considerations that you can investigate and possibly incorporate in your academic writing style. These are not rules to follow, but rather choices you can make.

1. As indicated earlier, single authors in some fields use the first-person pronoun *I* (note that in some Engineering and hard science fields, single authors may choose *we,* given the collaborative nature of research in these areas). *We*, of course, is common in co-authored papers, which are increasingly the norm in publications. Research indicates that *I* or *we* can be used in academic writing, but many new authors are very reluctant to use *I.*

In this paper I argue that small incentives can lead to greater participation in surveys.	This paper argues that small incentives can lead to greater participation in surveys.

2. Again we remind you that in a few fields contractions may be common; in most they are not.

Export figures won't improve until the economy is stronger.	Export figures *will not* improve until the economy is stronger.

3. Some authors prefer some negative forms over others, believing that those on the right are more academic.

Not . . . any	*no*
The analysis didn't yield any new results.	The analysis yielded *no* new results.
Not . . . much	*little*
The government didn't allocate much funding for the program.	The government allocated *little* funding for the program.

Not . . . many	*few*
This problem doesn't have many sustainable solutions.	This problem has *few* sustainable solutions.

4. Some readers (for example, journal editors) object to the use of vague expressions such as *and so forth* and *etc.* These expressions may sometimes be used, but keep in mind that they are imprecise and require readers to "fill in" the missing information.

Micropumps can be used in drug delivery, lab-on-a-chip analysis, etc.	Micropumps can be used in drug delivery, lab-on-a-chip analysis, ink dispensing, and other specialized applications that require self-contained, low power miniature pumps.

5. In many fields writers typically avoid addressing the reader as *you* (except, of course, if you are writing a textbook or other instructional materials). Note that this means you may need to use passive voice.

You can see the results in Table 1.	The results *can be seen* in Table 1.

6. Sometimes the use of a direct question can be a very effective means to draw your readers' attention to a point. This may be particularly useful when laying out an argument or research questions to be answered. However, indirect questions, such as those on the right, are likely more common.

Why has antibiotic resistance increased?	Many studies have investigated *why antibiotic resistance has increased*.
	or
	It is important to understand *why antibiotic resistance has increased.*
	or
	It remains unclear *why antibiotic resistance has increased.*

7. Adverb placement might be important. Often in academic writing adverbs are placed in mid-position rather than in the initial or final positions of sentences. In other contexts, English adverbs often occur at the beginning or end of sentences.

This model was developed by the International Monetary Fund (IMF) originally and was adapted by Lalonde and Muir (2007) later.	This model was *originally* developed by the International Monetary Fund (IMF) and was later adapted by Lalonde and Muir (2007).
Then the morphology of the samples was analyzed using a scanning electron microscope (SEM).	The morphology of the samples was *then* analyzed using a scanning electron microscope (SEM).

8. Consider whether you should split infinitives (*to* + verb). The prescriptive view of grammar condemns the use of split infinitives (placing an adverbial modifier between *to* and the infinitive as in *to sharply rise*). Although we would agree that split infinitives are not so common in some areas of academic writing, they are sometimes used, particularly to avoid awkwardness or ambiguity. (Both Chris and John regularly use split infinitives in their writing.)

We need *to adequately meet* the needs of those enrolled in the program.	We need *to meet* the needs of those enrolled in the program *adequately*.
Neural networks have the ability *to correctly classify* new patterns.	Neural networks have the ability *to classify correctly* new patterns.
The size of the container could be modified *to downwardly adjust* the portion size and amount of consumption.	The size of the container could be modified *to adjust* the portion size and amount of consumption *downwardly*.

The examples on the left came from published papers, while the versions on the right have been rewritten to eliminate the split infinitives. Can you guess why the authors chose to split the infinitives?

9. Use as many words as you need to express your points, but try not to use too many words. If you are wordy, readers may have difficulty following your point.

It may be difficult to make a decision about the method that should be used.	Choosing the proper method may be difficult.
There are some inorganic materials that can be used in tissue engineering by bioengineers in the process of tissue engineering that have been shown to be very promising.	Some inorganic materials have shown great promise in tissue engineering.

10. Consider using both active and passive voice. Both active and passive voices are used in academic writing; the key is to choose the right voice for the right purpose. Although grammar checkers may caution against using passive voice, it is commonly used in academic writing. (See Unit Three for more discussion.)

In summary, most of our comments about grammar and language have been designed to help you think about the sentence-level choices that may contribute to the development of your own style. The vocabulary shift and some of the other features we have mentioned are more important for maintaining a consistent academic style and for positioning yourself as knowledgeable and as an authority. In fact, you may remember that Sam wrote, *I have examined . . . .*

TASK FOURTEEN

Let's suppose that you want to follow the considerations listed in the Language Focus on pages 22–25. How would you revise these sentences?

1. You can use this model to optimize the water supply.

2. So, why did the bridge collapse? There're a lot of reasons.

3. In addition to herbs, animal products are employed in some forms of traditional medicine frequently.

4. So far there hasn't been much research on how conflict influences the level of trust and respect in a group.

5. There are several studies in Epidemiology that have shown that when people consume alcohol in moderate amounts they have a lower risk of developing heart disease in comparison to those people who drink a lot of alcohol.

6. Developed by computer scientists in the 1980s, data mining is a collection of methods aiming to understand and make money from the massive data sets being collected by supermarket scanners, weather buoys, intelligence satellites, and so on.

