

Name: \_\_\_\_\_

Epita (SUP) 2022

# Technology In the Media

(T.I.M.)

S1 – S2  
2017 – 2018



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# ASSESSMENTS AND COEFFICIENTS

## S1

English: Technology In the Media		English: Communicating In English	
<i>CONTRÔLE CONTINU 50%</i>		<i>CONTRÔLE CONTINU 50%</i>	
Content	Coef	Content	Coef
Midterm	4	Midterm	4
MCQs	4	MCQs	4
Paragraph writing	4	Participation + Oral Quizz	4
MOOC Project	6	POV	6
FINAL EXAM 50%		FINAL EXAM 50%	

## S2

English: Technology In the Media		English: Communicating In English	
<i>CONTRÔLE CONTINU 50%</i>		<i>CONTRÔLE CONTINU 50%</i>	
Content	Coef	Content	Coef
Midterm	4	Midterm	4
MCQs	4	MCQs	4
Independent writing	4	Reading response Paper	4
Debates + IT presentation	6	Country Project	6
FINAL EXAM 50%		FINAL EXAM 50%	

## BOMBERB – how to set up a presentation or speech.

Exercise 1. Study the stages of a presentation 1 to 7. Then fill in the gaps with words from the box below.

<b>Bang!</b>	<b>Bang!</b>	<b>Opening</b>	<b>Recap</b>
<b>Bridge</b>	<b>Message</b>	<b>Examples</b>	

1. Start with something to get attention: a surprising fact; a reference to "here and now"; a question; a humorous quote/story; audience participation; a visual aid. Bang!
2. Opening
  - A) Say a few words about yourself.
  - B) Tell the audience the structure of your talk.
  - C) Tell the audience how they will benefit from your presentation.
3. Present a small number of main points – a maximum of four. Message
4. Connect each point to the needs/interests of your audience. For example, show the audience how they will benefit or ask them a question. Bridge
5. Give them examples to make your points clear. Examples
6. Summarize the main points again. Mention the key benefits—how the audience members can apply the information in your talk to their specific situation. Recap
7. Finish with impact: a link back to your opening Bang!; a dramatic statement which sums up your message; an unusual visual aid; a strong Thank you for your attention!; a call to action (if there is something you want the audience to do). Bang!

**Failing to plan leads to planning to fail. Make the right choice!**

## Abbreviations for essay-correcting

WW – wrong word - **Actually** I don't have time for sports. ("currently" is right here.)

Sp – spelling mistake (This results in a loss of 3 points.)

T – Tense (E.g. John has seen that movie last week.)

W. O. word order (John has seen already that movie.)

W. M. word missing

punc – punctuation

Frag – fragment (Although John saw the movie last week.)

NS - new sentence

NP - new paragraph

DNE – does not exist (determinate)

Layout – *mise en page*

Agr – agreement (E.g. John have seen that movie; every people)

Cap – capital letter: (I speak French. Today is Monday.) deadly

D – Deadly (- 2 pts)

STR – structure

## Most common deadlies:

John **have** seen that movie (3<sup>rd</sup> person singular, **has**)

Differents subjects (no "s" on adjectives)

Mary used **his** own computer. (Mary used **her** own computer.)

The United States **are** powerful. (agreement)

I'm not agree.

Most of time...

In a first time...

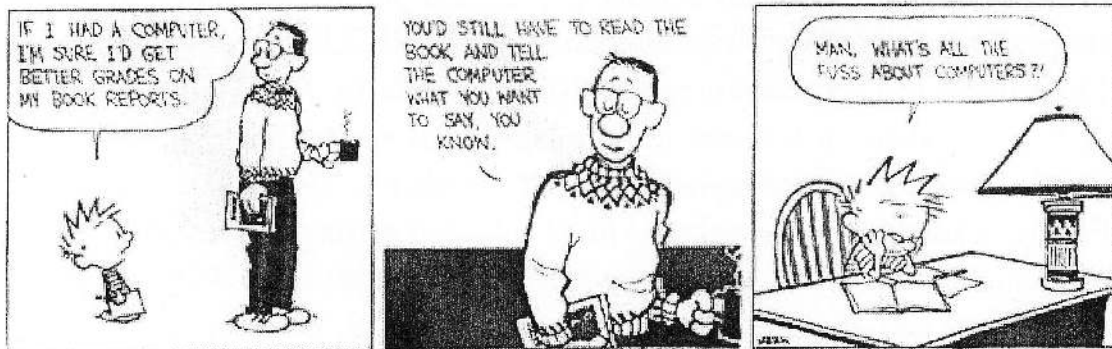
In one hand...

I work for a good **society**.

Everybody must **to** obey the law.

Informations

# ACADEMIC WRITING FOR GRADUATE STUDENTS



## 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 English, check MICASE at [www.elicorpora.info/](http://www.elicorpora.info/).)

