# Critical Thinking

## for students



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# What is critical thinking?

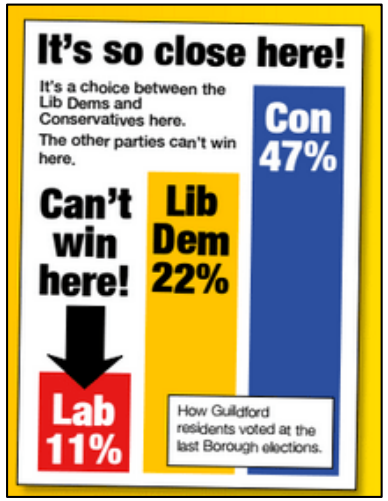
"***Critical*** in university work means being thoughtful, asking questions, not taking things you read (or hear) at face value. It means finding information and understanding different approaches and using them in your writing."

*Getting Critical (Pocket Study Skills), pviii. Kate Williams*


- It involves carefully considering **arguments** and **evidence** related to an issue and coming to a **conclusion**.
- It is not necessarily **negative**.

# You already use critical thinking skills in everyday life

- Advertising
- Social media
- News
- Statistics







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"We had the biggest inauguration audience ever"

When presented with information, always ask yourself some questions.

- How has the author reached their conclusions?
- What method has been used and was the method valid and appropriate?
- Why does the author think what they think?
- Is relevant and reliable evidence used to support any arguments, ideas or conclusions presented?
- Does the evidence presented support the conclusions made?

Source:
https://library.leeds.ac.uk/info/488/critical_thinking/348/critical_thinking/2

# Critical thinking at university

An example of a university assignment brief:

> "Your report needs to be **analytical** and **evaluative** – we need to see evidence of analytical and **critical thinking** on your part and not just the presentation of information and illustrative materials and descriptive commentary."

Critical thinking applies to:

- Your choice of sources
- The way you address those sources
- The way you approach your writing

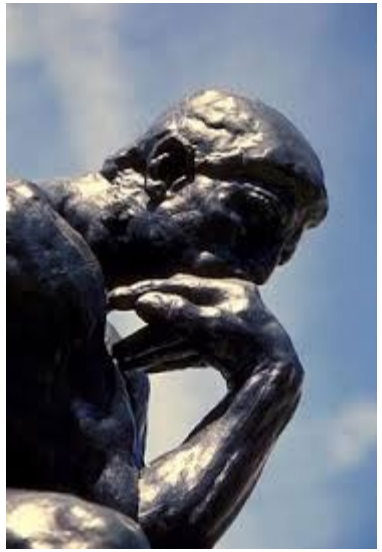
# Critical reading means….

- Appraising sources (i.e. deciding whether to read/use them)
- Not accepting every text as fact
- Questioning whether to believe an author's claims

*or*

Deciding to what extent to believe an author's claims

- Taking critical notes



# Evaluate sources using the CRAAP test

- **Currency** (When was it published? Has it been updated?)
- **Relevance** (Does it relate to your needs? Who is the audience?)
- **Authority** (Who are the author and publisher? What are their credentials?)
- **Accuracy** (Is it reliable and truthful? Is it supported by evidence?)
- **Purpose** (Why does this information exist? Is there a bias?)

- There is a useful tutorial on the library website:
  - https://leedstrinity.net/bebrilliant/evaluatinginformation/story_html5.html

# Critical thinking leads to critical writing

In critical writing, you should:

- consider the quality of the evidence and arguments you have read
- identify key positive and negative aspects you can comment upon
- assess their relevance and usefulness to the debate that you are engaging in for your assignment
- identify how best they can be woven into the argument that you are developing
- use synthesised sources to construct a clear argument
- be evaluative and analytical – don't just describe

Source: http://www2.le.ac.uk/offices/ld/resources/writing/writing-resources/critical-writing

# Using critical skills: what is the difference between these 2 texts?

**Text 1**. The brain contains millions of neurons. These communicate with each other through electrochemical activity at the synapses found at the end of each neuron. The chemicals that enable this communication to take place are known as neurotransmitters. Each neurotransmitter is associated with different kinds of message. The different messages to the brain influence the way we respond to events that take place in our internal or external world. Some neurotransmitters are associated with mood swings, with depression, with rapid responses, and so forth.

Source: Cottrell, S. (2013) *The study skills handbook* Basingstoke: Palgrave MacMillan

**Text 2**. Scientists do not agree about the extent to which creativity can be linked to activity in the right hemisphere of the brain. It is known that the biochemistry of the two hemispheres of the brain is different. For example, there is more of the neurotransmitter, norepinephrine, in the right hemisphere than the left (Oke et al. 2016). Norepinephrine is associated with increased alertness to visual stimuli. It has been suggested by Springer and Deutsch (2012) that this may lead to increased right-hemisphere specialisation for visual and spatial perception. However, this link is not yet proven. It is not yet clear whether one hemisphere of the brain can be responsible for any creative task. Moreover, although it might seem reasonable to assume that responsiveness to visual stimulus may be an important factor of credibility, this has also not yet been proved.

# Feedback

**Text 1**

This is descriptive writing. It only describes one aspect of how the brain works and there is no critical evaluation. There is no support from external sources and is quite vague in places. There are few clear links between sentences.

**Text 2**

This is critical, analytical writing. The writing evaluates the evidence for the theory that the right brain is associated with creativity. The writer draws out aspects about current findings that may prove to be significant in the long term. The writer questions ‘reasonable assumptions’, making clear what has and has not been proved at the time of writing. Sources used are relevant and up-to-date.

# How can you contact us?

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