

Foundation in
ACADEMIC MEDICAL ENGLISH: WRITING
COURSE BOOK

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UNIT 1

Academic Style

This unit will discuss the question of what distinguishes academic English writing, such as you would be expected to produce on a medical degree course, from the type of English you might find in a magazine or email. It will focus on five key attributes of good academic writing style.

It will largely concentrate on language and sentence level structures. Future units will look at putting together good sentences into well-structured paragraphs and essays.

Topics Covered

5 key characteristics of academic writing:

- Formality
- Objectivity
- Concision
- Precision
- Accuracy

Learning Objectives

By the end of this module you will be able to:

- Recognise some key differences between academic writing and general English
- Identify specific problems in sentences that are inappropriate in an academic context
- Write sentences displaying formality, objectivity and precision
- Peer review an essay
- Write a short paragraph in a good academic style

Discussion

1. What do you think is the difference between academic and general English? What characteristics should good academic writing possess?
2. Discuss the following terms, and how they could apply to good writing: *formality*, *objectivity*, *concision*, *precision* and *accuracy*. Use a dictionary if you are unsure of the meanings.

Model Texts

1. Which of the texts below is written in a more academic style?

Text 1

The body is not considered to be a solid structure. In fact, you can see that it has several spaces in it, some in the back and some in the front. One of the spaces in the back is the cranial cavity - the brain is in this one. Another one is the spinal cavity. This one has the spinal cord in it. The ventral cavities include the thoracic cavity and the abdominopelvic cavity. Inside the thoracic cavity you can see the two lungs and a region near them called the mediastinum. Some very interesting organs are located in the mediastinum.

Between the thoracic cavity and the abdominopelvic cavity there's the diaphragm, which is a muscle used for breathing. This divides the two separated cavities. More often than not anatomists divide the abdominopelvic cavity into a superior abdominal cavity and an inferior pelvic cavity. The organs of the digestive, excretory, etc. systems are located in these wonderful cavities.

Text 2

The body is not a solid structure. It contains four major cavities: two dorsal and two ventral. The dorsal cavities include the cranial cavity, containing the brain, and the spinal cavity, containing the spinal cord. The ventral cavities include the thoracic cavity and the abdominopelvic cavity. The thoracic cavity contains the two lungs and a central region between them called the mediastinum. The heart, aorta, oesophagus, trachea and thymus gland are located in the mediastinum.

The abdominopelvic cavity is separated from the thoracic cavity by the diaphragm, which is a muscle used for breathing. The abdominopelvic cavity is generally divided into a superior abdominal cavity and an inferior pelvic cavity. The organs of the digestive, excretory, and reproductive systems are located in these cavities.

Key Concepts: Academic Style

Formality

One of the most obvious features of academic writing is that it uses formal language. Recognising whether a word in English is formal or informal is often a matter of instinct; we get used to reading or hearing some words in formal contexts and others in informal ones. However, there are some general rules for identifying formal language if you are uncertain.

1. Words and sentences are written in full. Formal writing generally avoids the use of contractions like “can’t”, “isn’t”, and “etc.” It is also written in full sentences rather than notes and lists. Abbreviations are still used for units or measurements, and often in widely known names such as the UN or WHO. For less widely known acronyms, such as those for specific disorders, the full form is usually used the first time the condition is mentioned, and the abbreviated form subsequently.

2. Words are of Latin or Greek origin, rather than Old English. This is probably the biggest difference between formal and informal vocabulary in English. Informal words which are used in general conversation, such as ‘do’, ‘have’, ‘go’ tend to be of Old English or Germanic origin. Formal and scientific language tends to be of Latin or Greek origin. If you have studied a Latin-based language such as French or Italian, this will help you identify the more formal terms, as they are very similar to their equivalents in those languages. If not, you will probably start to recognise Latin and Greek roots with time - you will be studying a large number of them while learning medical terminology.

3. Words are modified using prefixes and suffixes instead of phrases. This is connected to point 2. When speaking informally we usually modify the meaning of words by adding adjectives or prepositions, and using them in phrases. Formal words of Latin and Greek origin, however, can have their meaning modified by adding prefixes or combining them together with other roots. As a result in formal writing a complicated meaning is often expressed by a single long word, rather than many short ones. This point is particularly true of technical terms (see the box below).

