

UCLA Graduate Writing Center

Academic Writing Skills for ESL Graduate Students

In this interactive workshop, ESL graduate students will learn skills and strategies to build their fluency, accuracy, and comprehensibility in English academic writing. In addition, we will discuss useful on-campus, online, and print resources that will help students to work independently to improve their writing. There will also be time for questions and answers about ESL writing issues and concerns.

Table of Contents

Audience	2
Purpose	3
Organization	3
Style	4
Focus on Verbs	4
Focus on Nouns	5
Other stylistic features.....	9
Flow	13
Old-to-New Information Flow	13
Transitional Devices	15
Demonstrative Adjectives and Pronouns	16
Make Topic Strings Consistent	17
Punctuation	18
<i>This</i> and Summary Phrases	20
Presentation	21

Academic writing is a product of many considerations, the most important of which are audience, purpose, organization, style, flow, and presentation. These aspects of writing are interconnected, but each deserves its own discussion. (Much of the information in this packet, including the organization, is based on Feak and Swales' 2012 book, *Academic Writing for Graduate Students*, 3rd Edition. Additional sources have been noted with footnotes.)

Audience¹

Even before you write, you need to consider your audience; that is, who will be reading your work? In many cases, your audience will be someone who is already knowledgeable about your topic. Other possible audiences include advisors, thesis committees, fellowship selection committees, and journal editors. Your understanding of your audience will affect the content of your writing.

Practice: Read the following excerpts from two longer texts that discuss obtaining drinking water from salt water. For whom were they written? How can you tell? In what kinds of publications would you expect to find each one?

Excerpt A:

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. Salty source water is heated to speed evaporation, and the evaporated water is then trapped and distilled. 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. (One exception is the island of Curaçao in the Netherlands Antilles, which has provided continuous municipal supplies using desalination since 1928.) To make the process more affordable, modern distillation plants recycle heat from the evaporation step.

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. 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. The water on the salty side is highly pressurized to drive water molecules, but not salt and other impurities, to the pure side. In essence, this process pushes freshwater out of saltwater. (Martindale, 2001)

Excerpt B:

Reverse osmosis (RO) membrane systems are often used for seawater and brackish water desalination. 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. The complete optimization of an RO network includes the optimal design of both the individual module structure and the network configuration. 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. 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 Adapted from John M. Swales and Christine B. Feak, *Academic Writing for Graduate Students, 3rd Edition: Editing Skills and Tasks*. (Ann Arbor: University of Michigan Press, 2012).

How do the texts differ in terms of vocabulary and level of detail? Find the definitions of *reverse osmosis* in each passage. How do these definitions differ?

Purpose

Purpose and audience are interconnected. If the audience knows less about the topic than the writer, then the writer’s purpose might be instructional. If, on the other hand, the audience knows more than the writer, the writer’s purpose is often to display familiarity (as in a qualifying paper, for example). Being mindful of your purpose will help you decide how to word your findings and conclusions. If your purpose is to demonstrate familiarity with a particular topic, your language should reflect that knowledge confidently. If your purpose is instructional, as in a textbook, your writing should be easy for your audience (e.g., students) to follow.

Organization²

Readers expect a piece of writing to 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 a letters that may, in fact, resemble a letter or e-mail you have received at some point in your academic career. This good-news letter has a clear, predictable pattern of organization, detailed in the second column next to the letter itself.

<p>Dear Ms. Wong:</p> <p>Thank you for your interest in our university. 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. We look forward to welcoming you to Midwestern University and wish you success in your academic career.</p> <p>Sincerely, Dr. Xyxyxyxyx</p>	<p>Greeting</p> <p>Acknowledgment Good news</p> <p>Administrative matters</p> <p>Welcoming close that points to the future</p> <p>Closing</p>
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² Adapted from John M. Swales and Christine B. Feak, *Academic Writing for Graduate Students, 3rd Edition: Editing Skills and Tasks*. (Ann Arbor: University of Michigan Press, 2012).

Style³

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.

