

CRITICAL THINKING

What is Critical Thinking?

Critical thinking means to have the ability to carefully evaluate what information is relevant and correct. However, in the Digital Age, 'fake news' has become omnipresent with each side of various arguments working harder than ever to discredit the other. **The most interesting question is how do you know the information you are using is correct or reliable?**

TOP TIP

We can be diligent and make sure our resources are the best available by establishing bias and motivation. For more information on this, see our Peer Review and Cognitive Bias sections!

The Importance of Critical Thinking

On campus there are banners that promote independent thinking, and this is because **the most important thing you will learn during your time in university is the ability to think critically and independently.** One of the key differences between university and school is that **we want you to be producers of information and not strictly consumers of it.** A key habit we all picked up in school is the method of learning information by rote in order to do well in an exam. However, a **University environment requires you to be critical of what you are learning and to decide for yourself if this information is correct.** With the vast, and generally uncensored, information available on the internet **the quality of that information and the biases of authors are more in question now than any other time.**

Where to begin with Critical Thinking?

It all begins with a question! This can be any question you might have, such as, is climate change caused by human activity? Or is climate change even real? In order to answer questions like this using our critical thinking **we must first have a process that allows us to do so in a structured way.** And it begins with a number of steps:

- **Ask a question**
- **Source relevant information**
- **Assess bias (Self and author)**
- **Understand both sides of the argument**
- **Present conclusions**
- **Ensure openness to revision**

Being mindful of the sources

Avoid letting yourself fall blindly into belief by accessing information objectively.

Consider examining the motivations of authors or sources, which may cast doubt on the validity of their findings and conclusions. When approaching a complex question, you should ask yourself some of the following questions:

- **1. Funding** - How is the research I am reading funded?
- **2. Business/Career interests** - Is there a business or particular career interest for the author
- **3. Is there any other reason the author holds that point of view?**
- **4. Is there anything that would make me doubt that?**

TOP TIP

Everyone has biases and we need to be mindful of this. Often, our intuitive or underlying feeling about a topic or issue can lead us to arrive at an answer which suits our pre-existing assumptions. This is why we must be aware of author bias as well as our own.

Pitfalls in Objective Thinking

Cognitive Biases

Cognitive biases are underlying unconscious motivations or patterns which affect the way you think. Our cognitive biases are one of the primary ways in which our thinking can become compromised. Cognitive biases are the unconscious patterns of thinking which we have developed. Basically, to save energy our brains take these little shortcuts in everyday thinking, in order to quickly navigate the overwhelming amount of information presented to us by the environment.

For example, confirmation bias is one of the most pervasive biases. **This is the tendency to search for, interpret, favour and recall information in a way that confirms one's pre-existing beliefs.** It takes **less mental energy to continue believing the same thing, than it does to reevaluate and adapt our beliefs.** Unfortunately, this short cut is one of the primary ways in which stereotypes and prejudices persist.

There is also, In-Group / Our-Group bias and this is when we perceive **people who are similar to us as being a part of 'our group', and those who appear dissimilar to us as being 'other' or an 'outside group'.** This bias **becomes troublesome when we begin to evaluate the merits of one group over another.** Traditionally, this a concept which has garnered a lot of attention in the realm of race and skin colour, but it can also be applied to religious beliefs, political ideals, or even in sport. Consider how much your perspective of any situation or piece of information might be affected by your association with a particular group and see whether your judgement is remaining objective.

Another bias is Fundamental Attribution Error which refers to **the tendency to over emphasize personality-based explanations for observed behaviour in others.** For example, we may misinterpret a shy person's reaction as rudeness when in reality they are anxious.

Failure to Critically Think

The rise of the internet and an open-source economy has meant that just about anyone can become an expert on any issue. **This access to vast amounts of information has led not to a harmonizing of ideals based on truth and objectivity, but rather to an era more polarizing and extreme, than ever before.** Internet search engines and social media companies have exploited our human tendency towards confirmation bias. Despite the ability to access just about any piece of information on the web, most people now live in isolated bubbles and communities whereby they are **fed information which only perpetuates their current beliefs or ideologies.** If we are never exposed to conflicting beliefs, then **we never get the chance to develop our critical thinking skills which leads to the inability to think rationally and logically.**

TOP TIP

When we fail to reason appropriately. Coupled with an oversupply of cognitive biases, our thinking is no longer objective. The first step in thinking critically involves identifying and overcoming these biases. The key to critical thinking is having this ability to view things from many perspectives.

