

How to keep *Critical Thinking* on your mind?

Taken from *Hoang & Taylor (89)*

Socratic questioning is a useful technique that you can use to explore complex issues and ideas encountered in your EE. It can uncover misconceptions and enhance your analysis and evaluation of the research topic.

Critical thinking is improved through the use of questioning to enhance understanding. The technique is derived from classical Greek philosopher Socrates who believed that effective use of questioning promotes active and independent learners. There are six main types of Socratic questions

1. Questions that seek clarification

- a. Can you explain that point/answer further?
- b. What led you to that particular judgement?
- c. Why did you arrive at that particular conclusion? What made you say that?

2. Questions that challenge

- a. What assumptions did you make in coming to that conclusion?
- b. Is there an alternative point of view?
- c. Is this always the case? Why might there be exemptions to the case?

3. Questions about the evidence

- a. What evidence have you used to support your arguments?
- b. In addition to source bias, how might others challenge the evidence you have presented?
- c. What other information could you have used to support your research and answer?

4. Questions that consider alternatives

- a. What might other people think? What different perspectives might they have?
- b. What possible alternative points of view might there be? Why?
- c. Could you have approached this from a different angle? Would this have changed your answer/point of view?

5. Questions about implications (consequences)

- a. What are the short terms implications of this?
- b. Do these implications differ from the long term consequences?
- c. How do the outcomes impact on different individuals and societies?

6. Questioning the questions

- a. What questions did you ask, and why did you ask those questions?
- b. What was the importance of the questions you asked?
- c. What additional questions might you have asked?

Adapted from: <http://www.sussex.ac.uk/skillshub/?id=344>

Critical thinking skills need to be understood and developed in the context of your subject discipline - check this out with your supervisors.

Identify what's important:

- What are the key ideas, problems, arguments, observations, findings, conclusions?
- What evidence is there?
- Distinguish critical from other types of writing (eg descriptive); fact from opinion; bias from reason

Evaluate what you find:

- Explore the evidence - does it convince?
- What assumptions are being made and inferences drawn?
- Is there engagement with relevant, up to date research?
- How appropriate are the methods of investigation?
- Is there a consistent and logical line of reasoning?
- Do you agree with what's being said? Why?
- How is language being used (emotive, biased etc.)?

Look beyond what you're reading/hearing:

- What other viewpoints, interpretations and perspectives are there? What's the evidence for these? How do they compare?
- How does your prior knowledge and understanding relate to these ideas, findings, observations etc.?
- What are the implications of what you're reading/hearing?

Clarifying your point of view:

- Weigh up the relevant research in the area
- Find effective reasons and evidence for your views
- Reach conclusions on the basis of your reasoning
- Illustrate your reasons with effective examples