

Access Reading

Study Skills Session, Supporting Documents

Thursday 4th April 2024

Name:

PhD tutor:

Joe

Subject Strand:

Environment and Geography related courses

Critical thinking:

Critical thinking can be defined as the process of working out **what** you think and **why** you think this.

Critical thinking is essential to all subject disciplines at university study. It is very common for new university students to receive feedback that they need to think thus write more critically to develop their essays and ultimately receive higher grades.

At university critical thinking also involves:

- Identifying **what you want to know**, and **why**.
- Sourcing **relevant and reliable** information.
- Grounding your thinking in this **evidence**.
- Addressing **contradictions** in wider academic thinking.

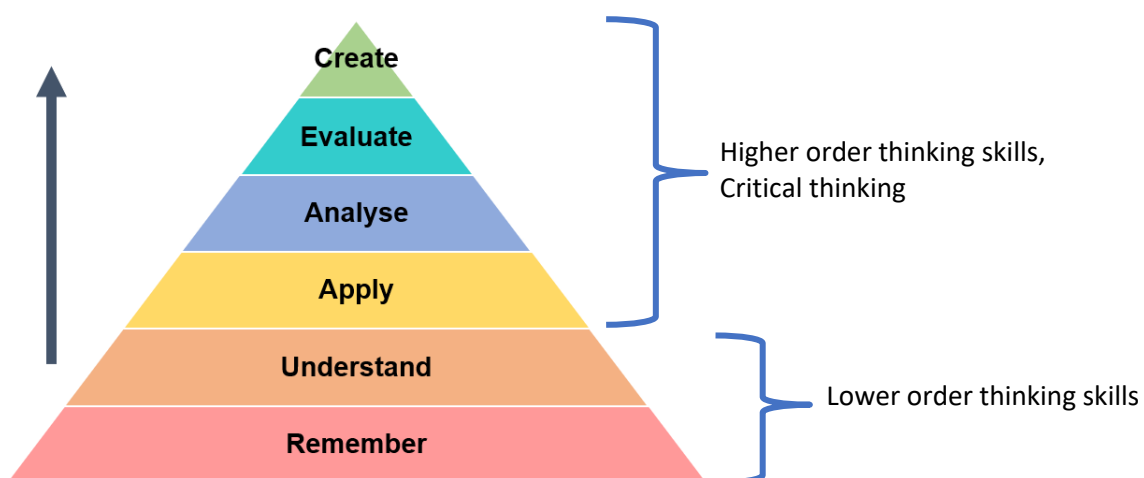
Critical thinking is an important study skill that you will develop at university, practising this skill before enrolling at university to help you make a smoother transition academically.

Bloom’s Taxonomy:

To help establish how critical we are being we can utilise Bloom’s Taxonomy. Through Bloom’s Taxonomy we can see the stages of learning as a hierarchy of critical analysis.

“Remember” requires the least amount of critical thinking and “Create” requires the most. The higher your university work sits on the pyramid the more critical you are being. This means when you analyse and evaluate academic literature you are seen to be more critical than those which simply describe theories and claims without questioning their validity.

To achieve a higher level on the pyramid you still need to undertake everything beneath it but be sure not to get trapped there!



Stages	Description	Examples of words associated with this level
Create	Produce new or original work.	Design, construct, develop, formulate, investigate
Evaluate	Justify a stand or decision.	Argue, defend, support, critique, weigh
Analyse	Draw connections among ideas.	Relate, compare, contrast, examine, question
Apply	Use information in new situations.	Execute, implement, solve, use, demonstrate
Understand	Explain ideas of concepts.	Describe, discuss, classify, recognise, paraphrase
Remember	Recall facts and basic concepts.	Define, state, memorise, repeat, quoting

In pairs, discuss and decide whether the following actions show higher or lower-order thinking and where each of them fits into Bloom's hierarchy of criticality.

Action	Higher or lower-order thinking	Level of criticality
Explain a theory.		
Judge the quality of an interpretation of evidence.		
Test a theory using primary research you have collected.		
Quote a secondary source.		
Trace links between sources in a discourse.		
Determine whether enough evidence has been collected or presented in a piece of literature.		
Make recommendations.		
Interpret evidence in a way that is informed by a particular theory.		
Paraphrase a source.		
Acknowledge a key authority on the topic		

My thoughts...

Relevant take aways from the extract/information
presented...