Work with a partner and look through the articles you chose for Task Nine. Can you find examples that demonstrate how the authors dealt with the stylistic considerations as well as the possible need to be cautious, as in the case of Sam? More importantly, can you offer explanations as to why certain stylistic choices were made and how these might relate to the author's purpose? Use the chart on page 27 to guide your analysis.

Article Analysis				
Do the articles contain examples of:	**Yes**	**In what part(s)? Give one or more example(s).**	**No**	**Do you think this is typical? (Yes, No, Unsure)**
I / we				
contractions				
more formal negatives				
etc., and so forth, and so on				
addressing the reader as *you*				
indirect questions				
mid-position adverbs				
split infinitives				
too many words to make a point				
passive voice				
may, *appear to,* or other language that softens a point				

TASK FIFTEEN

Now that you have become more familiar with some of the possible stylistic features of academic writing, write a one-page problem-solution text about a problem in a country that you are familiar with. Try to choose a problem unique to that country. Refer, if you like, to the text in Task Eight. Your audience is a group of professors and students interested in your selected country. Consider the style points on pages 16–25 as you write.

To conclude this extensive discussion on vocabulary and style, we now turn our attention to the use of the internet and online tools that may help you become more familiar with commonly used expressions or standard phraseology. Standard phraseology consists of expressions that are typical of academic writing across many disciplines. Many authors new to academic writing want to have some knowledge of these expressions as well as an understanding of what can be borrowed.

Using Google Scholar to Identify Potentially Useful Words and Phrases

1. Go to http://scholar.google.com/.

2. In the search box, place quotation marks around a phrase that you want to learn to use. For instance, you might want to find ways to use "In recent years there has been interest in . . . ." You might want to know what kind of modifiers can be used before *interest*. Place an asterisk * before *interest*. This search will yield the phrase along with words that come before *interest*. To narrow your search, you can add another topic. For instance, your area may be electric vehicles. Your search would then look something like this.

    "In recent years, there has been * interest in" "electric vehicle"

A search in 2011 produced one screen that included this information.

FIGURE 2. Sample Google Scholar Results

As you can see in Figure 2, adjectives that can modify *interest* are *increasing*, *considerable*, and *extensive*. To determine how common these adjectives are, you can then search for the complete expressions (e.g., "in recent years there has been increasing interest in").

Other ways to use the internet to search for specific language examples include WebCorp LSE (www.webcorp.org.uk/index.html), which searches all of the internet. You can also search online corpora with a specific focus such as MICUSP, the British National Corpus, the British Academic Written English (BAWE) corpus, or the Corpus of Contemporary American English (COCA). New corpora are being developed with great frequency, and you may want to periodically search the internet to see what is available. You can even create your own corpus of texts in your chosen field (or even

from your own writing) that you can then analyze using online tools such as Compleat Lexical Tutor or freeware such as AntConc, a concordance program for Windows, Macintosh OS X, and Linux. While we cannot offer instruction on the use of these resources here, you will find that you can learn to use them well enough on your own with minimal effort.

Flow

Another important consideration for successful communication is flow—moving from one statement in a text to the next. Naturally, establishing a clear connection of ideas is important to help your reader follow the text. We have already tried to demonstrate good flow of ideas in the water passage in Task Three.

TASK SIXTEEN

Read the passage and discuss the questions on page 31 with a partner.

❶ In many countries around the world, it is customary for consumers of hospitality and other services to provide gifts of money (called "tips") to the workers who have served them. ❷ However, the specific service workers that are customarily tipped, and the amounts consumers give those workers, vary across nations. ❸ For example, in the United States consumers tip over 30 different service professions, while no service professions are tipped in Iceland (Star, 1988). ❹ In Mexico consumers tip restaurant servers 15% to 20% of the bill, but tip only 5% to 10% of the bill in Romania (Putzi, 2002). ❺ These variations in tipping norms are sources of uncertainty for international travelers and phenomena to be explained by hospitality and tourism researchers.

❻ International differences in tipping customs may be partially explained by differences in national values. ❼ According to Hofstede (1983), national values differ on four major dimensions—power distance, uncertainty avoidance, individualism, and masculinity. ❽ Power distance reflects a nation's acceptance of power and status differences. ❾ This value should be positively related to national acceptance of tipping because tipping gives customers power over servers (Hemenway, 1984; Lynn, 2000a).

Lynn, 2004.

1. How do you think the author establishes the relationship between the ideas?

2. Underline the grammatical subjects of Sentences 2–9. Can you find a link between each grammatical subject and the sentence that comes before it?

3. How would you explain the relationship between Sentences 1 and 2?

4. To what does *these variations* in Sentence 5 refer?

5. Which words are repeated in the text? Are you surprised by the amount of repetition of words in the text? Did you even notice this when you first read the passage?

6. What do you think Sentence 10 will discuss? Why?

Old-to-New Information Flow

Although your first instinct in establishing a smooth flow of ideas is to use logical connectors such as *however* or *furthermore*, many writers generally try to follow a progression from old or given information, which is in the subject position or early at the left end of the sentence, to new information, which is placed at the right end of the sentence. Placing relevant "old" information in early position establishes a content connection backward and provides a forward content link that establishes the context. Notice how this old-to-new pattern is established in this text.

