

Access Reading

Study Skills Session, Supporting Documents

Thursday 4th April 2024

Name:

PhD tutor:

Oliver

Subject Strand:

Courses related to the Built Environment

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.

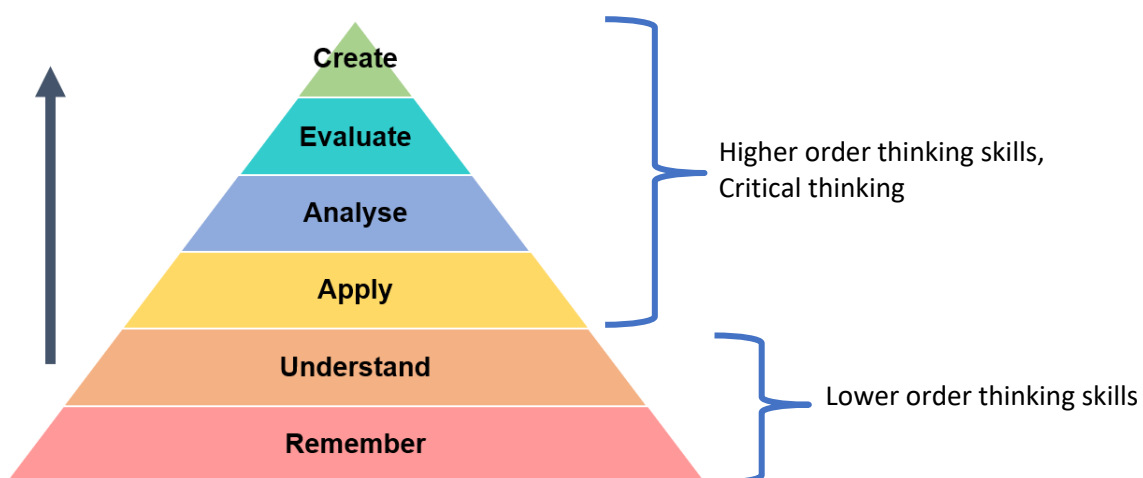
Critical thinking is an important study skill that you will develop at university, practising this skill before enrolling at university to help you make a smoother transition academically.

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:

Cottrell, S. (2019) *The Study Skills Handbook*. 5;Fifth;Fifth; edn. London: Macmillan Education UK

Hardavella, G., Aamli-Gagnat, A., Saad, N., Rousalova, I. and Sreter, K.B. (2017) "How to give and receive feedback effectively," *Breathe* (Lausanne, Switzerland), 13(4), pp. 327–333

Huisman, B., Saab, N., Broek, P. van den and Driel, J. van (2019) "The impact of formative peer feedback on higher education students' academic writing: a Meta-Analysis," *Assessment and evaluation in higher education*, 44(6), pp. 863–880

Arioğlu Akan, M. Ö., Dhavale, D. G., & Sarkis, J. (2017). Greenhouse gas emissions in the construction industry: An analysis and evaluation of a concrete supply chain. *Journal of Cleaner Production*, 167, 1195-1207. <https://doi.org/10.1016/j.jclepro.2017.07.225>

Díaz-López, C., Carpio, M., Martín-Morales, M., & Zamorano, M. (2021). Defining strategies to adopt Level(s) for bringing buildings into the circular economy. A case study of Spain. *Journal of Cleaner Production*, 287, 125048. <https://doi.org/10.1016/j.jclepro.2020.125048>

Gibberd, J. 2020. State of play for circular built environment in Africa. A report compiling the regional state of play for circularity in the built environment in Africa across Egypt, Ethiopia, Ghana, Kenya, Malawi, Nigeria, Rwanda, South Africa, Uganda and Zambia. Final report October 2020, Gauge and United Nations One Planet Network Sustainable Buildings and Construction Programme

Labaran, Y. H., Mathur, V. S., Muhammad, S. U., & Musa, A. A. (2022). Carbon footprint management: A review of construction industry. *Cleaner Engineering and Technology*, 9, 100531. <https://doi.org/10.1016/j.clet.2022.100531>

Moghayedi, A., & Awuzie, B. (2023). Towards a net-zero carbon economy: A sustainability performance assessment of innovative prefabricated construction methods for affordable housing in Southern Africa. *Sustainable Cities and Society*, 99, 104907. <https://doi.org/10.1016/j.scs.2023.104907>

Mhlanga, J., Haupt, T.C. and Loggia, C. (2022), "Shaping circular economy in the built environment in Africa. A bibliometric analysis", *Journal of Engineering, Design and Technology*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JEDT-03-2022-0175>

If you have any further questions please email:

accessreading@reading.ac.uk