Formal vs Technical Vocabulary

Academic writing tends to use vocabulary that is not only formal, but also technical. Most formal language can be used and understood in any academic context. An engineer, a doctor and a sociologist might all write about *conducting* or *performing* an experiment (as opposed to *doing* an experiment, which might be used in an informal context).

Technical language is only expected to be understood by specialists in the field. A medical term like *cardiomyopathy* (meaning disease of the heart muscle) is technical: regardless of whether the context is formal or not, you would not use that word speaking to someone who does not know anything about the subject. Technical vocabulary is also known as *terminology*.

4. Idioms are avoided. Conversational English is full of idiomatic expressions that add colour, humour and emotional force to our ideas. Academic English tends to avoid these. Formal vocabulary is almost always used literally, rather than metaphorically.

Why use formal vocabulary?

Learning formal language requires extra work, especially if you have mainly learnt or practised English in informal contexts in the past. This might seem rather pointless, especially when the same meaning could be expressed just as well in informal English. There are, however, some good reasons why formal language is preferred in academic writing:

1. It is universal

English is spoken in many different ways in different parts of the world. Different countries, or even different regions within one country, may have different informal words for the same thing. However, everyone uses the same formal vocabulary. Using formal vocabulary means any English speaking academic can read a paper written by any other, without being confused by differences in local expressions.

2. It is precise

Informal vocabulary is often rather vague in meaning. The verb 'get', for example can be used in a huge number of different ways. The formal alternatives, such as 'receive', 'become' and so forth have more specific meanings. This is important in academic writing to prevent confusion, and to make sure your meaning is clear and precise.

3. It shows you are serious

To a large extent, it is important to use academic language just because it is what people expect in the context. At a wedding or job interview people wear formal clothes, not necessarily because these are more practical, but just because doing so shows respect, and a desire to join in the spirit of the occasion. In the same way, using formal language shows that you are taking the subject seriously, and means your writing is more likely to be taken seriously by the reader.

Examples from the model texts:

Text 1 (non-academic) "It **has** several spaces **in it**"

Text 2 (academic) "It **contains** four major cavities"

"Has" is informal. It is a word of very broad meaning, and here the meaning is provided by modifying it with the preposition "in." "Contains" is a more formal term, that expresses the same meaning in a single, precise word.

Text 1 (non-academic) "...you can see **it's** not solid."

Text 1 (non-academic) "The organs of the digestive, excretory, **etc.** systems..."

Contractions such as these should be avoided.

"It's" should be written as "It is"

"etc." could be replaced in this situation with "and other"

There are exercises to practise formal language in the workbook.

Objectivity

Objectivity can be contrasted with subjectivity. A statement is *subjective* if it is based on or expresses personal experience or feeling. A statement is *objective* if it is based on facts about the external world. Academic writing generally attempts to be the latter. Objectivity is important for effective communication and collaboration, as it provides a framework of information on which everyone can agree.

In practice, separating what is objective from what is subjective is not always easy. All our knowledge about the world comes to us via our senses and our reasoning, which are of course subjective. However, when writing an academic essay it is usually important to choose language that sounds objective rather than subjective. There are exceptions to this, for example, when discussing medical ethics or reflecting on personal experiences. These types of writing will be covered in detail in later units.

1. Avoid language that implies subjective experience. A word like ‘beautiful’ is subjective: what it is understood to mean differs from one person to another. This makes it ineffective for communication in an academic context. Instead, we could say “attractive to many people.” This now expresses a fact about the world; one person might disagree with another that the Mona Lisa is a beautiful painting, but we should all be able to agree that, regardless of our personal opinion, many people do find it attractive.

Generally speaking, we should avoid using terms that imply an emotional response for this reason. This includes many adjectives used to make “strong” statements in conversational English, such as amazing, wonderful, exciting and so forth.

2. Statements should be verifiable. To say that something is verifiable means that it is possible to check whether or not it is true. In the example above, it is possible to test whether the Mona Lisa is attractive to many people by experiment: we could show a test group of people the painting, ask them if they think it is attractive, and if a significant number say that they think it is, then the statement is true. There is no experiment, however, to test whether or not something is beautiful.

A good general guideline for writing with objectivity is to consider whether your claims could be tested. If they cannot, they are likely subjective and should be removed or modified.