❶ Research has shown that <u>caffeine</u> does indeed reduce sleepiness and can lead to better academic performance since students can spend more time studying. ❷ Despite <u>its</u> effectiveness in counteracting sleepiness, <u>caffeine</u> can have a negative impact on subsequent sleep, which for many students may already be compromised. ❸ Specifically, <u>caffeinated</u> beverages consumed near bedtime at night can <u>prolong sleep onset and reduce sleep efficiency and depth</u>, thus <u>affecting both sleep quality and duration</u>. ❹ Most of the research on <u>how caffeine affects sleepiness/alertness</u> has focused on coffee or no-doze pills. ❺ However, a new kind of <u>caffeinated</u> drink has become increasingly popular, namely

functional energy drinks (FEDs). ❻ FEDs are marketed as products
that can improve both mental and physical performance. ❼ In addi-
tion to containing caffeine, FEDs have other active ingredients
such as taurine, glucose, and glucoronolactone. ❽ Exactly how
these ingredients together affect alertness remains unclear.

The old-to-new pattern of information is established by starting a text with
some familiar information. In the following sentence, you can repeat some
information from the previous sentence (exact repetition, in the form of a
synonym or variation on the part of speech). In the energy drink example,
you can see the repetition of caffeine in Sentences 1 and 2.

❶ Research has shown that caffeine does indeed reduce
sleepiness and can lead to better academic performance since
students can spend more time studying. ❷ Despite its effec-
tiveness in countering sleepiness, caffeine can have a neg-
ative impact on subsequent sleep,

To tie two sentences together, you can repeat information from the begin-
ning of the first sentence, as in the case of *caffeine* in Sentences 1 and 2.
Alternatively, you can pick up information from the end of the first sentence
(since, once read, this new information is now familiar). An example of this
is Sentences 5 and 6.

❺ However, a new kind of caffeinated drink has become
increasingly popular, namely functional energy drinks (FEDs).
❻ FEDs are marketed as products that can improve both men-
tal and physical performance.

Note also how passive voice in Sentence 6 is essential here. The point about
marketing might not be well connected using active voice. An old-to-new
pattern can also be achieved by using *this/these* + a noun, which refers back
to some or all of the preceding sentence. An example of this can be seen in
this possible Sentence 9.

❾ If this relationship could be explained, more effective FEDs
could be developed.

If old-to-new cannot be easily maintained, writers will often opt to use a logical connector to make relationships clear, as in Sentences 4 and 5.

> ❹ Most of the research on how caffeine affects sleepiness/ alertness has focused on coffee or no-doze pills. ❺ However, a new kind of caffeinated drink has become increasingly popular, namely functional energy drinks (FEDs).

Note that *a new kind of caffeinated drink* is new information that was not mentioned in Sentence 4. In order for the author to strongly establish the logical connection, the linking word, *however*, is added.

TASK SEVENTEEN

Work with a partner and answer these questions that focus on old-to-new flow of ideas.

1. **The first sentence of a description of the biological clock follows. Given what you know about the old-to-new pattern of information, what are the two topics (or focal points) of the second sentence that the reader would likely expect?**

   The biological clock is a master clock that dictates the day-night cycle of activity known as circadian rhythm.

   Topic 1: _____

   Topic 2: _____

2. **In fact, the writer produced Sentences 2 and 3. How clearly are Sentences 1, 2, and 3 connected to each other? Explain your opinion.**

   ❶ The biological clock is a master clock that dictates the day-night cycle of activity known as circadian rhythm. ❷ The suprachiasmic nucleus (SCN) was identified as the location of the clock in the brains of humans and animals. ❸ Specialized clock genes are activated and deactivated mainly by a pair of proteins, one of which turns on a group of genes and the other of which turns off a key gene in a feedback loop that has a 24-hour rhythm (specifically a 24-hour and 18-minute rhythm).

3. **What do you think of this revision? How does this differ from the first version?**

    ❶ The biological clock is a master clock that dictates the day-night cycle of activity known as circadian rhythm. ❷ The clock was identified in a part of the brain called the suprachiasmic nucleus (SCN). ❸ Within individual SCN cells, specialized clock genes are activated and deactivated mainly by a pair of proteins, one of which turns on a group of genes and the other of which turns off a key gene in a feedback loop that has a 24-hour rhythm (more precisely, a 24-hour and 18-minute rhythm).

4. **In Sentences 4 and 5, the author wrote this:**

    ❹ The biological clock functions regardless of the normal 24-hour cycle of light and darkness. ❺ Light is involved in resetting and regulating the clock.

    Is the relationship between the two sentences clear? Could the author do anything to clarify how the two points are related? What? What about combining the two sentences into one?

    Can you offer a revision here?

    _____

    _____

    _____

    _____

    _____

5. Let's assume Sentences 4 and 5 are combined into one.

    ❹ Although the biological clock functions regardless of the
    normal 24-hour cycle of light and darkness, light is still
    involved in resetting and regulating the clock.

    How well connected is this Sentence 5?

    ❺ Sunlight resets the internal biological clock each day to
    synchronize the rhythms of activity of the clock genes,
    promoting the production of certain substances, such as
    hormones, which are necessary for maintaining good health.

6. What is the relationship between the information before *promoting*
    and the information after *promoting*? Should the author use a
    connector to make the relationship more clear?

7. In Sentence 6, the author wrote:

    ❻ It was once thought that aging disrupts the biological clock.

    Does this sentence flow smoothly from Sentence 5? If so, why? If
    not, why not?

8. Here are the final three sentences of the biological clock
    definition. Do you think they should be in their own paragraph?
    Why or why not?

    ❻ It was once thought that aging disrupts the biological
    clock. ❼ But, recent research (Czeisler et al., 2005) has
    shown that the body temperature and hormone fluctuations
    of the elderly are as regular as those of the young. ❽ Doctors
    can consider this valuable information in the treatment of
    sleep disorders in the elderly.