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## TASK NINE

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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.

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## 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.

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### TASK TEN

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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.

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## TASK ELEVEN

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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. \_\_\_\_\_

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## TASK TWELVE

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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.

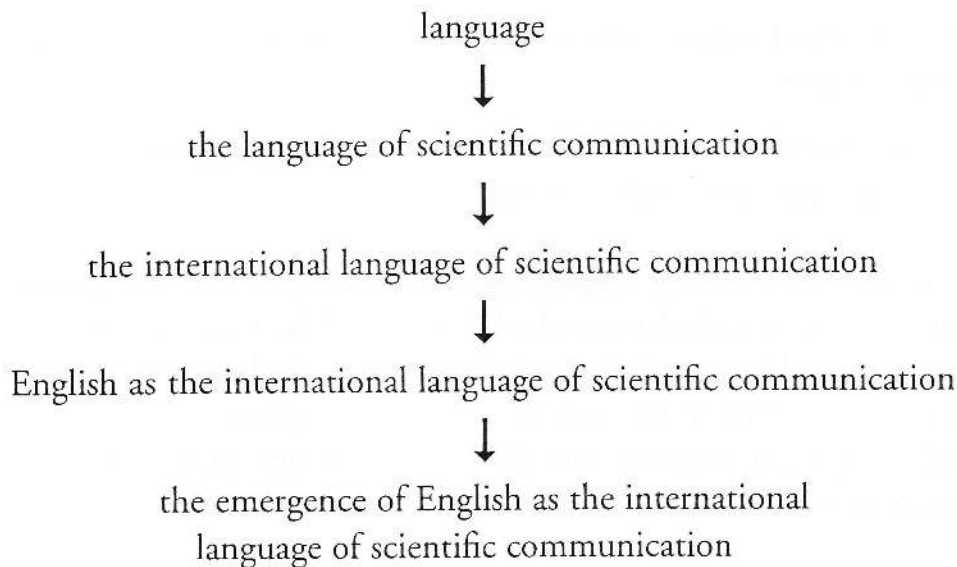
1. Researchers have *come up with* a number of models to describe the effect of certain cola drinks on dental enamel erosion.  
\_\_\_\_\_
2. AIDS researchers have *run into* a variety of unexpected problems in their efforts to develop an effective vaccine.  
\_\_\_\_\_
3. Recent studies on car scrapping have *brought up* the important question as to whether CO<sub>2</sub> 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.



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?

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## TASK THIRTEEN

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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.

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

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

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## 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*  
The analysis didn't yield any new results.

*no*  
The analysis yielded *no* new results.

*Not . . . much*  
The government didn't allocate much funding for the program.

*little*  
The government allocated *little* funding for the program.

## 1: AN APPROACH TO ACADEMIC WRITING

*Not . . . many*

This problem doesn't have many sustainable solutions.

*few*

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 reader's 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.

Then the morphology of the samples was analyzed using a scanning electron microscope (SEM).

This model was *originally* developed by the International Monetary Fund (IMF) and was later adapted by Lalonde and Muir (2007).

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.

Neural networks have the ability *to correctly classify* new patterns.

The size of the container could be modified *to downwardly adjust* the portion size and amount of consumption.

We need *to meet* the needs of those enrolled in the program *adequately*.

Neural networks have the ability *to classify correctly* new patterns.

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?



## 1: AN APPROACH TO ACADEMIC WRITING

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 . . . .*

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## TASK FOURTEEN

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Let's suppose that you want to follow the considerations listed in the Language Focus on pages 14–17. 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.

I: AN APPROACH TO ACADEMIC WRITING

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>I / we</i>				
contractions				
more formal negatives				
<i>etc., and so forth, and so on</i>				
addressing the reader as <i>you</i>				
indirect questions				
mid-position adverbs				
split infinitives				
too many words to make a point				
passive voice				
<i>may, appear to, or other language that softens a point</i>				

## Paragraph, Structure and Topic Sentence

A paragraph is a series of sentences that are organized and coherent, and are all related to a single **topic**. Writing that is longer than a few sentences should be organized into paragraphs. This is because paragraphs show a reader where the subdivisions of an essay begin and end, and thus help the reader see the organization of the essay and understand its main points fast.

Paragraphs can contain many different kinds of information. A paragraph could contain a series of brief examples or a single long illustration of a general point. It might describe a place, character, or process; narrate a series of events; compare or contrast two or more things; classify items into categories; or describe causes and effects. Regardless of the kind of information they contain, all paragraphs share certain characteristics. One of the most important of these is a **topic sentence**.