3. Avoid writing “I” or “you”. As a matter of style, it is unusual in academic writing (especially in the sciences) to refer to the writer or the reader directly. In conversational English, we often use “you” to make general recommendations or statements of fact; for example “You can reduce the risk of developing diabetes by eating healthily.” In academic writing we might instead write “The risk of developing diabetes can be reduced by healthy eating.” If we are describing a piece of research, rather than writing “I conducted a study on...” we would say “A study was conducted on...”

The Passive Voice

The passive voice is a grammatical form that focuses on an action, rather than the person performing the action. As such, it can be useful to help make writing sound more objective, particularly when we want to remove reference to ourselves.

Active: "I **performed** the test"

Passive: "The test **was performed**."

The passive is formed by first replacing the subject of the original active sentence ("I") with the object ("the test"). The main verb is put into the past participle form (in this case, the verb is "perform", the past participle of which is "performed"), and the verb *to be* is inserted before it in the same form as the original active verb. "Performed" was in the past simple tense, so we use "was", which is the past simple tense of "be".

Note that it is not always more academic to use the passive. It is only necessary when we wish to avoid mentioning the subject of the sentence. In a factual statement where the subject is important, it is usually better to use the active form.

For example, if we are discussing the heart, "The heart pumps blood", would usually be preferable to "Blood is pumped by the heart". The second statement adds nothing to the meaning but is longer, which breaks the rule of concision (see below).

Practising writing in both the active and passive voices, and knowing when to use each, will greatly improve your academic writing.

Examples from the model texts

Text 1 (non-academic) "Some **very interesting** organs are located in the mediastinum"

The fact that the organs are interesting is subjective. It adds nothing factual, and should be removed.

Text 1 (non-academic) "In fact, **you** can see that it has several spaces in it..."

Text 2 (academic) "It contains four major cavities"

The second text avoids the use of the personal pronoun "you".

Concision

Good academic writing expresses ideas in the most efficient way possible. Do not use twenty words when you can say the same thing in ten words.

1. Use a few complex sentences instead of many simple ones

Text 1 (non-academic) “One of the spaces in the back is the cranial cavity. The brain is in this one. Another one is the spinal cavity. This one has the spinal cord in it.”

Text 2 (academic) “The dorsal cavities include the cranial cavity, containing the brain, and the spinal cavity, containing the spinal cord.”

Here, four sentences can be cut down to one by using adjectival clauses. Academic writing often uses sentences that contain more complex grammar than is used in general English, but allow an idea to be stated more concisely.

Warning!

Be careful not to go too far in your efforts to keep writing concise. If you try to include all your ideas in one sentence it will probably become very confusing. You are also in more danger of making grammatical mistakes – you cannot make writing more concise by cutting out important grammatical words such as verbs, or linkers between clauses.

If you feel that an attempt at concision makes the meaning unclear, or may not be grammatically accurate, avoid it.

2. Avoid repetition of ideas

Text 1 (non-academic) “Between the thoracic cavity and the abdominopelvic cavity there's the diaphragm, which is a muscle used for breathing. This divides and separates the two cavities.”

Text 2 (academic) “The abdominopelvic cavity is separated from the thoracic cavity by the diaphragm, which is a muscle used for breathing.”

Text 1 repeats itself – if the diaphragm separates the thoracic and abdominal cavities it must be between them, so we don't need to say this. Also, in this situation “divide” and “separate” have the same meaning, so to say it “**divides** and **separates** the two cavities” is repetition.

3. Cut out words that add nothing to the meaning

Every word in a piece of academic writing should be there for a reason. It should convey an important meaning, or help the coherence and clarity of your writing.

There are a number of reasons why language that does not add meaning can creep into writing. The first, is that in general English it is common to add words (especially adjectives) just to make a text more dramatic or exciting. The purpose of academic writing is to inform, not entertain, so these should be avoided.

Text 1 (non-academic) "The organs of the digestive, excretory, etc. systems are located in these wonderful cavities."

This is also connected to objectivity, as often this kind of language expresses an opinion not a fact.

Another reason why unnecessary words and phrases sometimes find their way into student writing is "showing off", or wanting to sound academic. Students may find excuses to drop phrases in even when they are not needed to show that they know them and have a wide vocabulary. In fact, the effect produced is the opposite – adding a long word or impressive-sounding phrase when it is not appropriate just shows that you do not really know how to use it.

