

As in many GS texts, the electric vehicle passage (and the one on page 60) began with a general statement. General statements of fact or tendency can often be useful starting points of papers and sections of papers. In fact, our small study of a subset of student papers in MICUSP² revealed that this was overwhelmingly the most common choice of openings among students. Other common ways to begin a paper include providing some interesting statistics, a quotation, or a definition.

Opening with General Statements

General statements can include those providing facts as well as broad statements made about a topic that are usually, but not necessarily always, true. Here are a few examples.

Individuals in organizations exhibit a wide range of behaviors, from the minimalist who does the least possible to maintain membership to those who go beyond expectations, engaging in extra-role behavior to promote the effective operation of the organization or to benefit others.

In the last decade, tremendous strides have been made in the science and technology of organic light-emitting diodes (OLEDs).

Medical tourism is growing in countries such as Thailand, Malaysia, and the Philippines.

Generalizations that you anticipate readers are likely to accept can be effective opening sentences. By beginning with information that is generally accepted, you begin with something familiar to the readers, and ease them into your paper. While you may worry whether starting with familiar information is a good strategy, in many fields this may be preferred over starting with a highly challenging or provocative claim. Why do you suppose this is?

After making a general statement, some support or explanation for the statement should be offered, which, as we have discussed, helps move the passage from general to specific. Support can take the form of specific detail or perhaps a citation to earlier work. Whether you begin a GS text with a general statement or a definition is a matter of personal preference. However, sometimes one may be a strategically better choice than the other.

² The Michigan Corpus of Upper-level Student Papers is available at www.elicorpora.info/.

Suppose, for instance, the topic assigned is “The English Language.” Now, if we were to write on this topic as linguists and the audience was a professor in Linguistics, we might open the text with a definition.

English is a language that belongs to the West Germanic subgroup of the Indo-European language family. It began its history as a distinct tongue in England around 500 ACE.

However, in other circumstances, depending on your purpose, it may be a better strategy to start with a generalization.

In comparison to many of the world's better-known languages, English is relatively new. Indeed, the English of 600 years ago can be understood only by specialists.

Although Chinese has the greatest number of native speakers, English is the most widely distributed language in the world today. This position derives from the fact that English is widely taught as a second language in schools and widely used in international communication as a lingua franca.

TASK THREE

Three pairs of sentences are shown on page 63, each consisting of a definition and a generalization. When would it be better to begin a text with the first sentence in each pair rather than the second?

Example

- A. Plug-in hybrid electric vehicle (PHEV) technology is considered a potential near-term approach to addressing global warming and U.S. dependency on foreign oil in the transportation sector as the cost, size, and weight of batteries are increasingly reduced.
- B. A plug-in hybrid electric vehicle (PHEV) combines the propulsion capabilities of a traditional combustion engine with an electric motor.

Sentence A may be good for either expert or non-expert readers. The information in Sentence A seems broadly accessible since readers should be familiar with global warming and dependency on foreign oil. Although most definitions often work for an audience that is unfamiliar with the topic to be addressed, the definition in Sentence B might be too technical for a broad audience. So, it seems that Sentence B would be best for an audience familiar with concepts like propulsion and traditional combustion engines. In the end, audience matters.

1. a. Since their introduction, social network sites (SNSs) such as MySpace, Facebook, RenRen, and Bebo have attracted millions of users, many of whom have integrated these sites into their daily practices. As of this writing, there are hundreds of SNSs, with various technological affordances, supporting a wide range of interests and practices.
 - b. According to Messinger et al. (2009) a social networking website is a platform in which members can (a) easily create “profiles” with information about themselves, and (b) define their “trusted” circle of friends.
 2. a. Since their discovery in the late 1970s, hydrothermal vents associated with mid-oceanic ridges have fascinated scientists of various disciplines.
 - b. A hydrothermal vent is a fissure in a planet’s surface from which geothermally heated water emerges (Lal, 2008). Such vents are commonly found near volcanically active places, areas where tectonic plates are moving apart, and new crust is being formed.
 3. a. Folk art is often defined as an art form created out of everyday materials by untrained artists.
 - b. Folk art distinguishes itself from what is commonly known as fine art in that it has been and remains an important link in cultural transmission.
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Opening with Statistics

Statistics can be particularly effective openings to GS texts because they can sometimes generate reader interest in the text, as demonstrated by this excerpt from a student paper written for a mechanical engineering course.

In the United States in 2006, 4,784 pedestrians were killed in traffic accidents. Because a larger percentage of Americans use private vehicles than walk or use public transportation compared to people in many countries in the European Union and around the world, less attention is given in the U.S. to pedestrian safety than in these more pedestrian-friendly countries. In addition, though numerous efforts have been made to improve vehicle passenger safety (air bags, crumple zones, et cetera), no similar effort to protect pedestrians has been initiated. While pedestrians were involved in just over 1% of all traffic accidents in 2006, these vulnerable road users accounted for over 12% of all traffic fatalities.