### TOPIC SENTENCES

A well-organized paragraph supports or develops a single controlling idea, which is expressed in a sentence called the **topic sentence**. A topic sentence has several important functions: it substantiates or supports an essay's thesis statement\*; it unifies the content of a paragraph and directs the order of the sentences; and it tells the reader about the subject and how the paragraph will discuss it. Readers generally look to the first few sentences in a paragraph to determine the subject and perspective of the paragraph. That's why it is often best to put the topic sentence at the very beginning of the paragraph. In some cases, however, it is more effective to place another sentence before the topic sentence—for example, a sentence linking the current paragraph to the previous one, or one providing background information.

\*A thesis statement is the sentence that describes the subject of your essay. (*La thèse, l'intitulé*)

Although most paragraphs should have a topic sentence, there are a few situations when a paragraph might not need a topic sentence. For example, you might be able to omit a topic sentence in a paragraph that narrates a series of events, if a paragraph continues developing an idea that you introduced (with a topic sentence) in the previous paragraph, or if all the sentences and details in a paragraph clearly refer—perhaps indirectly—to a main point. The vast majority of your paragraphs, however, should have a topic sentence.

### PARAGRAPH STRUCTURE

Most paragraphs in an essay have a three-part structure—introduction, body, and conclusion. You can see this structure in paragraphs whether they are narrating, describing, comparing, contrasting, or analyzing information. Each part of the paragraph plays an important role in communicating your meaning to your reader.

**Introduction:** the first section of a paragraph; should include the **topic sentence** and any other sentences at the beginning of the paragraph that give background information or provide a transition.

**Body:** follows the introduction; discusses the controlling idea, using facts, arguments, analysis, examples, and other information.

**Conclusion:** the final section; summarizes the connections between the information discussed in the body of the paragraph and the paragraph's controlling idea.

Look at this sample and explanation from the “IELTS buddy” website. The subject is Studying Abroad

Studying abroad has two main benefits. Firstly, people who study abroad can get a better job when they return to their home country. This is because their qualifications and experience mean that they tend to get jobs that are higher paid, and they can also gain promotion quickly. Another advantage of studying abroad is the independence students can gain. For example, students have to cope with the challenges of living alone and meeting new people from different cultures. As a consequence, they will become more confident in their life and in their relationships with others. All in all, it is clear that studying abroad is a beneficial experience.

### The Three Parts to Good Paragraph Writing

The most common structure for a paragraph is as follows:

- Topic sentence
- Supporting sentences
- Concluding sentence

#### 1. Topic Sentence

The **topic sentence** states what the paragraph will be about. It gives the topic of the paragraph, and it also restricts the topic to one or two main ideas which can be explained fully in the space of one paragraph. The **controlling idea** is the specific area that the topic is limited to:

topic	controlling idea
<u>Studying abroad has two main benefits</u>	

#### 2. Supporting Sentences

**Supporting sentences** explain and develop the topic sentence. Specifically, they discuss the topic sentence by explaining the main ideas and discussing those more fully using *reasons, examples, facts, results, statistics, or anything else that proves your ideas are true.*

The supporting sentences that explain the benefits of studying abroad are:

*People get a better job when they return home (1st supporting idea)*

- *Better qualifications & experience mean better pay and promotion (reason)*
- *Now has a high standard of living (result)*

*Students gain independence (2nd supporting idea)*

- *Students have to cope with the challenges of living alone and meeting new people from different cultures. (example)*
- *Students will become more confident in their life and relationships (result)*

#### 3. Concluding Sentence (Optional)

A concluding sentence can be used to signal the end of the paragraph. It tells the reader the important points to remember. It is often a paraphrase of the topic sentence.

*All in all, it is clear that studying abroad is a beneficial experience.*

Concluding sentences are optional and paragraphs often do not have them.

(IELTS note: You won't get marked down if you do not have a concluding sentence in IELTS, but it is a good way to add coherence to your paragraph.)

The following paragraph illustrates this pattern of organization. In this paragraph the topic sentence and concluding sentence (CAPITALIZED) both help the reader keep the paragraph's main point in mind.

SCIENTISTS HAVE LEARNED TO SUPPLEMENT THE SENSE OF SIGHT IN NUMEROUS WAYS. In front of the tiny pupil of the eye **they put**, on Mount Palomar, a great monochromer 200 inches in diameter, and with it see 2000 times farther into the depths of space. **Or they look** through a small pair of lenses arranged as a microscope into a drop of water or blood, and magnify by as much as 2000 diameters the living creatures there, many of which are among man's most dangerous enemies. **Or**, if we want to see distant happenings on earth, **they use** some of the previously wasted electromagnetic waves to carry television images which they re-create as light by whipping tiny crystals on a screen with electrons in a vacuum. **Or they can bring** happenings of long ago and far away as colored motion pictures, by arranging silver atoms and color-absorbing molecules to force light waves into the patterns of original reality. **Or** if we want to see into the center of a steel casting or the chest of an injured child, **they send** the information on a beam of penetrating short-wave X rays, and then convert it back into images we can see on a screen or photograph.