Here is an example from a student essay:

Systolic dysfunction is considered to be a failure of the heart to pump with sufficient force.

The phrase "is considered to be" adds nothing to the meaning of this sentence! In fact, it weakens it. The statement is a fact; the purpose of the phrase "is considered to be" is to emphasise that this is something that people believe, and so may not be a fact. It would be far better to just write "is".

Generally speaking "filler" phrases like this should be avoided in academic writing, unless you have a specific reason for including them.

Precision

Academic writing should give precise details whenever possible.

1. Descriptions should be detailed and exact

Text 1 (non-academic) “Inside the thoracic cavity you can see the two lungs and a region **near them** called the mediastinum.”

Text 2 (academic) “The thoracic cavity contains the two lungs and a **central** region **between them** called the mediastinum.”

The description in text 1 only gives a general idea of where the mediastinum is (it could be anywhere in the thoracic cavity). Text 2 tells us exactly where it is.

2. When possible, give exact figures

Text 1 (non-academic) “It has **several** spaces in it...”

Text 2 (academic) “It contains **four** major cavities...”

When figures give measurements, it is also important to include the units.

Accuracy

Accuracy might seem a very similar concept to precision, but they are not quite the same thing. While precision involves making sure that your information is exact and detailed, accuracy involves making sure it is *true*. A very precise statement can still be completely wrong!

There are a number of things to bear in mind to ensure accuracy.

1. Check facts, and use reliable sources

Claims made in your writing should always be verified using reliable sources, and these sources should be credited with references. How to write references and use sources effectively in your writing will be discussed further in unit 6.

To make a statement of “fact” without knowing where that information comes from, or whether it is true or not, is irresponsible writing and should always be avoided.

2. Accurately state degrees of certainty and frequency

A misunderstanding that some students have about academic writing is that, because it is factual, statements should always be absolute and certain. In fact, almost the opposite is true. Very little, if anything, in science is known for certain. Instead, scientists conducting research tend to discuss the *probability* of things being true. The same is true of doctors making a diagnosis or prognosis.

It is very important in academic writing not to overstate the certainty of facts. If something is not 100% certain, you should say that it is “probably true”, “seems to be true”, or “may be true” not that it *is* true.

This is helpful to remember when writing exam essays, when you will not be able to do research to check your facts. Rather than inventing a statistic which is unlikely to be accurate, it is far better to be honest and make cautious statements that indicate your lack of certainty.

The type of language used to indicate uncertainty is often referred to as “hedging” language, and will be discussed further below.

3. Use accurate technical vocabulary

Choice of vocabulary is also important when it comes to ensuring accuracy, particularly when using technical terms. A poor choice of words can change the meaning of a sentence, and make it misleading or untrue.

Text 1 (non-academic) “It has several **spaces** in it, some in the front and some in the back.”

Text 2 (academic) “It contains four major **cavities** – two dorsal cavities and two ventral cavities.”

Although “space” and “cavity” have similar meanings, “cavity” is the correct, technical term here. “Space” suggests they are empty.

Text 1 (non-academic) “It has several spaces in it, some in the **back** and some in the **front**.”

Text 2 (academic) “It contains four major cavities – two **dorsal** cavities and two **ventral** cavities.”

“Dorsal” is the correct technical term, not “back”. “Back” is often used in general English only to refer to the spine, whereas “dorsal” refers to anywhere on the rear part of the body, including the back of the skull.

Hedging

Students often believe that when writing factually on a scientific subject, all statements should be absolute and certain. In fact, this is not at all true. Scientific research deals with evidence and probability, and in scientific papers it is very rare to read claims that something has been proven or demonstrated beyond doubt.

If a fact is not certain, it is very important to show this with appropriate language in your writing. To suggest that something is certain when in fact there is a chance (even a very small one) that it may not be is dishonest and bad practice. Phrases like “appears to be” and “is likely to be” are useful here. This type of language is known as *hedging*.

Hedging is also important when talking about frequency. A direct statement like “Smokers develop lung cancer” is clearly untrue, as not *all* smokers do. In fact, most smokers do not, but the percentage who do is much higher than that of non-smokers. A hedged expression like “Smokers are more likely to develop lung cancer” is far better.