MICUSP File MEC.G1.03.1

TASK FOUR

Discuss with a partner whether opening a GS text with some statistics is possible in your field of study. Why are such openings potentially interesting for readers? Now look at this GS opening from a student paper in Economics and answer the questions on page 65.

① Between 1992 and 1995, an international lysine cartel that included five companies illegally colluded on prices around the world. ② Lysine is an amino acid used as a feed additive for enhancing muscle growth in livestock. ③ Prior to the collusive agreement, worldwide sales of lysine were over \$600 million annually and this figure increased by \$200 million following the price-fixing arrangement.

MICUSP File ECO.G0.02.2

1. What message is the author trying to convey in the first three sentences?
 2. The purpose of this paper was to examine the extent to which economic models on collusion describe collusion in the lysine industry. Do you think this is an effective opening? Why or why not?
 3. What is the purpose of Sentence 2? How important is this sentence?
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Opening with Definitions

Definitions are a common way of getting started; they are “hooks” from which GS paragraphs can be hung. Such paragraphs typically open with full-sentence definitions. Textbooks, in contrast, often introduce the definitional information as a minor part of the sentence, as in this example:

The majority of corporate profits, or earnings after all the operating expenses have been deducted, are subject to tax by the government.

Textbook definitional information is used to clarify terms that may be unfamiliar to the reader. However, this is not your task if your audience is already familiar with the terms and expects you to write a text that demonstrates your understanding of concepts.

In the next part of this unit, we will highlight certain aspects of the structure of these key definitional sentences. We will then consider more extended definitions, contrastive definitions (e.g., organic versus inorganic chemistry), and comparative definitions (i.e., discussions of the advantages and disadvantages of competing definitions).

Writing a Definition

The term *definition* comes from the Latin word *definio*, which means “to limit or bound; to interpret ideas or words in terms of each other; to understand one thing by another.” A definition sets the boundaries for a word’s meaning. As you are aware, one term can have different meanings depending on the context. The dictionary definition of *cold*, for example, usually has

To sum up, we suggest that you offer a definition of a term or concept if one or more of the following apply

1. the term or concept is perhaps unfamiliar to your readers
2. you need to display your understanding for a course paper or examination
3. the origin of the term is interesting or sheds light on the meaning (as in our definition of *definition* earlier)
4. there is a lack of agreement on or some ambiguity surrounding the meaning

TASK FIVE

List some terms in your own field with meanings different from those in everyday life. In Engineering, you might consider the word *chip* or *jitter*. In Business, Computer Science, or Automotive Engineering, you might consider the word *crash*. Engineers may also consider *noise*. What about a *cloud*? Now define one or two of those terms as we did for *tone* in Linguistics and Physiology.

Some Common Ways to Define in Academic Writing

Definitions are common in student papers and published papers. Definitions may simply be short, parenthetical additions to a sentence or perhaps a larger part of a paper. The extent of the definition depends on the purpose of the paper, the level of familiarity your audience has with the subject, and the extent to which there is an agreed-upon definition of the concept. Here are some common ways to define.

1. short definitions or “glosses” that give information about a term in a word or phrase and are placed within either parentheses or commas in a sentence; phrasal definitions signaled by such devices as *i.e.* or phrases such as *known as*, *defined as*, and *called*
2. sentence definitions, which are brief and somewhat similar to a dictionary definition
3. extended definitions, which are longer and more detailed than definitions found in dictionaries

something to do with low temperature or a deficiency of heat. But *cold* is a relative term whose meaning changes with context. In the following text, how does the author define *particularly cold* for the reader?

Only when environmental conditions are particularly cold, for example during winter conditions at latitudes above about 50° in either hemisphere, or when cold is associated with windy and especially wet conditions, or when the athlete exercises in cold water for prolonged periods, does the risk arise that the athlete will lose heat faster than he or she can produce it.

Noakes, 2000.

Words and phrases may also have different meanings depending on the field of study. For example, *tone* has several definitions. In Music, a *tone* can be a sound of distinct pitch, quality, and duration; while in Linguistics, *tone* can refer to the rise or fall of the voice on a particular syllable (as in Chinese). In Interior Design, *tone* may be a color or shade of color. And, finally, *tone* in Physiology may be used to describe the normal state of elastic tension or partial contraction in resting muscles.

Apart from disciplinary differences in the meaning of a term, meanings may differ within some fields of study; this is not uncommon in the social sciences and the humanities. In these fields the definition of a term may not be agreed on by members of the discipline; there may be multiple or competing definitions, each of which has merit. An awareness of these differences may be critical for your reading as well as your writing. Indeed, to quote Boggs (2009), "Definitions are curious things. On the surface, one resembles another, sometimes more closely, sometimes less. Beneath their surface, however, lurks the essential quality that differentiates one definition from another, a quality that makes that definition unique to its referent."