9. What do you think about the connection between Sentences 7
    and 8? Can you think of a better connection?

10. **Now read these two texts on lasers in medicine. Which do you prefer? Why?**

A. ❶ Lasers have found widespread application in medicine. ❷ Lasers play an important role in the treatment of eye disease and the prevention of blindness. ❸ The eye is ideally suited for laser surgery ❹ Most of the eye tissue is transparent. ❺ The frequency and focus of the laser beam can be adjusted according to the absorption of the tissue. ❻ The beam "cuts" inside the eye with minimal damage to the surrounding tissue—even the tissue between the laser and the incision. ❼ Lasers are effective in treating some causes of blindness. ❽ Other treatments are not. ❾ The interaction between laser light and eye tissue is not fully understood.

B. ❶ Lasers have found widespread application in medicine. ❷ For example, they play an important role in the treatment of eye disease and the prevention of blindness. ❸ The eye is ideally suited for laser surgery because most of the eye tissue is transparent. ❹ Because of this transparency, the frequency and focus of the laser beam can be adjusted according to the absorption of the tissue so that the beam "cuts" inside the eye with minimal damage to the surrounding tissue—even the tissue between the laser and the incision. ❺ Lasers are also more effective than other methods in treating some causes of blindness. ❻ However, the interaction between laser light and eye tissue is not fully understood.

Language Focus: Linking Words and Phrases

As demonstrated in Task Seventeen, repetition and linking words and phrases can help a writer maintain flow and establish clear relationships between ideas. Table 1 lists some of the more common linking words and phrases, arranged according to their function and grammatical use.

TABLE 1. Linking Words and Phrases

Function	Subordinators (introduce a dependent clause that must be joined to a complete sentence)	Sentence Connectors (introduce a complete sentence or independent clause)	Phrase Linkers (introduce a noun phrase)
Addition		*furthermore* *in addition* *moreover*	*in addition to*
Adversativity	*although* *even though* *despite the fact*	*however* *nevertheless*	*despite* *in spite of*
Cause and effect	*because* *since*	*therefore* *as a result* *consequently* *hence* *thus*[1]	*because of* *due to* *as a result of*
Clarification		*in other words* *that is* *i.e.*	
Contrast	*while* *whereas*	*in contrast* *however* *on the other hand* *conversely*	*unlike*
Illustration		*for example* *for instance*	
Intensification		*on the contrary* *as a matter of fact* *in fact*	

[1] Note that *thus* may also be used in non-finite clauses of result, as in this example: *A fungus infected the fruit, thus causing a significant economic loss to the farmers.* See Unit Three for further discussion of this point.

Sentence connectors raise a small, but important, issue—namely, punctuation. Many general style guides and style guides for your specific area of study are available (online and in book form) that can provide detailed explanations of punctuation use. Therefore, we will limit our discussion to a few key points regarding semicolons (;), colons (:), dashes (—), and commas (,). (See Figure 3.)

1. Semicolons join two completely independent clauses or sentences and work much like a full stop.

   Air traffic delays due to high traffic volume have increased considerably over the last decade; these delays have become a major public policy issue.

2. Semicolons can be used with sentence connectors. In the following example, note the use of the comma after the connector.

   Increasing the size of airports is one solution to traffic congestion; however, this is a long-term solution whose benefits may not be seen for many years into the future.

3. Because semicolons are a "stronger" type of punctuation than commas (they mark a stronger break in the flow of ideas), they can be used to break sequences into parts.

   In recent years GNP growth rates have varied considerably for the countries in this study (China, 6%; U.S., 3%; Japan, 1%).

   Several researchers have examined whether capital income should be taxed in the steady state (Moriyama, 2003; Correia, 1996; Chamley, 1986).

4. Semicolons can be used to separate rather long items in a list.

   Some of the solutions to the air traffic delay problem include increasing the size of airports that routinely experience major flight delays; overhauling the air traffic control system so that more flights can be safely handled; and increasing landing fees (which are currently based on the weight of an aircraft) during peak periods.