It can be difficult to know what is considered academic and what is not. Moreover, some language is appropriate for some genres but not others. Deciding what is academic and what is not is further complicated by the fact that academic style differs from one area of study to another. For instance, contractions may be used in philosophy but not other fields. The use of the first-person pronoun *I* also varies from field to field. The best way to familiarize yourself with the appropriate style for your field is to read articles from prominent journals in your field. Consult your advisor or professors for more information about the prominent journals in your field.

Focus on 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.*

Below is a list of verbs that can often be used to replace phrasal verbs in academic writing.

consider	decrease	develop	investigate	reach
constitute	determine	eliminate	maintain	tolerate

³ Adapted from John M. Swales and Christine B. Feak, *Academic Writing for Graduate Students, 3rd Edition: Editing Skills and Tasks*. (Ann Arbor: University of Michigan Press, 2012).

Practice: Choose a verb from the list above to replace each verb in bold type in the sentences below to reduce their informality.

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.

In the space provided below, try to think of a few single verbs that could be used in place of the one in boldface.

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 CO₂ 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.

Focus on Nouns

English has a 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 rather compact form. For instance, we can start with the word *language* and expand on the simple noun in this way.



Thus, it is possible to write

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

as opposed to

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

The first example contains a very long noun phrase — a nominalization. Sometimes nominalization is a useful strategy in writing, while other times it can contribute to unnecessary wordiness. Let’s take a closer look at nominalization in the following section.

Nominalization⁴

When determining whether your characters are in the subject position and your actions are in the verb position, look for nominalizations.

1. Examples of nominalizations:

Verb →	Nominalization	Adjective →	Nominalization
Discover	Discovery	Careless	Carelessness
Analyze	Analysis	Difficult	Difficulty
Resist	Resistance	Different	Difference
React	Reaction	Intense	Intensity

Some nominalizations are identical to their verbs: to hope/a hope; to research/research; to answer/an answer, etc.

⁴ Helen Sword calls needless nominalizations “zombie nouns” because they cannibalize active verbs.” Helen Sword, “Zombie Nouns,” *Opinionator*, July 23, 2012, accessed July 21, 2013, <http://opinionator.blogs.nytimes.com/2012/07/23/zombie-nouns/>.

Original: There was erosion of the land from the floods

Rewrite: The floods eroded the land.

Original: Our intention is to audit the records of the program.

Rewrite: We intend to audit the records of the program.

2. Nominalized phrases versus succinct verb forms of the noun⁵

Nominalized Phrase	Succinct Revision
Gave a report	Reported
Made a decision	Decided
Offered a suggestion	Suggested
Issued an announcement	Announced
Did an analysis	Analyzed

3. Nominalizations and strings of modifiers versus descriptive verbs

Nominalized Phrase	Succinct Revision
Conducted a careful examination of	Scrutinized
Caused considerable confusion for	Baffled
Resulted in significant delay of	Paralyzed
Caused a drop in the morale of	Demoralized

Activity: Reword the sentences below.⁶

Original: The ABC database has been subject to different improvements, modifications, and extensions in structure and content over the years.

Rewrite:

Original: This paper reports an analysis of Tucker's central prediction system model and an empirical comparison of it with two competing models.

Rewrite:

⁵ Examples and tip taken from Dennis G. Jerz, "Nominalization: Don't Overuse Abstract Nouns," *Jerz's Literacy Weblog*, March 28, 2000 (Revised April 15, 2011), accessed July 21, 2013. <http://jerz.setonhill.edu/writing/grammar-and-syntax/nominalization/>

⁶ Adapted from Duke University's Graduate School Scientific Writing Resource (2013), <https://cgi.duke.edu/web/sciwriting/>

4. Useful nominalizations:

- When the nominalization is a subject that refers to a previous sentence:
 - These arguments all depend on a single unproven claim.
 - This decision can lead to costly consequences.
- When the nominalization names the object of the verb:
 - I do not understand either her meaning or his intention.
Compare with: I do not understand either what she means or what he intends.
- When the nominalization is a familiar concept:
 - The Equal Rights Amendment was an issue in past elections.
 - Taxation without representation was not the central concern of the American revolution.
- When your topic is so abstract that you need nominalizations to write about it with a certain level of generality:
 - The cognitive component of intention exhibits a high degree of complexity. Intention is temporally divisible in two: prospective intention and immediate intention. (from Myles Brand's *Intending and Acting*)

Compare with:

When an actor intends anything, he behaves in ways that are cognitively complex. We may divide these ways into two temporal modes: He intends prospectively or immediately.