To illustrate, while we may all have an understanding of *fast food*, definitions of the concept differ for different research purposes and it may be necessary to clearly state the definition so as to avoid misunderstanding or criticism. Even within the sciences there is a need for clarifying concepts such as high blood pressure, for which there are no universally accepted pressure readings (which in turn can complicate comparisons of study outcomes). Even in the sciences there are occasionally debates regarding the meaning of important concepts such as noise. We will return to the issue of multiple definitions later.

Here are some skeletal phrases that you could use to present the definition that you have chosen.

While debate exists regarding a precise definition of . . . , the stance adopted in this paper is that

For the purposes of this paper, . . . refers to/is defined as/is considered to be

Here we define . . . as . . . In this paper I have adopted [author's] definition of

This paper follows [author's] definition of

TASK SIXTEEN

Take a look at this discussion of road rage and answer the questions on page 87.

- ① The term “road rage” was first coined in 1988 (Fumento, 1998) and is defined in the *Oxford English Dictionary* as “violent anger caused by the stress and frustration of driving in heavy traffic.”
- ② Some researchers suggest that this definition is not entirely accurate.
- ③ For example, road rage has been described as a cultural habit of retaliation that occurs as a result of frustration and can occur independent of heavy traffic (James & Nahl, 1998).
- ④ Some have even gone so far as to label road rage a mental disorder (Schmid, 1997).
- ⑤ Classifying this cultural phenomenon as a mental disorder may be a stretch, but there is substantial evidence that some drivers become very angry when confronted by an adverse driving event.
- ⑥ Elevated levels of anger may prompt aggressive and other risk-taking behavior, behavior that can increase accident risk, and risk of other negative behavior such as physical assault between drivers or arguments with passengers (Deffenbacher, Oetting, & Lynch, 1994).

DePasquale et al., 2001.

1. How many and what kinds of different definitions of road rage do the authors include? Why?
2. How is the text organized? Does it seem to be a GS text?
3. What verb tenses are used? Why?
4. In Sentence 5, what is *this cultural phenomenon*?
5. In which sentences do the authors seem to be cautious about their claims? Which words or phrases suggested that the authors were hedging (i.e., being careful)?
6. What do the authors mean when they say, *Classifying this cultural phenomenon as a mental disorder may be a stretch*?
7. What is the purpose of the second sentence (i.e., *Some researchers suggest that this definition is not entirely accurate*)?
8. What do you think the authors are going to write about next? Their data? Their method? Their hypothesis? Something else?

TASK SEVENTEEN

Read through the discussion of procrastination, which views the term from a variety of perspectives. Answer the questions on pages 88–89. Does it seem like a competing or a contrastive definition, or is it another kind?

① Procrastination refers to deliberately putting off one's intended actions. ② This means that procrastinators intend to perform an action at a certain moment, but do not engage in it at the moment that it was planned. ③ Instead, they postpone it, or even never do it at all. ④ This phenomenon is defined at the behavioral level (not doing what was intended) as well as at the cognitive level (postponing decisions) and does not refer to the possible causes of the dilatory behavior. ⑤ There may be several reasons for putting off one's intentions, some of which we are not interested in, such as illness, technical problems, and so on. ⑥ Moreover, sometimes procrastination might even be functional (for instance, postponing a decision because crucial information is lacking, as in Ferrari, 1994). ⑦ Two types of procrastinator have been described: the

optimistic procrastinator and the pessimistic procrastinator. ⑧ Optimistic procrastinators put off their intentions but do not worry about doing so (Milgram et al., 1992). ⑨ They are confident that they will succeed in the end, regardless of their engagement in the intended action now or later. ⑩ Moreover, they overestimate their progress and their chances to succeed and underestimate the time needed to achieve their goal (Lay, 1987, 1988). ⑪ In contrast, pessimistic procrastinators do worry about their dilatory behavior (Milgram et al., 1992). ⑫ They are aware of the fact that they get behind schedule. ⑬ Nevertheless, they still procrastinate because they do not know how to deal with the task (Lay, 1987, 1988). ⑭ They feel incompetent and are afraid that their involvement in the task will prove their incompetence. ⑮ Therefore, they procrastinate to avoid unpleasant experiences.

Dewitte and Lens, 2000.

