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Support Session 2: Critical Thinking

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What is critical thinking?

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Why do you think critical thinking is important?

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What do you find most challenging about critical thinking?

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What we'll address today

- What critical reading is
- Approaches to learning
- Selecting sources
- Critical reading
- Critical thinking in practice
- Questions

What is critical thinking?

"Critical thinking is the art of making clear, reasoned judgements based on interpreting, understanding, applying and synthesising evidence gathered from observation, reading and experimentation."(Burns & Sinfield, 2016)

Why is critical thinking important?

- Developing critical thinking skills is essential to your success at University and beyond
- Whatever your discipline, you will engage with a wide variety of sources of information and evidence
- One of the most common types of feedback received by students is that their work is ‘too descriptive’

A non-critical student…

- Reads a text to memorise facts and statements
- Writes by building a narrative around facts and statements without analysing validity, reliability or applicability
- Uses resources unproblematically, stitching them together without inserting them into their own argument

A critical student…

- Reads a text as one interpretation of facts
- Writes by analysing the text, comparing what it says and how it evidences its arguments to other texts and their knowledge

Critical thinking is about questioning and learning with an open mind.

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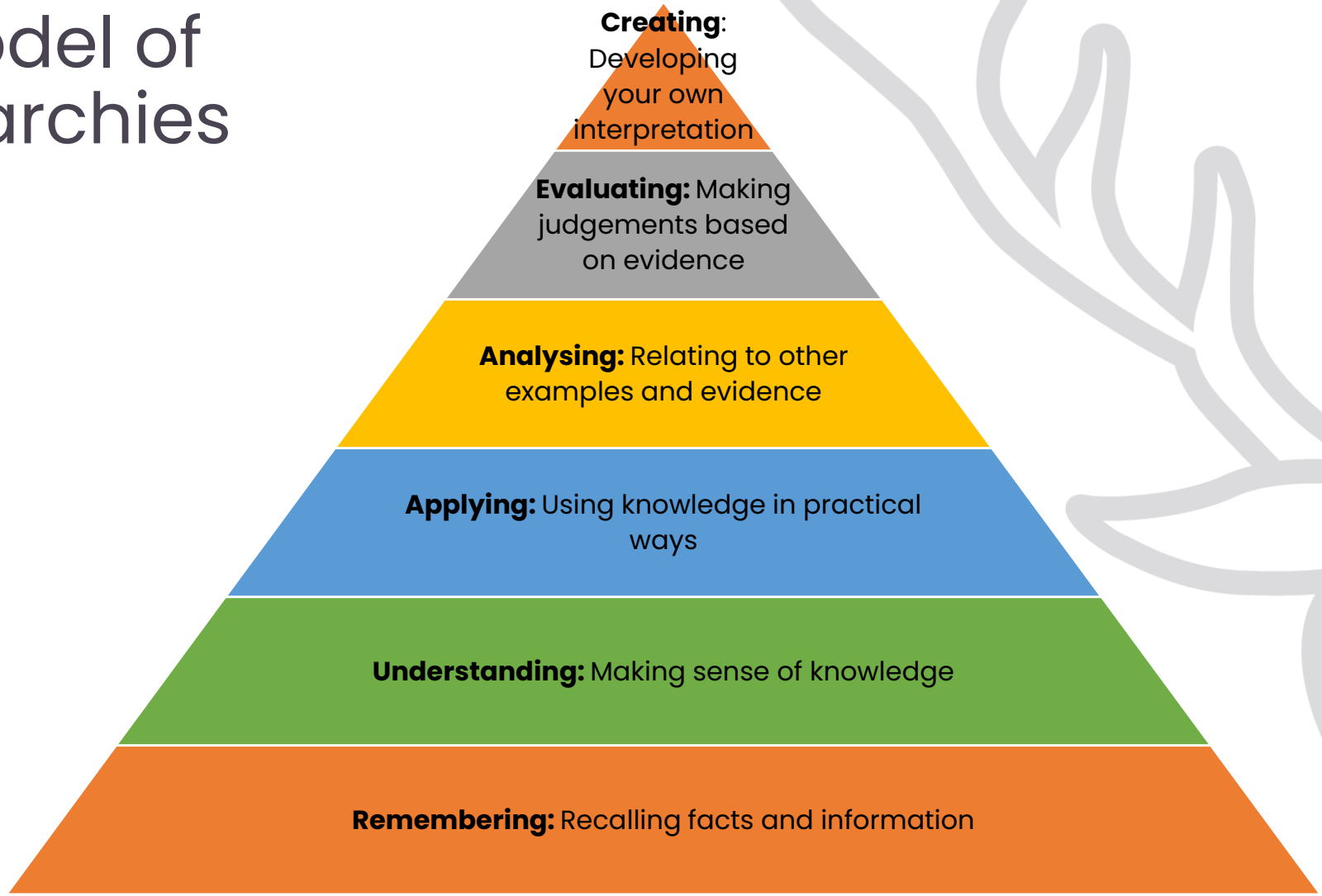
The Bloom Model of Learning Hierarchies



