



Critical Thinking



Critical thinking is the mental process of forming and evaluating an opinion or argument in order to make a judgement about a subject.

It is about balancing the argument and evidence *for* and *against*. To succeed in your studies you need to think critically about *all* the things you read, see or hear.

5 Steps in critical thinking:

Step 1: Listen to and read all the information carefully

Whether you are reading a book or an article, or listening to a lecture, it is important that you focus carefully to note the important information, before looking at it with a critical eye. Practice the reading skills of skimming, scanning and detailed reading (and look at the advice sheet on '[Critical Reading](#)'). Pay attention to the fine detail. It is important to focus on the exact wording to ensure that you have not misread anything.

Step 2: Categorise the information

Many of the articles and books you will read will be on similar topics, and include similar information. In order to be able to think critically, you will need to categorise information so that you can make contrasts and connections. Look at the following example, and decide which **two** statements carry a similar message:

- A. The right hemisphere of the brain controls our capacity to identify what is real. When either hemisphere is damaged, it is difficult for people to perform tasks such as differentiating their mother from a cupboard.
- B. The right hemisphere of the brain controls the ability to recognise what is real in the outer world. When the right hemisphere is damaged, some individuals find it impossible to recognise or imagine the problem they have.
- C. Our capacity to recognise what is real is controlled by the right hemisphere of the brain. If this is damaged, the individual may find it impossible to imagine what problems are created by the damage.

(Adapted from Cottrell, 2005).

Answer:

B & C carry the most similar message as reference is made to 'when the right hemisphere is damaged' not 'when either hemisphere is damaged', as in A.



Step 3: Identify other people's positions, arguments and conclusions

An argument generally includes three elements: the **claim**; the **evidence** or **reasons** for the claim; and the **assumptions** (the beliefs which support the claim as being valid). For example:

Claim: Virtual Learning Environments (VLEs) are useful tools for learning in universities.

Evidence: A study carried out by Smith (2007) shows that students who use a VLE achieve higher degrees than those who do not.

Assumptions: The assumptions are that: (i) useful tools for learning are what we want VLEs to be; (ii) the methodology used by Smith in her study was valid; and (iii) achieving a higher degree is better than achieving other (lower) degrees.

The author's overall argument is normally stated in the introduction chapter or section. As this is broken down into different parts, the argument will occur in different paragraphs. It will not always be the first sentence, but it will be close to the beginning of the paragraph. When reading the author's argument, you need to be aware of another person's point of view.

Step 4: Weigh up opposing arguments

Here are few of the types of fallacies that occur in arguments:

Jumping to conclusions – This is when conclusions are made and the facts, ideas or beliefs provided do not justify this conclusion, for example, assuming that binge drinking is a big problem among teenagers when only a group of 100 students were surveyed.

Causality – Before drawing the conclusion, ensure that there is actual evidence to support this. The data may show a strong correlation, but this does not mean that X caused Y.

Black and white thinking – This is where the argument goes from one extreme to another. For example, if doctors cannot solve the problems in hospitals, then they should not contribute to the discussion. Simply because they cannot solve the problems does not mean doctors cannot contribute.

Step 5: Drawing conclusions

You should now be in a position to draw conclusions about the arguments provided.

Make sure you state your claim clearly and give reasons to support your claim.

Further resources

See our video on Critical Thinking. Available at: <http://ask164.wixsite.com/askwritingseries/being-critical>

Take an [Online critical thinking lesson](http://www2.napier.ac.uk/getready/managing_information/critical_thinking.html), Edinburgh Napier University. Available at: http://www2.napier.ac.uk/getready/managing_information/critical_thinking.html

Read Cottrell, S. (2005) *Critical thinking skills: developing effective analysis and argument*. Basingstoke: Palgrave Macmillan