FIGURE 3. Punctuation
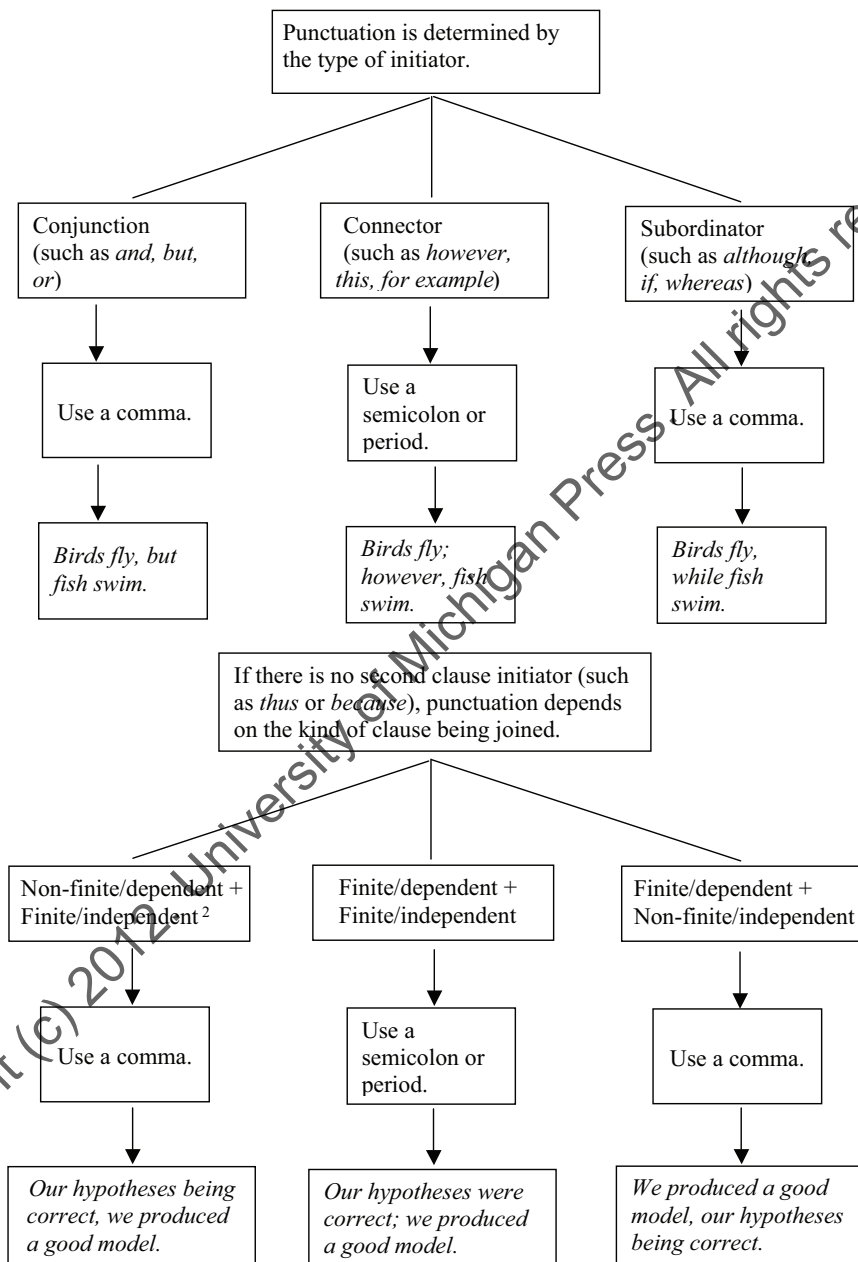
[2]A finite verb is a main verb that is inflected to indicate tense and person.

Although commas could be used in the preceding example, the length of the elements suggests that semicolons would work better; note the use of the semicolon before *and* toward the end of the sentence. Similar considerations apply to sentences that use a colon to introduce a list.

There are four main causes of airport congestion: bad weather, excessive volume, runway closures, and equipment outages.

There are four main causes of airport congestion: bad weather, such as a snowstorm, may ground planes; too many planes may be scheduled to arrive or depart within a short period; runways may be closed; and equipment may be out of service.

Sometimes a dash is used to introduce a list as well, but how you should choose between a dash and a comma is a matter of debate. Often dashes are used by authors to intrude into a sentence and to provide some additional information. Commas are used in a variety of situations. It is best to check a style manual for the many uses. For our purposes here, however, we will say only that commas are used with many of the subordinators.

Although weather is a major cause of airport delays, excess traffic volume is also a major factor.

5. Importantly, style manuals also have guidelines for semicolon uses. Refer to these for more information on semicolon use in your field.

TASK EIGHTEEN

Edit this passage by adding semicolons or commas where necessary.

Although most major companies provide their employees
with email accounts as well as internet access many of these
companies are concerned about potential abuse and monitor
their employees' use of these media. In fact, more than 75%
of all major corporations report that they monitor their
employees' use of email and internet access either by spot-
checking or constant surveillance. Businesses have many
reasons for monitoring email and internet use for example
they may be concerned about protecting sensitive company
information they may be worried about lawsuits arising from
sexual harassment because of mass mailing of offensive jokes
they may also want to identify employees who are surfing
the internet rather than working. In other words they are
concerned about cyberslacking.

TASK NINETEEN

**Supply linking words or phrases to enhance the flow of one of these
passages. Look carefully at the punctuation to help you make an
appropriate choice. Once you have made your choices, consider why
the linking words are important and why an old-to-new pattern of
information flow alone might not be adequate.**

A. It has long been documented that individuals in an organi-
    zation may voluntarily carry out tasks that are not part of
    their regular job duties. _____, individuals may
    go above and beyond the call of duty to help coworkers,
    prevent problems, or volunteer to stay late when not
    expected to do so. This behavior is intended to help others
    in the organization or the organization itself and is often
    referred to as organizational citizenship behavior (OCB).

_____ it is recognized that OCB is important for an organization to effectively function, there is debate among researchers as to how OCB can be encouraged and rewarded. This debate is further complicated when considering the role of OCB in multinational corporations pursuing global diversity. Most OCB research has focused on Western cultures; _____, whether these research findings can be extended to other cultures is not clear, _____ suggesting a need to investigate OCB as it exists in other cultures, particularly those described as "collectivist."

B. Shape Memory Alloys (SMA) are a group of metallic materials that can return to some previously defined shape or size when subjected to the appropriate temperature. When some SMA are cold they can be deformed at a low temperature; _____, when the material is heated above this temperature it undergoes a change in crystal structure, _____ causing it to return to its original shape. Some materials exhibit shape memory only when heated; others can undergo a shape change both when heated and when cooled. _____ many alloys are known to have the ability to "remember" their shape, only some may actually find widespread commercial use. Of particular interest are those that can recover substantial amounts of strain or that generate significant force upon changing shape. _____, one common nickel and titanium SMA, Nitinol, has this ability and is being used in surgical implants, clamps, miniature valves and switches, and other devices.