Activity: Identify the nominalizations in the following paragraph. Decide which to change and which to leave as nominalizations.⁷ Try it yourself before looking at the suggested revisions on the next page!

Textbooks often employ typographical cueing (e.g., capital letters, italics) for parts of the lesson assumed to have greater importance or difficulty for the student. Some research has indicated that such typographical cueing results in an improvement in retention of the emphasized material when compared with material printed in standard homogenous typeface. In spite of these findings, the widespread use of typographical cueing has not been apparent in educational materials, either because of cost factors or the reluctance of authors and publishers to designate some of the material as unimportant and deserving of only superficial reading.

⁷ Adapted from Fowler & Barker (1974), Effectiveness of highlighting for retention of text material, *Journal of Applied Psychology*, 59, p.358.

Suggested revisions:

Textbooks often typographically cue [change] information (e.g., capitalize [change] letters, italicize [change]) for parts of the lesson assumed to have greater importance or difficulty for the student. Some research has indicated that such typographical cueing [leave] improves [change] retention of the emphasized material when compared with material printed in standard homogenous typeface. In spite of these findings [leave], typographical cueing has not been widely used [change] in educational materials, either because of cost factors or the reluctance of authors and publishers to designate some of the material as unimportant and deserving of only superficial reading.

Other Stylistic Features

Additional stylistic choices must sometimes be made in academic writing. For example, in some fields it is appropriate to use the first-person pronoun *I* (or, in fields where it is common for researchers to collaborate, *we* may be common), while in other fields it is frowned upon. In addition, contractions may be permitted in some fields, though you should note that in most disciplines they are not. Relatedly, most academic writers avoid the use of the second-person pronoun *you*.

Students frequently have questions about the use of the passive voice. Both the passive and active voice are used in academic writing; the key is to choose the right voice for the right purpose.

Passive Voice⁸

In English, all sentences are in either “active” or “passive” voice:

ACTIVE: Werner Heisenberg formulated the uncertainty principle in 1927.

PASSIVE: The uncertainty principle was formulated by Werner Heisenberg in 1927.

In an active sentence, the person or thing responsible for the action in the sentence comes first. In a passive sentence, the person or thing acted on comes first, and the actor is added at the end, introduced with the preposition “by.” The passive form of the verb is signaled by a form of “to be”: in the sentence above, “was formulated” is in passive voice while “formulated” is in active.

In a passive sentence, we often omit the actor completely:

The uncertainty principle was formulated in 1927.

⁸ Prepared 2006 by Tim Corson and Rebecca Smollett, University College Writing Workshop. Some examples adapted from Duke University Graduate School Scientific Writing Resource, 2013, <https://cgi.duke.edu/web/sciwriting/>.

When do I use passive voice?

In some sentences, passive voice can be perfectly acceptable. You might use it in the following cases:

1. The actor is unknown:
The cave paintings of Lascaux were made in the Upper Old Stone Age. (We don't know who made them.)
2. The actor is irrelevant:
An experimental solar power plant will be built in the Australian desert. (We are not interested in who is building it.)
3. You want to be vague about who is responsible:
Mistakes were made. (Common in bureaucratic writing!)
4. You are talking about a general truth:
Rules are made to be broken. (By whomever, whenever.)
5. You want to emphasize the person or thing acted on. For example, it may be your main topic:
Insulin was first discovered in 1921 by researchers at the University of Toronto. It is still the only treatment available for diabetes. (Insulin is the focus of the paper, not the researchers.)
6. You are writing in a scientific genre that traditionally relies on passive voice. Passive voice is often preferred in lab reports and scientific research papers, most notably in the Materials and Methods section:
The sodium hydroxide was dissolved in water. This solution was then titrated with hydrochloric acid. (It doesn't matter who did the dissolving & titrating; the focus is on the method, not the person implementing the method.)

In these sentences you can count on your reader to know that you are the one who did the dissolving and the titrating. The passive voice places the emphasis on your experiment rather than on you.

Note: Over the past several years, there has been a movement within many science disciplines away from passive voice. Scientists often now prefer active voice in most parts of their published reports, even occasionally using the subject “we” in the Materials and Methods section.