How to think critically?

The ability to think critically means **we must consider information both logically and rationally**. So rather than merely accepting information and conclusions which are presented, even with evidence, **a critical perspective will seek to question and understand the source of the evidence provided**.

TOP TIP

You can become a critical thinker by looking for logical connections between the ideas, consider alternative interpretations and then evaluate the strength of the arguments presented.

The importance of Forming Reasoned Conclusions

Reasoned conclusions are always based on evidence. We need to critically engage with opposing arguments, refute evidence and seek to find the truth. **Being critical is not the same as engaging in critical thinking.** However, **we can often arrive at true conclusions by using false premises or starting points; referred to as 'cherry picking' facts.** By using the following method of success, we can ensure we are actively using our critical thinking skills:

Reframe the Issue

Don't think of it as an 'I' versus 'them' argument. Reframe it in your mind as a partnership, a collaboration in which the two of you together are trying to figure out the right answer. This makes it much **easier on both sides to evaluate which arguments are good and which are bad** because you're motivated to get to the right answer.

Analyse your Sources

TOP TIP

If the internet is your main tool for information, remain mindful of the sources of that information.

Write your Ideas Down

TOP TIP

Writing is an excellent way to sharpen your ability to think and communicate. It helps you to learn to think properly, by fleshing out ideas. Ultimately leading you to expanding on ideas, where you analyse the good from the bad, and dispense with those ideas which are substandard.

Writing is the best way to extend our memory, facilitate editing and clarify your thinking in an organised manner. Try not to view writing an essay as merely something which you need to do in order to get a good grade. **View it as a way that you, the writer, can formulate and organize an informed, coherent and sophisticated set of ideas about some important topic.**

Engage and Encourage Discussion

This can be achieved through study groups where you can bring up difficult topics with friends. **Try to foster a space in which opposing viewpoints can be discussed,** not hashed out and fought, but rather collaborated on in an effort to find the most reasoned conclusion.

Remain Sceptical

Remain **mindful of the possible assumptions and biases which can be attached to some ideas, only then should we form reasoned conclusions based on available evidence. Our reasoning should be based on sound consistent logic, not on emotions or social pressure.** Truths are true whether emotion is involved or not, similarly something may be true whether 1 person believes it, or a 1,000.

Critical Thinkers are . . .



Conclusion

Finally, **thinking critically does not mean jumping to rash conclusions or believing things simple because of tradition or authority. It means taking responsibility for your own personal thinking.** Being eager to acquire knowledge and being committed to the search for truth and rationality. Now, with our **Formula for Success and a knowledge of self/author bias, you can effectively ensure you are applying critical thinking skills both in academic and everyday life.**

Useful Links

- Cognitive Biases.
URL: <https://www.youtube.com/watch?v=ReFqFPJHLhA>
- URL: <https://betterhumans.coach.me/cognitive-bias-cheat-sheet-55a472476b18>
- Cognitive Dissonance.
URL: <https://www.youtube.com/watch?v=NqONzcNbz8>
- Self-serving bias.
URL: <https://www.youtube.com/watch?v=-m6VcfivQC0>
- Fundamental Attribution Error.
URL: https://www.youtube.com/watch?v=HR_q96-YRzk
- Jane Elliott – Ingroup/Outgroup experiment.
URL: <https://www.youtube.com/watch?v=KHxFuO2Nk-0>
- Confirmation Bias – What is the Rule.
URL: <https://www.youtube.com/watch?v=vKA4w2O61Xo>
- The Wason Selection Task.
URL: <http://www.philosophyexperiments.com/wason/>
- Daniel Kahneman – ‘Thinking, Fast and Slow’.
URL: <https://www.amazon.co.uk/Thinking-Fast-International-Daniel-Kahne-man/dp/0374533555>
- Daniel Levitin – ‘The Organized Mind’.
URL: https://www.amazon.co.uk/Organized-Mind-Thinking-Straight-Information/dp/0241965780/ref=sr_1_1?s=books&ie=UTF8&qid=1526921836&sr=1-1&keywords=daniel+levitin+the+organized+mind
- Jonathan Haidt – ‘The Righteous Mind’.
URL: https://www.amazon.co.uk/Righteous-Mind-Divided-Politics-Religion/dp/0141039167/ref=sr_1_1?s=books&ie=UTF8&qid=1526921785&sr=1-1&keywords=jonathan+haidt+the+righteous+mind

Other Relevant Online PDFs

- How to Build an Academic Argument
- Critical Reading