1. What elements make the passage seem “academic”?
2. Why do the authors include the general discussion of procrastination in Sentences 1–6?
3. What is the purpose of Sentence 7? Is this sentence helpful to a reader? Why?
4. Underline the sentence connectors in the text. What kinds of connector did the author use (see page 37)? How do these affect the flow of ideas?
5. In Sentence 4 there is a summary phrase. What does *this phenomenon* refer to?
6. Why do you suppose the authors used *sometimes* and *might* in Sentence 6?
7. If, during the revision process, you thought that the passage would be improved by breaking it into two paragraphs, where would you put the paragraph break?

8. The authors have chosen to place the references to previous work in parentheses. What would be the effect of clearly making the reference part of the sentences, as in this example?

They are aware of the fact that they get behind schedule. Nevertheless, Lay (1987, 1988) states that they still procrastinate because they do not know how to deal with the task.

How do writers refer to previous work in your field? Do they use numbers, parentheses, or something else? If you do not know, check a journal in your field.

9. What might the authors of this text discuss next?
10. What question (or questions) might this passage be part of an answer to?
11. What field do you think the passage is from?

TASK EIGHTEEN

We offer two choices here. Write an extended definition of a term for which there are competing definitions. Or write a contrastive definition for a term in your field. Remember to use citations if you refer to sources.

Discussions of Schools of Thought

Many fields have controversies that have led to competing schools of thought. Examples are schools of thought in Economics, the different categorizations of intelligence, or disagreements about the origins of the universe. Passages outlining these schools of thought often involve highlighting contrasts. Notice how this is done in the sample text in Task Nineteen.

Longer Research Papers

When you read an RP, you may think that it is a fairly straightforward account of an investigation. Indeed, RPs are often designed to create this impression so that authors can appear more convincing to their readers. However, we believe that such impressions are largely misleading and may lead novice authors to conclude that writing up research should be an uncomplicated process for those with some experience. A more accurate picture is that RP authors typically operate in a highly competitive environment. They need to establish that their research questions are sufficiently interesting for others to read. They need to demonstrate that they are familiar with the relevant literature to demonstrate that the research questions have not already been answered. And they need to compete against other RPs for acceptance and recognition. As a result, RP authors are very much concerned with positioning—with showing that their studies are relevant and make some new contribution to the field.

The overall rhetorical shape of a typical RP is shown in Figure 14. The arrows indicate that the sections are closely connected. In fact, some journal editors have suggested that authors try to create a strong connection between the Introduction and Discussion. In addition, authors should make sure that every method described is related to some results and all results are related to a method.

Some empirical papers will follow a slightly different pattern in which the Results and Discussion sections appear in the same section. This eliminates the difficult task of deciding in which section authors should interpret or give meaning to their results. In other types of papers, several studies may be discussed, which results in some cycling of the Methods-Results-Discussions sections. Despite these and other variations, the basic format remains relevant.

FIGURE 14. Overall Shape of a Research Paper

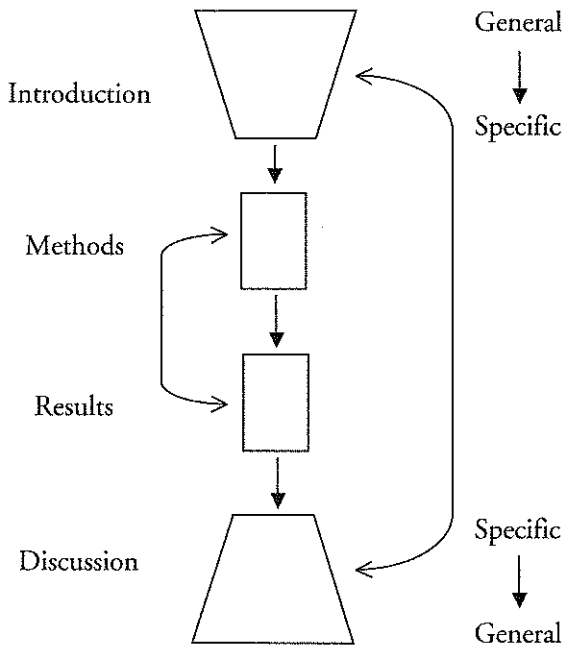


Figure 14 gives a useful indication of the broad-narrow-broad or general-specific-general movement of the typical RP. As the RP in English has developed over the last hundred years or so, the four different sections have become identified with four different purposes.

Introduction (I)	The main purpose of the Introduction is to provide the rationale for the paper, moving from a general discussion of the topic to the particular question, issue, or hypothesis being investigated. A secondary purpose is to attract interest in the topic—and hence readers.
Methods (M)	The Methods section describes, in various degrees of detail, methodology, materials (or subjects), and procedures. This is the narrowest part of the RP.
Results (R)	In the Results section, the findings are described, accompanied by variable amounts of commentary.
Discussion (D)	The Discussion section gives meaning to and interprets the results in a variety of ways. Authors make a series of "points," at least some of which refer to statements made in the Introduction.