THUS ALMOST EVERY TYPE OF ELECTROMAGNETIC RADIATION YET DISCOVERED HAS BEEN USED TO EXTEND OUR SENSE OF SIGHT IN SOME WAY.

George Harrison, from "Faith and the Scientist"

## COHERENCE

In a coherent paragraph, each sentence relates clearly to the topic sentence or controlling idea, but this is not all. If a paragraph is coherent, each sentence flows smoothly into the next without obvious shifts or jumps. A coherent paragraph also highlights the ties between old information and new information to make the structure of ideas or arguments clear to the reader.

Along with the smooth flow of sentences, a paragraph's coherence may also be related to its length. If you have written a very long paragraph, one that fills a double-spaced typed page, for example, you should check it carefully to see if it should start a new paragraph where the original paragraph wanders (s'égarer) from its controlling idea. On the other hand, if a paragraph is very short (only one or two sentences, perhaps), you may need to develop its controlling idea more thoroughly, or combine it with another paragraph.

A number of other techniques that you can use to establish coherence in paragraphs are described below.

**Repeat key words or phrases.** Particularly in paragraphs in which you define or identify an important idea or theory, be consistent in how you refer to it. This consistency and repetition will bind the paragraph together and help your reader understand your definition or description.

**Create parallel structures.** Parallel structures are created by constructing two or more phrases or sentences that have the same grammatical structure and use the same parts of speech. By creating parallel structures you make your sentences clearer and easier to read. In addition, repeating a pattern in a series of consecutive sentences helps your reader see the connections between ideas. In the paragraph above about scientists and the sense of sight, several sentences in the body of the paragraph have been constructed in a parallel way. The parallel structures (which have been **emphasized**) help the reader see that the paragraph is organized as a set of examples of a general statement.

**Be consistent in point of view, verb tense, and number.** Consistency in point of view, verb tense, and number is a subtle but important aspect of coherence. If you shift from the more personal "you" to the impersonal "one," from past to present tense, or from "a man" to "they," for example, you make your paragraph less coherent. Such inconsistencies can also confuse your reader and make your argument more difficult to follow.

**Use transition words or phrases between sentences and between paragraphs.** Transitional expressions emphasize the relationships between ideas, so they help readers follow your thinking or see connections that they might miss or misunderstand if you did not include them. The following paragraph shows how carefully chosen transitions (CAPITALIZED) lead the reader smoothly from the introduction to the conclusion of the paragraph.

I don't wish to deny that the flattened, minuscule head of the large-bodied "stegosaurus" houses little brain from our subjective, top-heavy perspective, BUT I do wish to assert that we should not expect more of the beast. FIRST OF ALL, large animals have relatively smaller brains than related, small animals. The correlation of brain size with body size among kindred animals (all reptiles, all mammals, FOR EXAMPLE) is remarkably regular. AS we move from small to large animals, from mice to elephants or small lizards to Komodo dragons, brain size increases, BUT not so fast as body size. IN OTHER WORDS, bodies grow faster than brains, AND large animals have low ratios of brain weight to body weight. IN FACT, brains grow only about two-thirds as fast as bodies. SINCE we have no reason to believe that large animals are consistently stupider than their smaller relatives, we must conclude that large animals require relatively less brain to do as well as smaller animals. IF we do not recognize this relationship, we are likely to underestimate the mental power of very large animals, dinosaurs in particular.

Stephen Jay Gould, "Were Dinosaurs Dumb?"

## SOME USEFUL TRANSITIONS

(modified from Diana Hacker, *A Writer's Reference*)

### To show addition:

again, and, also, besides, equally important, first (second, etc.), further, furthermore, in addition, in the first place, moreover, next, too

### To give examples:

for example, for instance, in fact, specifically, that is, to illustrate

### To compare:

also, in the same manner, likewise, similarly

### To contrast:

although, and yet, at the same time, but, despite, even though, however, in contrast, in spite of, nevertheless, on the contrary, on the other hand, still, though, yet

### To summarize or conclude:

all in all, in conclusion, in other words, in short, in summary, on the whole, that is, therefore, to sum up

### To show time:

after, afterward, as, as long as, as soon as, at last, before, during, earlier, finally, formerly, immediately, later, meanwhile, next, since, shortly, subsequently, then, thereafter, until, when, while

### To show place or direction:

above, below, beyond, close, elsewhere, farther on, here, nearby, opposite, to the left (north, etc.)

### To indicate logical relationship:

accordingly, as a result, because, consequently, for this reason, hence, if, otherwise, since, so, then, therefore, thus

*Produced by Writing Tutorial Services, Indiana University, Bloomington, IN*

Indiana University – Bloomington, text adapted for students