When should I avoid passive voice?

Passive sentences can get you into trouble in academic writing because they can be vague about who is responsible for the action:

The DNA was sequenced using the n-terminus method (Smith et al., 2004). (Who sequenced the DNA? Why is the Smith et al. paper being cited—because they sequenced the DNA or because they developed the n-terminus method?)

Academic writing often focuses on differences between the ideas of different researchers, or between your own ideas and those of the researchers you are discussing. Too many passive sentences can create confusion:

Research has been done to discredit this theory. (Who did the research? You? Your professor? Another author?)

Some students use passive sentences to hide holes in their research:

The telephone was invented in the nineteenth century. (I couldn't find out who invented the telephone!)

Finally, passive sentences often sound wordy and indirect. They can make the reader work unnecessarily hard. And since they are usually longer than active sentences, passive sentences take up precious room in your paper:

Since the car was being driven by Michael at the time of the accident, the damages should be paid for by him.

Weeding out passive sentences

If you now use a lot of passive sentences, you may not be able to catch all of the problematic cases in your first draft. But you can still go back through your essay hunting specifically for passive sentences. To spot passive sentences, look for a form of the verb to be in your sentence, with the actor either missing or introduced after the verb using the word "by":

Poland was invaded in 1939, thus initiating the Second World War.

Genetic information is encoded by DNA.

The possibility of cold fusion has been examined for many years.

Try turning each passive sentence you find into an active one. Start your new sentence with the actor. Sometimes you may find that need to do some extra research or thinking to figure out who the actor should be! You will likely find that your new sentence is stronger, shorter, and more precise:

Original: Poland was invaded in 1939, thus initiating the Second World War.

Rewrite: Germany invaded Poland in 1939, thus initiating the Second World War.

Original: Genetic information is encoded by DNA.

Rewrite: DNA encodes genetic information.

Original: The possibility of cold fusion has been examined for many years.

Rewrite: Physicists have examined the possibility of cold fusion for many years.

No-No Words and Phrases

Some words and expressions are generally associated with colloquial (everyday, informal) language and are best avoided altogether. (There are exceptions to every case, of course.) Try to complete the practice activity below before reading the next section.

Practice: Which of the expressions in bold 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**.

Several of the bolded expressions in the previous exercise are actually best to be avoided in academic writing. In general, try to avoid using the following words and expressions in your writing:

a lot get/getting really just (as an adverb)

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*. 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 2017 produced one screen that included this information.

Figure 1. Sample Google Scholar Results

The screenshot shows four search results from Google Scholar. Each result includes a title, authors, publication information, a snippet of the abstract, and citation statistics. The bolded phrases in the snippets correspond to the bolded words in the practice exercise.

- A horizon scan of global conservation issues for 2015**
WJ Sutherland, M Clout, M Depledge, LV Dicks... - Trends in ecology & ..., 2015 - Elsevier
... A bioplastics industry independent of fossil fuel feedstocks and agricultural land could grow rapidly. Algae as a replacement for palm oil. **In recent years there has been much interest in** the possible applications of oils produced by genetically modified algae [24] ...
☆ 97 Cited by 29 Related articles All 21 versions
- A hybrid controller design for parallel hybrid electric vehicle**
W Li, G Xu, Z Wang, Y Xu - Integration Technology, 2007. ICIT ..., 2007 - ieeexplore.ieee.org
... **In recent years there has been considerable interest in** using hybrid system theory to develop a systematic framework for the analysis and design of ... The hybrid **electric vehicle** systems contain interacting discrete and continuous dynamics, and exhibit simultaneously several ...
☆ 97 Cited by 13 Related articles All 3 versions
- Health impact assessment of active transportation: a systematic review**
N Mueller, D Rojas-Rueda, T Cole-Hunter... - Preventive ..., 2015 - Elsevier
... Lindsay et al., 2011). **In recent years, there has been growing interest in** health impact assessment (HIA) as a method to estimate potential health consequences of non-healthcare interventions (Mindell et al., 2003). HIA aims at ...
☆ 97 Cited by 121 Related articles All 12 versions
- Design of interior PM machines for field-weakening applications**
WL Soong, S Han, TM Jahns - Electrical Machines and Systems ..., 2007 - ieeexplore.ieee.org
... **In recent years there has been increasing interest in** the use of concentrated winding stators for both interior [10] and surface PM rotors [8]. Surface PM machines using distributed winding ... The first application is for an **electric vehicle** traction motor ...
☆ 97 Cited by 22 Related articles All 4 versions

As you can see in Figure 1, adjectives that modify interest are much, considerable, growing, and increasing. To determine how common these adjectives are, you can then search for the complete expressions (e.g., “in recent years there has been an increasing interest in”).