This and Summary Phrases

As indicated earlier, *this/these* + a noun can be used to establish a good old-to-new flow of information. Consider the following sentences.

> Writing instructors know that students need to understand the differences between formal and informal language. *This understanding* can help students make strategic choices in their writing.

What does *this understanding* refer to? Consider the following sentences.

> In recent years, the number of students applying to PhD programs has increased steadily, while the number of places available has remained fairly constant. *This situation* has resulted in intense competition for admission.

What does *this situation* refer to? What is the effect of using *this* instead of *that*?

The phrases in italics contain a summary noun or word that refers back to the idea in the previous sentence. They summarize what has already been said and pick up where the previous sentence has ended. You may have noticed in your academic reading that *this* is not always followed by a noun—that is, *this* is unsupported or unattended. Keep in mind, however, that if there is a possibility your reader will not understand what *this* is referring to, your best strategy is to follow *this* with a noun so that your meaning is clear.

TASK TWENTY

Choose a noun to complete the second sentence of each set of sentences. More than one answer may be possible.

1. According to a recent survey, 26% of all American adults, down from 38% 30 years ago, now smoke. This _____ can be partly attributed to the mounting evidence linking smoking and fatal diseases, such as cancer.

   a. decline   b. decrease   c. drop   d. improvement   e. reduction

   Can you think of any other nouns that could complete the sentence?

2. **Early in September each year, the population of Ann Arbor, Michigan, suddenly increases by about 25,000 as students arrive for the new academic year. This _____ changes the character of the town in a number of ways.**

   a. increase   b. influx   c. invasion   d. jump   e. rise

   Can you think of any other nouns that could complete the sentence?

   _____

3. **Nowadays, laptop computers are lighter, more powerful, and easier to use than they were five years ago. These _____ have led to an increase in the sales of these machines.**

   a. advances   b. changes   c. developments   d. improvements

   Can you think of any other nouns that could complete the sentence?

   _____

As the task indicates, the noun that you choose to follow *this/these* can provide a strong interpretive signal that reveals your stance (see Unit Six). By revealing your stance you communicate not only what you know, but also what you think.

TASK TWENTY-ONE

Choose a summary word from the list to complete each sentence. Can you think of other possible summary words in addition to those on the list?

difficulty	estimation	problem	situation
disruption	finding	process	view

1. The traditional economic and consumer behavior models assume a rational, thoughtful consumer who gathers information about a good and then carefully makes a purchase. This _____ has recently been challenged, particularly because of the growing number of consumer choices.

2. Our pilot study has shown that wind turbines used to generate electricity can pose a threat to flying birds. This _____ suggests a need for further research on improving the safety of these mechanisms.

3. In soccer, goalkeepers routinely wear gloves that may restrict heat loss from the hands and cause discomfort. In order to alleviate this _____, special materials, called phase control materials (PCMs), have been incorporated into gloves to reduce the amount of heat inside the glove, thus maintaining a comfortable temperature.

4. Normal average human skin temperature is 37°C. At any lower environmental temperature, heat will be lost from the skin to the environment as the body attempts to heat up the air in direct contact with the body. This _____ is known as conduction.

5. Until adjustment of the body clock has occurred, individuals suffering from "jet lag" feel tired during the new daytime, yet are unable to sleep properly during the new night. For athletes in particular this _____ of sleep can affect mood and powers of concentration and might result in poorer training performances and competition results (Reilly et al., 1997b).

6. Until recently, the support needs of frail older people in Sweden have been met primarily by the state, with there being little expectation that the family would provide care. This _____ is now changing as increasing emphasis is being placed on the role of the family.

TASK TWENTY-TWO

Now try to find your own summary words that can complete these sentences.

1. Irrigation in sub-Saharan Africa is in most cases performed using a rope and bucket to raise and distribute water from a shallow open well. While this _____ has the advantage of being inexpensive, its low capacity and labor-intensive nature is decidedly a disadvantage.

2. Motor vehicle deaths in the U.S. declined from nearly 60,000 in 1966 to just over 40,000 in 2011, even though Americans drive millions more miles now and millions more vehicles are on the road. The death rate, which was 7.6 deaths per 100 million miles in 1950, declined from 5.5 in 1966 to 1.6 in 2011. This _____ can be attributed to the manufacture of safer vehicles with features such as airbags and antilock brakes.

3. Haigney concludes from his study that driving performance decreases when drivers use their cell phones. This _____ is consistent with recent reviews of the literature on driving distractions.

4. Although it seems that the construction of new roads and widening of existing roads should reduce traffic congestion, recent research has shown that these activities actually lead to increases in traffic. This _____ is known as the "induced traffic" effect.

5. In 1900, average life expectancy at birth was 47 years for individuals born in developed countries. In 1950, life expectancy was nearly 68. For newborns today, life expectancy is about 77 years. This _____, however, does not mean that humans are undergoing some physiological change. Rather, it is a result of advances in medicine and technology.

Summary expressions may be expanded into longer phrases to add clarity or interpretation. However, you should weigh the benefits of expanding the summary phrase. A long and possibly complicated summary phrase may actually be less effective.

Consider the opening sentences and Options a–d. Which of the options would you choose as the fourth sentence?