Things I know already about this topic based on
previous experience/learning...

Things I need to know more about...

Critical reading notes:

Remember you don't have to answer all the questions, use them in a way you find useful.

<p>What are the key arguments in the text?</p>	
<p>What were the strengths of the argument presented? What was convincing and why?</p>	
<p>What were the weaknesses of the argument? Are there any flaws, gaps or limitations to the argument?</p>	
<p>How can I use this source to answer the essay question? What can be learnt from this article?</p>	
<p>How does this text relate to other information I have read and/or my personal experience? Does it agree, contradict, or challenge my current knowledge?</p>	
<p>Does the author reference other's work which I would be interested/should look at myself?</p>	

Further resources:

Academic Resources:

These articles can all be found by copying the references below into Google scholar (<https://scholar.google.com/>). All of the articles below can be openly accessed.

Certini, G., & Scalenghe, R. (2015). Is the anthropocene really worthy of a formal geologic definition? *Anthropocene Review*, 2(1), 77–80.

Crutzen, P. (2002). Geology of mankind. *Nature*, 415(23), 23.

De-la-Torre, G. E *et al.*, (2021). New plastic formations in the Anthropocene. In *Science of the Total Environment* (Vol. 754, p. 142216). Elsevier

E. C., & Ramankutty, N. (2008). Putting people in the map: Anthropogenic biomes of the world. *Frontiers in Ecology and the Environment*, 6(8), 439–447.

Gibbard, P. *et al.*, (2021). A practical solution: the Anthropocene is a geological event, not a formal epoch. *Episodes*, 45(4), 349–357.

Levis, C. *et al.*, (2017). Persistent effects of pre-Columbian plant domestication on Amazonian forest composition. *Science*, 358(6361), 925–931.

Lewis, S., & Maslin, M. (2015). Defining the Anthropocene. In *Nature* (Vol. 519, Issue 7542, pp. 171–180). Nature Publishing Group.

Roberts, P., Kaplan, J., Findley, D. M., Hamilton, R., Caetano-Andrade, V. L., Amano, N., Kay, A., Renn, J., & Winkelmann, R. (2023). Mapping our reliance on the tropics can reveal the roots of the Anthropocene. In *Nature Ecology and Evolution* (Vol. 7, Issue 5, pp. 632–636). Nature Research.

Rockström, J. *et al.*, (2009). A safe operating space for humanity. *Nature*.

Ruddiman, W. (2003). The Anthropogenic Greenhouse Era Began Thousands of Years Ago. *Climatic Change*, 61, 261–293.

Ruddiman, W. *et al.*, (2015). Defining the Epoch we live in. In *Science* (Vol. 348, Issue 6230, pp. 38–39). American Association for the Advancement of Science.

Steffen, W., Grinevald, J., Crutzen, P., & McNeill, J. (2011). The anthropocene: Conceptual and historical perspectives. In *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* (Vol. 369, Issue 1938, pp. 842–867).

Zalasiewicz, J *et al.*, (2008). Are we now living in the Anthropocene? *GSA Today*, 18(2), 4–8.

Zalasiewicz, J *et al.*, (2017). The Working Group on the Anthropocene: Summary of evidence and interim recommendations. *Anthropocene*, 19, 55–60.

Websites:

Anthropocene Working Group: <http://quaternary.stratigraphy.org/working-groups/anthropocene/>

Max Planck Institute. Anthropocene Working Group proposes Crawford Lake as GSSP candidate site of the Anthropocene series [Online] Available at: <https://www.shh.mpg.de/2347073/anthropocene-working-group-crawford-lake-candidate-anthropocene-site>

Natural History Museum. (2023), What is the Anthropocene and why does it matter? [Online] Available at: <https://www.nhm.ac.uk/discover/what-is-the-anthropocene.html>

Vienna Anthropocene Network Articles: <https://anthropocene.univie.ac.at/resources/>

Videos:

BBC Documentary: Human Planet <https://www.bbc.co.uk/programmes/b00llpvp>

Johan Rockstrom discussing planetary boundaries: <https://www.youtube.com/watch?v=RgqtrlixYR4>

The Anthropocene and the Near Future: Crash Course big History #9: https://www.youtube.com/watch?v=3WpaLt_Blr4

Welcome to the Anthropocene: <https://www.youtube.com/watch?v=fvgG-pxlobk>

If you have any further questions please email:

accessreading@reading.ac.uk