Other ways to use the internet to search for specific language examples include WebCorp LSE (<http://www.webcorp.org.uk/live/>), 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 constantly being developed with great frequency, and you may want to periodically search the internet to see what is available.

Flow⁹

Another important consideration for successful communication is flow — moving from one statement in a text to another. Naturally, establishing a clear connection of ideas is important to help your reader follow the text. Read the passage below and consider the questions that follow.

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. (However, the specific service workers that are customarily tipped, and the amounts consumers give those workers, vary across nations.) For example, in the United States consumers tip over 30 different service professions, while no service professions are tipped in Iceland (Star, 1988). 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). These variations in tipping norms are sources of uncertainty for international travelers and phenomena to be explained by hospitality and tourism researchers. International differences in tipping customs may be partially explained by differences in national values. According to Hofstede (1983), national values differ on four major dimensions — power distance, uncertainty avoidance, individualism, and masculinity. Power distance reflects a nation’s acceptance of power and status differences. This value should be positively related to national acceptance of tipping because tipping gives customers power over servers (Hemenway, 1984; Lynn, 2000a).

1. How do you think the author establishes the relationship between the ideas?
2. How would you explain the relationship between the first and second sentences?
3. Which words are repeated in the text? Are you surprised by the amount of repetition of words in the text? Did you notice this when you first read the passage?
4. What do you think the next sentence or section 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.

⁹ Adapted from John M. Swales and Christine B. Feak, *Academic Writing for Graduate Students, 3rd Edition: Editing Skills and Tasks*. (Ann Arbor: University of Michigan Press, 2012).

What is the difference between these two paragraphs?¹⁰

Original: Asian competitors who have sought to compete directly with Acme's X-line product groups in each of six market segments in the Western Pacific region will constitute the main objective of the first phase of this study. The labor costs of Acme's competitors and their ability to introduce new products quickly define the issue we will examine in detail in each segment. A plan that will show Acme how to restructure its diverse and widespread facilities so that it can better exploit unexpected opportunities, particularly in the market on the Pacific Rim, should result.

Rewrite: The first phase of the study will mainly examine six market segments in the Western Pacific region to determine how Asian competitors have sought to compete directly with Acme's X-line product groups. In each segment, the study will examine in detail their labor costs and their ability to introduce new products quickly. The result will be a plan that will show Acme how to restructure its diverse and widespread facilities so that it can better exploit unexpected opportunities, particularly in the market on the Pacific Rim.

You can improve the flow of your sentences by moving from old to new information and by making your topic strings consistent. In each sentence, start with old information and end with new information.

Definitions

- **Old/known:** information you've already mentioned or implied, or information that you can assume the reader is familiar with and will recognize.
- **New:** information that is not known, that you want to stress, that is most significant, that you will expand on in the following sentence.

Activity: Rewrite the underlined sentences in each example to improve its cohesion.¹¹

Original: The Gateway Arch at the edge of the Mississippi River in St. Louis is the world's tallest monument. Eero Saarinen designed the stainless steel structure that commemorates the Westward Movement.

Rewrite:

Original: Farmers try to provide optimal growing conditions for crops by using soil additives to adjust soil pH. Garden lime, or agricultural limestone, is made from pulverized chalk, and can be used to raise the pH of the soil. Clay soil, which is naturally acidic, often requires addition of agricultural lime.

Rewrite:

¹⁰ Adapted from Joseph M. Williams *Style: Toward Clarity and Grace*. Chicago Guides to Writing, Editing, and Publishing. (Chicago: University of Chicago Press, 1990), pp. 42-65.