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Enquiry-based learning

- As an independent learner you must be willing to reflect on what you are doing and how you are progressing
- You won't exercise your critical thinking skills by listening or reading passively, but through actively engaging with the subject matter
- Taking a reflective, enquiry-based approach to your study helps you delve deeper into the materials you read

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Preparing for critical thinking

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Selecting sources

Usually, you can't read all the texts you find on a topic: you need to make choices and be selective.

- Opt for quality and not quantity, and choose reliable and current sources
- Start with an easy text to give you an overview of the topic

Most sources can be useful depending on how you use them – but not every source is a reliable critical source!

- Know what you're reading and why
- If you are evaluating critical sources remember to check:
  - **Academic integrity:** is the research peer reviewed?
  - **How old is it?:** The usefulness of this question varies between disciplines! But if there has been more up-to-date work it should account for seminal research from recent years
  - **Relevance:** is the focus of this study central or tangential to your work? Criteria for relevance includes relevant case studies, shared methodological approaches, and definitions/outlines of key terms and concepts

Critical reading

When reading, you should ask yourself:

- Why am I reading this?
- What do I want to get out of it? Are you looking for specific facts, a general idea of the content, the author's viewpoint?
- What do I already know?
- How will I know when I have read enough?

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Critical reading

The way we read depends on what we're reading and why we're reading it and the purpose of our reading will determine the approach we take.

Reading for information

- Determine the scope and relevance of the piece
- e.g., Browsing a database for texts on a specific topic, looking for a specific word or phrase in a text, determining the relevance of an article
- Scanning

Reading for understanding

- Pick out key facts and the parts to explore further
- e.g., Jumping to specific parts such as the introduction or conclusion, going over the whole text fairly quickly without reading every word
- Skimming

Reading for analysis

- Think critically about what is being written
- e.g., Examining data or discussions presented, following the details of the argument
- Close reading

Active reading

You should aim to **understand** what you read

- Underline or highlight key words and phrases as you read
- Annotate or use sticky notes to draw attention to parts of the text - pose questions, summarise points, challenge points, examples, links to other texts…
- Look for signposts within the text - phrases like, ‘in contrast,’ ‘in conclusion, or ‘most importantly.’
- Try to explain the text to a friend, or someone who doesn’t know your research

Note taking

This is part of active reading and is an important way of focusing your attention, helping you to process, organise and understand what is being said.

Some practical tips:

- Summarise the main ideas of the introduction, each section, and conclusion
- Record any significant quotes and page numbers
- Don't attempt to write down everything! Aim to get the gist of the topic or the main points. Be brief; use bullet points
- Use your own words. Helps you process things and helps avoid plagiarism later when you write up.
- Use a question mark to highlight bits you're unsure of
- Do you have complete references?
- Experiment with various methods - linear (lists and bullets), mind map or tables? Highlighting by using underlining or symbols or post-its
- Keep focused on your purpose
- Don't be concerned about whether anyone else could make sense of your notes

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Critical thinking in practice

Description

- Who is the author?
- What is the main purpose and overall argument/conclusion of this text?
- When was the text written and in what context?

Analysis

- Who is the author and are they subject experts?
- What kind of reasons/evidence has the author provided for their main argument and how relevant and reliable are these reasons/evidence?
- How convincing is the overall argument? Why (not)?
- Are there any assertions in the article/text that are unsupported?
- Has something been omitted? What and why?
- Is the conclusion reasonable?

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Identifying limitations

Is the research robust? What limitations have the authors themselves identified? Does other research help to fill in the gaps?

Issues with the methodology

- Significant issues or limitations of the research design of a project
- For example:
  - 'A major problem with the experimental method is that…'
  - 'However, there are certain drawbacks associated with the use of…'

Weaknesses of the data

- Weaknesses of their data or analysis including concerns around statistical significance, sample size and extrapolation
- For example:
  - 'The small size of the dataset meant that it was not possible to…'
  - 'There is a potential for bias from…'
  - 'These data must be interpreted with caution because…'

Limitations of the research

- Areas that were not possible to cover within the specific scope of the research
- For example:
  - 'An issue that was not addressed in this study was…'
  - 'The scope of this study was limited in terms of…'
  - 'Since the study was limited to X, it was not possible to…'

Areas for further enquiry

- Areas that are identified as being in need of further enquiry
- For example:
  - 'Further research will be required in order to…'
  - 'The study should be repeated using…'

Challenging biases and diversifying thought

- If you are female, what might a male perspective be? Would it be different? Why?
- If you are looking at a conservative argument, what might a liberal view be?
- If you were examining something scientifically, how would a social scientist approach the situation? What methodology would they use? What theory would they engage with?
- If you are looking at something in detail, try to step back and see it from a broader perspective, and vice versa.