6. **In Sub-Saharan Africa, only 20% of all households have access to financial services. In 2010, nearly 70 percent of Kenyan households either had no bank accounts or relied on informal sources of finance. In 2011, 13 commercial banks were operating in Benin, a country with a population of 10 million.**

   a. **This limits market exchanges, increases risk, and limits opportunities to save.**

   b. **This lack limits market exchanges, increases risk, and limits opportunities to save.**

   c. **This lack of formal financial services limits market exchanges, increases risk, and limits opportunities to save.**

   d. **This lack of formal financial services in parts of Africa limits market exchanges, increases risk, and limits opportunities to save.**

Finally, we need to say something about whether it is better to use *it* or *this* to refer back to something stated earlier in the text.

TASK TWENTY-THREE

Which sentence in each set makes better sense following the main sentence? While all of the choices are grammatically correct, which one seems to better capture the connection?

1. **Voice over Internet Protocol (VoIP) has been rapidly expanding over the past decade, growing at a rate of nearly 200%.**

   a. **It can be partially attributed to local telephone service providers, who were not specialized telecommunications operators, entering the VoIP market.**

   b. **This can be partially attributed to local telephone service providers, who were not specialized telecommunications operators, entering the VoIP market.**

2. **Our survey reveals an extremely high level of confidence that businesses are well equipped to prevent targeted cyber attacks by outsiders—94% of the businesses that responded described themselves as fairly or very confident.**

   a. **It suggests that the reality of the threats facing businesses has not been made clear.**

   b. **This unexpected finding suggests that the reality of the threats facing businesses has not been made clear.**

3. **Researchers have found that it is easier to start a traffic jam than to stop one. A small, but temporary, increase in the number of cars entering a highway can cause a bottleneck; however, after the number of cars decreases, traffic jams generally continue.**

   a. **It has been verified through the use of sensor data from Germany and the Netherlands.**

   b. **This has been verified through the use of sensor data from Germany and the Netherlands.**

   c. **This phenomenon has been verified through the use of sensor data from Germany and the Netherlands.**

   d. **This traffic phenomenon has been verified through the use of sensor data from Germany and the Netherlands.**

Although up to this point we have emphasized *this* + noun, we know, in fact, that there are occasions when "unattended" *this* (no following noun) is perfectly reasonable. A study by Wulff et al. (2012) based on MICUSP demonstrated that unattended *this* is common with these verbs: *be* (overwhelmingly the most common), *mean*, *lead*, *result*, *have*, and *suggest*. As you can see, many of these verbs are short and simple and allow the author to offer an interpretation or explanation, as can be seen in the common phrase *this is because* . . . .

Presentation

Most instructors tolerate small errors in language in papers written by non-native speakers—for example, mistakes in article or preposition usage. However, errors that instructors think could have been avoided by careful proofreading are generally considered less acceptable. These include the use of an incorrect homophone (a word that sounds exactly like another, such as

too/to/two); basic grammar errors (e.g., subject-verb agreement); and misspelled words, including those that are not identified in a computer spell-check routine. The issue of grammar errors is a complicated one since many instructors do not appreciate how difficult it is to master some aspects of English such as articles (*a, an,* and *the*) and prepositions. We believe that if the flow of ideas is good, small errors may not be noticed; when the flow of ideas is not strong—i.e., does not follow the old-to-new principle—grammar errors may be more pronounced. Thus, it makes more sense to us to focus more on content and information flow first and then tend to matters of grammar only after all other aspects of the paper are in good shape. Finally, your work is more likely to receive a positive response if you consider these questions.

1. Does the information flow in an expected manner?

   Look at the beginnings and ends of all sentences to see if there is a content bridge linking them backward and forward. If there is no content bridge, revise to establish one or consider adding a linking word or phrase.

2. Consider the overall format of your written work.

   Does your paper seem to have been carefully prepared? Are there clear paragraphs? Is the line spacing correct? Have you used standard fonts and font sizes? Have you tried to follow the style of your field (APA, MLA, IEEE, Chicago Style, to name a few)? If you are unsure of the style common in your field, be sure to learn which to use.

3. Proofread for grammatical accuracy.

   Do subjects and verbs agree? Have the appropriate verb tenses been used? Have the articles *a, an,* and *the* been used when necessary? Is *the* used too much? Do not automatically make changes based on suggestions from the grammar checker of your word processor. Some suggestions, such as changing from passive voice to active voice, may result in a poor connection of ideas.

4. Check for misspelled words, even if you have spell-checked your work.

   Has the correct homophone been used? Did the spell-checker miss anything?

TASK TWENTY-FOUR

Read this draft of a short discussion of earthquakes in Turkey and the instructor comments on pages 51–52. Discuss each comment with a partner and then decide whether it is R (reasonable) or U (unreasonable). If you are unsure, indicate this with a question mark (?). Consider then if and how you would revise the text. Finally, write a new draft, taking into account other advice given in the unit.

❶ Turkey is located in a region that is shaken by severe earthquakes. ❷ They occurred almost every year. ❸ Central Anatolian Fault Zone is one of the most active fault zones in the world, and it lies along the northern part of the country, going from south east to northwest. ❹ The reason of that most of these severe earthquakes causes a lot of damage and death of many people is not only the nature of the fault zone, but also that there are many cities and highways settled on it.

❺ Because many cities have been built on or within the vicinity of geologic fault. ❻ They are unquestionably prone to earthquakes. ❼ There are many earthquakes each year. ❽ The most serious damage occurred in August 1999. ❾ It affected a big area and caused approximately 20,000 people death and millions dollars physical damage in three cities. ❿ Too prevent such big damage and loss in the future, researchers have been researching the 1999 earthquake. ⓫ They looked at the excellent seismic records from recording stations near the epicenter of earthquake and saw that there were signs of earthquake. ⓬ They might help to develop some early warning systems to be aware of the upcoming shakings. ⓭ Even these can make warnings as short as 10 seconds before the shakings, if there is a well-planned evacuation plan, they may, at least, help to decrease the death toll of an earthquake.