¹¹ Activity adapted from Martha J. Kolln, *Rhetorical Grammar: Grammatical Choices, Rhetorical Effects*. 5th Edition (New York: Pearson Education, 2007), p. 72.

2. Ways to shift old/known information to the subject position:

- **Switch subjects and complements:**

Original: Most people's attitudes toward rural dialects are determined by urban snobbery. However, the individual's relationship to rural America is more important than snobbery.

Rewrite: More important, however, than snobbery is the individual's relationship to rural America.

- **Use the passive voice and nominalizations to manage the flow of information:**

- Appropriate use of passive voice:

Some astonishing questions about the nature of the universe have been raised by scientists exploring the nature of black holes in space. A black hole is created by the collapse of a dead star into a point perhaps no larger than marble. So much matter compressed into so little volume changes the fabric of space around it in profoundly puzzling ways.

- Appropriate use of nominalization:

To account for the relationships among colonies of related samples, it is necessary to track their genetic history through hundreds of generations. This kind of study requires a careful history of a colony.

Transitional Devices¹²

Transitional devices join your sentences in ways that make it easy for readers to follow your logic. You can improve your transitions by using transitional tags, repeating key words and phrases, and using demonstrative adjectives and pronouns carefully.

Transitional Tags

Transitional tags run the gamut from the little conjunctions *and*, *but*, *nor*, *for*, *yet*, *or*, and *so* to more complex signals that ideas are somehow connected—conjunctive adverbs and transitional expressions such as *however*, *moreover*, *nevertheless*, *on the other hand*. On the next page is a chart of the transitional devices with simplified definitions of their function (note that some devices appear with more than one definition). **A word of caution:** Do not overload your text with transitional expressions merely because you know these devices connect ideas. Use them judiciously, and vary your style with other types of transitions.

¹² Adapted from the Capital Community College Guide to Grammar and Writing, <http://grammar.ccc.commnet.edu/grammar/transitions.htm>.

<u>addition</u>	again, also, and, and then, besides, equally important, finally, first, furthermore, in addition, in the first place, last, moreover, next, second, still, too
<u>comparison</u>	also, in the same way, likewise, similarly
<u>concession</u>	granted, of course
<u>contrast</u>	although, and yet, at the same time, but at the same time, despite that, even so, however, in contrast, in spite of, instead, nevertheless, notwithstanding, on the contrary, on the other hand, otherwise, regardless, still, though, yet
<u>emphasis</u>	certainly, indeed, in fact, of course
<u>example</u>	after all, as an illustration, even, for example, for instance, in conclusion, indeed, in fact, in other words, in short, it is true, of course, namely, specifically, that is, to illustrate, thus, truly
<u>summary</u>	all in all, altogether, as has been said, finally, in brief, in conclusion, in other words, in particular, in short, in simpler terms, in summary, on the whole, that is, therefore, to put it differently, to summarize
<u>time sequence</u>	after a while, afterward, again, also, and then, as long as, at last, at length, at that time, before, besides, earlier, eventually, finally, formerly, further, furthermore, in addition, in the first place, in the past, last, lately, meanwhile, moreover, next, now, presently, second, shortly, simultaneously, since, so far, soon, still, subsequently, then, thereafter, too, until, until now, when

Repetition of Key Words and Phrases

We may hesitate to connect ideas by means of repetition because we've been trained to avoid redundancy. Certainly we should avoid repeating examples or phrases out of carelessness or a desire to fill up space, but well-chosen repetitions of words or phrases that are central to our arguments can create a sense of coherence, reminding the reader of the argument's direction.

Example: The law invokes the question of a common humanity endowed with the same rights, not the racialization of the colonized populations. The law also states that all school curricula must include the history of the triangular trade and of the cultures created by enslaved and displaced populations since the fifteenth century, that a date for annual public commemoration must be set, and that a special committee must be entrusted with the task of establishing appropriate ways of memorializing this crime for the benefit of future generations.

The paragraph above also contains a type of repetition called *parallel structure*, seen in the repeated use of "that." The three phrases beginning with "that" play similar roles in the logic of the sentence (i.e., they all tell what the law states) and they have similar (parallel) grammatical structures.