Evaluation

- Good critical research seeks to be impartial, and will embrace (or, at the very least, address) conflicting opinions
- Try to bring these into your research to show comprehensive searching and knowledge of the subject
- You can strengthen your argument by explaining, critically, why one source is more persuasive than another

Evaluation

- How is this text significant to your research? What can be learnt from it?
- What are the strengths and weaknesses of this text?
- What is your position on the subject? How does it differ from the argument in the text? How will you use the text?
- How does this text relate to other information you have read? Does it contradict, support or challenge other evidence?
- What else needs considering? Which aspects of this argument would you like to investigate further?

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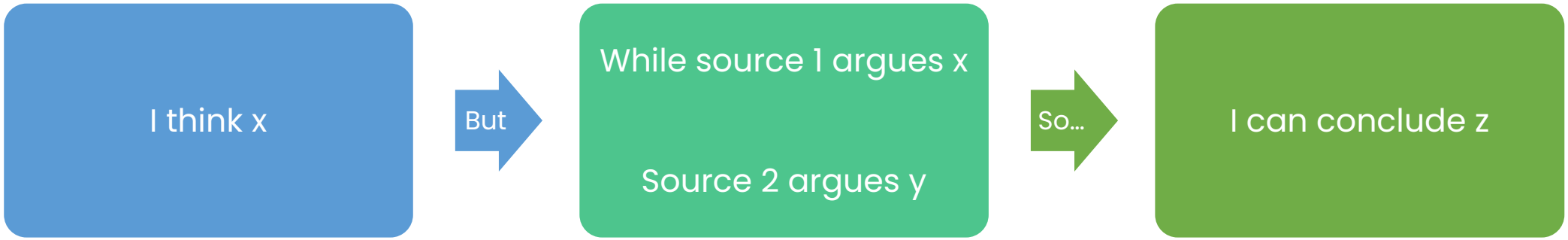
Synthesising sources and developing your critical position

- Being critical is about more than simply having an opinion about a source
- Once you read more than one source on a related topic, you can use these different perspectives to form an informed view of their relative strengths
- This process of comparing and contrasting sources is sometimes called synthesis
- It gives you the authority to comment on the implications of the research as a whole
- The more widely you are able to read around a topic, the broader your perspective will be and the more confidently you will be able to comment with authority



Comparing and contrasting

Synthesis usually takes place in the following ways:

- Highlighting disparities: papers reveal inconsistencies that suggest problems with the approach or interpretation
- Reinforcing similarities: papers confirm or replicate research, sometimes applying it in new ways or expanding its scope
- Showing development over time: papers build on one another to develop understanding of an area of study over time

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Common blocks to critical thinking

The topic I am researching is so big! There is just so much to read and then think about. Where do I start?

- It’s normal to feel overwhelmed!
- In this situation it's probably best to try to narrow the topic, or try to organise material into separate categories
- You may want to seek advice from a teacher

All these books and articles have been written by experts. How can I question what they have written?

You are now part of the academic community and so can and must consider critically everything you read and hear. This is what is expected and respected in higher education.

I'm not sure which opinion or argument is the right one. Where do I find the right answers?

- Looking for the ‘right’ answer can limit your thinking
- There may not be a ‘right’ answer
- What we are usually looking for is for you to acknowledge the complexity of the debate and ascertain what you think about the question

I'll do all the critical stuff at the end when I am writing. Doing it later will be ok, right?

Putting off thinking about a question, or researching how to present a critical argument, can limit your response and your achievements.

I've read a lot of articles but I'm not sure I have enough material yet. What if I've missed something?

If you do too much research, you can get trapped at the research stage. Being critical also means making critical decisions about the scope of the research so that a clear argument can be presented.

Key points

- Select sources carefully
- Know what you're reading and why
- Identify limitations of what you're reading
- Aim to reach a high level of analysis by synthesising sources and developing your own critical position
- Ask questions and keep an open mind!

Sources

- https://libguides.cam.ac.uk/unlockinglibraries/studyskills/resources
- https://www.sheffield.ac.uk/academic-skills/everyday/critical-thinking
- https://library.leeds.ac.uk/info/1401/academic_skills/105/critical_thinking
- https://subjectguides.york.ac.uk/skills

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Any questions?

Or you can always email us at outreach@lucy.cam.ac.uk

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