Instructor's Comments

You have a good topic here and a good starting point. Your problem-solution organization is clear, which is very important. Here are a few suggestions for making your text even better.

_____ 1. Although overall I understand the message you want to convey, I think it would help to add some more information in a few spots. For instance, in Sentence 9, "a big area" is rather vague. Can you be more precise? Also, in Sentence 9 you mention 3 cities were damaged. Should you give the names and the cost of the damage in each?

_____ 2. In the first paragraph think about clarifying for your reader that the earthquakes originate in the Central Anatolian Fault Zone. Establish the connection. Also, what about including a map so that readers can see where the fault zone is?

_____ 3. In Sentence 4 keep your focus on the earthquakes. Beginning the sentence with <u>the reason that the earthquakes cause a lot of damage</u> suggests that you have already stated that the earthquakes cause a lot of damage. Of course, readers should know that earthquakes cause serious damage, but I think you should say this. Consider beginning this sentence by saying that the earthquakes cause a lot of damage and then continue with your explanation.

_____ 4. What do you think about giving some actual figures for the total cost of the damage and perhaps give an example of the most serious form of damage?

_____ 5. In Sentence 11 you mention signs of the earthquake. What kind of signs?

_____ 6. The connection of your points in Sentences 1–3 could be improved. I see what you're saying, but you could say it more efficiently. The point in Sentence 2 could be woven into Sentence 1. This would also eliminate the past tense in Sentence 2, which should not be used because you are making a statement of fact.

___   7. I like the use of the word _excellent_ in Sentence 11 since this gives your reader a sense of what you think. You can position yourself better if you include some language that indicates your perspective; just reporting what others say or giving dry facts will not help you distinguish yourself. While _excellent_ is okay, I wonder whether you can find a better word here. What is it about the data that makes it excellent?

___   8. Sentence 5 is not a complete sentence. _Because_ introduces a dependent clause that can't stand alone. Can you think of a way to connect this sentence to the following one? Or make some other change?

___   9. In Sentence 6 can you really say _unquestionably?_ It seems a bit dramatic.

___ 10. Do you really need Sentence 7? I'm not sure it adds much. Sentence 7 just seems rather disconnected. Can you integrate the information somewhere else?

___ 11. In Sentence 9 the referent for the pronoun _it_ is not 100% clear. What is "_it_"?

___ 12. Sentence 9 describes a way to possibly minimize the destructiveness of earthquakes. Can you think of a smoother transition into the solution here? Something like _one way to . . ._ or _one possible method of . . . ?_

___ 13. Can you find another word for _make_ in Sentence 13? I understand what you are saying, but we usually don't use _make_ with _warning_.

___ 14. Before turning in your next draft, be sure to check the overall old-to-new flow of ideas. Be sure content and organization are in good shape; then check the grammar; and then in your final step of proofreading, check the flow.

Positioning

Now that you are familiar with some characteristics of academic writing, you are ready to "position" or establish yourself as a junior member of your chosen field (see Figure 4).

FIGURE 4. Positioning
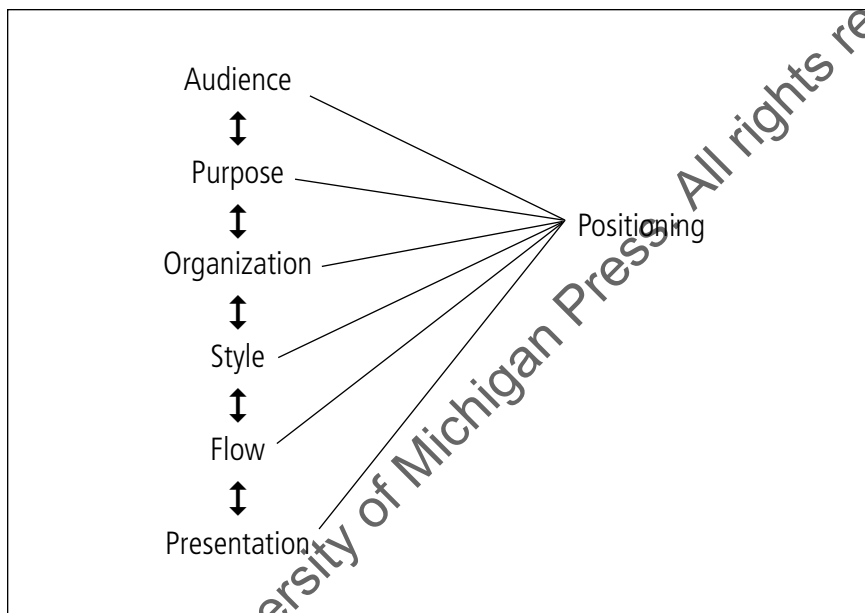
TASK TWENTY-FIVE

Mark these writing characteristics as H (helpful for positioning) or U (unhelpful for positioning). In some cases, there is room for disagreement. Explain your choices.

1. Choosing any writing style that you like   ——

2. Expressing enthusiasm and commitment   ——

3. Writing in a formal academic style   ——

4. Making broad generalizations throughout a text   ——

5. Being cautious about generalizations   ——

6. Using references to support your points   ——

7. Writing mainly from experience and personal knowledge   ——

8. Reevaluating the work of authorities in the field   ——

9. Showing an awareness of the "hot" issues in your field   ——