Demonstrative Adjectives and Pronouns

Demonstrative adjectives like "this" and pronouns like "he," "she," and "it" connect ideas by referring the reader to something earlier in the text. When you write, "This concept is important because..." you nudge the reader to sum the concept up, quickly and subconsciously, before proceeding to the *because* part of your reasoning. Also note that when you use pronouns, it should always be perfectly clear what they refer to. For this reason, it's usually best to follow "this" with a noun (more on this in a later section).

Make Topic Strings Consistent

Activity: Compare the underlined topics in each paragraph.

Original: In this paragraph, underlining indicates topics. Particular ideas toward the beginning of each clause define what a passage is centrally “about” for a reader, so a sense of coherence crucially depends on topics. Cumulatively, the thematic signposts that are provided by these ideas should focus the reader’s attention toward a well-defined and limited set of connected ideas. Moving through a paragraph from a cumulatively coherent point of view is made possible by a sequence of topics that seem to constitute this coherent sequence of topicalized ideas. A seeming absence of contexts for each sentence is one consequence of making random shifts in topics. Feelings of dislocation, disorientation, and lack of focus will occur when that happens. The seeming coherence of whole sections will turn on a reader’s point of view as a result of topic announcement.

Rewrite: In this paragraph, I have underlined the topics of every clause. Topics are crucial for a reader because they focus the reader’s attention on a particular idea toward the beginning of a clause and thereby notify a reader what a clause is “about.” Topics thereby crucially determine whether the reader will feel a passage is coherent. Cumulatively, through a series of sentences, these topicalized ideas provide thematic signposts that focus the reader’s attention on a well-defined set of connected ideas. If a sequence of topics seems coherent, that consistent sequence will move the reader through a paragraph from a cumulatively coherent point of view. But if through that paragraph topics shift randomly, then the reader has to begin each sentence out of context, from no coherent point of view. When that happens, the reader will feel dislocated, disoriented, out of focus. Whatever the writer announces as a topic, then, will fix the reader’s point of view, not just toward the rest of the sentence, but toward whole sections.

Science example of consistent subject strings:¹³

Original: To understand human evolution, genomes from related primates are necessary. For example, identification of features common among primates or unique to humans will require several primate genomes. Fortunately, scientists can now do such genome-wide exploration; in the past 5 years, the community has released several nonhuman primate genome sequences.

Rewrite: To understand human evolution, genomes from related primates are necessary. For example, several primate genomes are needed to identify features common to primates or unique to humans. Fortunately, such genome-wide exploration is now a reality; in the past 5 years, genome sequences of several nonhuman primates have been released.

Compare subject strings...

Paragraph 1: genomes from related primates...identification of features...scientists...the community

Paragraph 2: genomes from related primates...primate genomes...genome-wide exploration...
genome sequences

¹³ Adapted from Duke University’s Graduate School Scientific Writing Resource (2013), <https://cgi.duke.edu/web/sciwriting/>

Punctuation¹⁴

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 (,).

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

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.

Although commas could be used in the preceding example, the length of the elements suggests that semicolons would work better: note the semicolons 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.