Other types of hedging language are used to show that statements are matters of opinion or belief, rather than fact. For example, the phrase “is considered to be” reduces the certainty of a statement, by indicating that it is something that is widely believed to be true rather than an undisputed fact.

Remember, as noted above, that you should not use this type of hedging in a statement which is factual, because you think it sounds “more academic”. A statement like “The heart is considered to be responsible for pumping blood...” is silly – this is not something which is a matter of opinion!

Overall, remember that *appropriate* use of hedging makes your writing more accurate, not less.

Failure to correctly represent the degree of certainty, frequency or probability in your statements is inaccuracy, and bad academic writing.

Hedging in Exams

In your science exams you will generally be expected to be able to recall facts you have been taught. In English exams this is not so important, as the examiners are focusing on your writing style. However, you should still demonstrate good academic practice. This means not simply inventing things and claiming them as fact!

In an English paper, if you want to provide some evidence or examples but you are not certain of the facts (which is understandable, as you are not able to research in an exam), the best thing to do is to use careful hedging language to indicate that what you are writing is not certain. This shows good academic style, and will likely get you more marks than just making something up which the examiner can clearly tell is not true.

Exercise

Task 1

The sentences below do not show good academic style. Identify the problem with each one, and suggest how it could be improved.

1. The stomach is located in the body, near the lungs and intestines.
2. Anatomy and physiology are different in that anatomy is about the structure of the body and physiology is also about the body, but about its function not its structure.
3. Your body contains a number of systems that keep you alive.
4. There are quite a large number indeed of different organs in the body, all with a number of different specific functions.
5. Everyone agrees that smoking is unbelievably bad for you.

Task 2

Write short answers to the following questions without doing any research. Use hedging language as appropriate to indicate your degree of certainty.

1. A man dies of a heart attack at the age of 51. What may have caused this?
2. The reported incidence of depression has increased dramatically in the last 50 years. Why is this?

See the workbook for further practice.

Peer Review

The ability to critically review both your own and other students' work is a crucial part of learning good writing. This means being able to pick out both what is good (and so should be emulated) and bad and so should be avoided. Read the notes that have been added to the student essay below. Do you agree with all the points? Do you ever make any of these mistakes in your own writing?

There is another student essay in the workbook for you to add your own notes and corrections.

You should write small numbers out fully: 'three', not '3'.

This is very informal. Remove it?

Good academic vocabulary! 'primary causes', 'abundance', 'pathophobic'

Avoid numbered lists - write full sentences with 'Firstly', 'Secondly', 'Thirdly'.

This is just a filler expression. Remove.

Spelling!

This part is written in a nice objective style. Good use of the passive voice.

Some repetition here. You could make this bit more concise.

Over the last decade or so, a pretty significant increase in anti-bacterial resistant bacteria has been observed. This can essentially be linked to 3 primary causes: 1 careless physicians 2 Abundance of anti-bacterial products and 3 pathophobic patients.

Physicians at times could have the tendency to overprescribe anti-bacterial medication solely to please the patients' whim. This is no doubt that unethical and careless behaviour and should be met with tougher sanctions and regulations on doctors who practice in such a way.

Anti-bacterial hand washes and other products that are used on a daily basis are also to blame for this epidemic. Consumers should be more wary of these products and should use them with more caution.

Finally, patients have become increasingly more afraid of catching diseases and want to eliminate symptoms of diseases as soon as possible. Patients should use traditional methods of treatment which might be slower but much safer and healthier in the long run.

Writing Practice

Task 1

This following text, by a high school student, is not written in an academic style appropriate for university work. Rewrite it to express the same ideas in a more academic way. Even though you are expressing an opinion, try to write in a way that sounds as objective and factual as possible.

I'm writing on the subject of smoking on school grounds. I see nothing wrong with this. Students smoke anyway, and teachers can't control who smokes in school because there are just too many to catch in the process. I think about half of the students smoke in school. The other half are affected by the secondhand smoke. But I think the students who do smoke should be able to smoke outside at break during lunch. That way it wouldn't affect those who don't smoke. If they don't give us this opportunity then the bathrooms and the halls will become full of more smoke and more students will be affected by this.

Extension

Do you agree with the student above? If not, write a paragraph in an academic style expressing your own views.

Task 2

Write a paragraph in your own words on one of these subjects:

The characteristics of a good doctor.

The structure of a cell.

Focus on writing in an academic style.