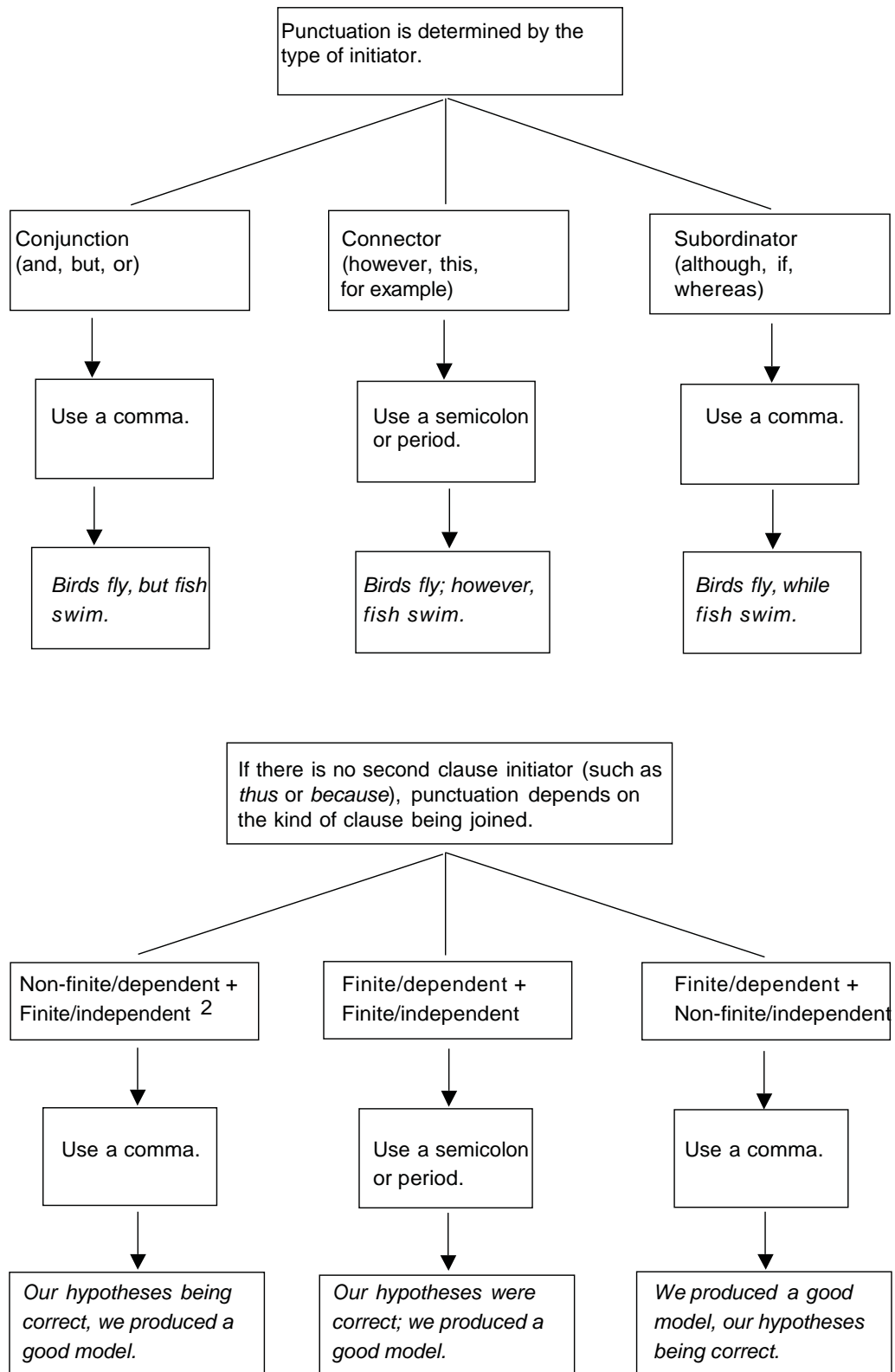
Sometimes a dash is used to introduce a list as well, but how you should choose between a dash and a comma is a matter of debate. Often dashes are used by authors to intrude into a sentence and to provide some additional information. Commas are used in a variety of situations, but for our purposes, however, 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.

¹⁴ Adapted from John M. Swales and Christine B. Feak, *Academic Writing for Graduate Students, 3rd Edition: Editing Skills and Tasks*. (Ann Arbor: University of Michigan Press, 2012).

Figure 2. Punctuation



2 A finite verb is a main verb that is inflected to indicate tense and person.

***This* and Summary Phrases¹⁵**

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.

Practice: 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?

¹⁵ Adapted from John M. Swales and Christine B. Feak, *Academic Writing for Graduate Students, 3rd Edition: Editing Skills and Tasks*. (Ann Arbor: University of Michigan Press, 2012).

As these examples indicate, the noun that you choose to follow this/these can provide a strong interpretive signal that reveals your stance. By revealing your stance you communicate not only what you know, but also what you think.

Presentation¹⁶

Most instructors tolerate small errors in language in papers written by nonnative 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 spellcheck 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 ensure there is a clear link between them. If not, 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? (See next section for more on article usage.) 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?

¹⁶ Adapted from John M. Swales and Christine B. Feak, *Academic Writing for Graduate Students, 3rd Edition: Editing Skills and Tasks*. (Ann Arbor: University of Michigan Press, 2012).