



Critical thinking

Critical thinking is an essential part of taking a scholarly approach to learning. It involves analysing and questioning information you receive to arrive at logical, well-reasoned conclusions.

What critical thinkers do

Critical thinkers use a range of skills in their academic work:

- Reasoning – looking at implications of information and giving reasons for opinions;
- Enquiry – systematically collecting information from a variety of sources, e.g. by asking questions;
- Analysis – sorting, classifying and comparing ideas;
- Flexibility – transferring known information to another area and accepting multiple answers, and
- Evaluation – judging credibility of resources, locating inconsistencies and faulty reasoning.

These skills are also associated with the ways successful learners approach tasks. Notice how you use these skills in your studies now. For example, when writing an assignment you need to read sources then sort, classify and compare the ideas before using them in your assignment.

Deep and surface approaches to study

Deep approaches to learning are associated with better outcomes and a more enjoyable learning experience. Surface approaches to learning are associated with less successful outcomes and more dissatisfaction with learning (Ramsden 2003, p. 53).

Table 1: Differences between deep and surface learning (adapted from Ramsden 2003, p. 53)

Deep approaches:	Surface approaches:
<ul style="list-style-type: none"> • focus on concepts applicable to solving the problem • relate new knowledge to what is already known • relate theoretical ideas to everyday experience • relate and distinguish evidence and argument • organise and structure content into a coherent whole • motivation comes from within 	<ul style="list-style-type: none"> • focus on unrelated parts of the task • memorise information for assessments • associate facts and concepts without reflection • don't distinguish principles from examples • treat the task as an external imposition • motivation comes from external factors such as assessment

Everyone uses both of these approaches at different times and for different purposes but students at university are often expected to apply deep approaches to study.

Critical thinking in reading

As you read academic texts at university you are expected to be 'critical' and to think about what was the author's intention when writing the text. You need to be able to find out what evidence and ideas were used to convince the reader of the credibility and reliability of the text. You can be more 'critical' when you read by attempting to answer questions such as:

- what credibility does the author have in this field?
- what is significant or important about this text?
- what claims are being made?
- what is the basis of the claims?
- what evidence is used?
- how logical are the ideas?
- do the conclusions follow from the evidence?
- how valid and generalisable are the conclusions?
- are there any pieces of information missing which indicate author bias?

One way of keeping questions like these in mind as you read is to use a Reading Log (see Useful Links below).

Critical thinking in writing

You can show that you have been able to read critically by writing a well-reasoned argument in your essay or assignment. Below are some of the characteristics of good critical writing to pay attention to as you write and edit your assignments.

Table 2: Characteristics of good critical writing (adapted from Cottrell 2005, pp. 168–169)

Content	The writing presents a case by providing reasons, using evidence, comparing and evaluating arguments. The minimum background information is used and only essential details are included. Description is kept to a minimum.
A sense of audience	The audience is always kept in mind. The aim of an argument is to persuade others by anticipating points of disagreement and providing evidence to counter potential opposing positions.
Clarity	As the aim is to convince the reader, writing must be clear and concise, avoiding emotional language and jargon.
Analysis	Analytical writing looks at the evidence in a detailed and critical manner weighing up strengths and weaknesses of evidence and making it clear to the reader how the writer has arrived at the conclusions.
Selection	Skilful writers select only the most important or controversial points to examine in detail and regularly summarise the arguments that they are expressing.
Sequence	Information is sequenced in such a way that it helps the reader to understand the line of reasoning.
Logical order	Good critical writing selects and orders points in a logical order usually starting with those points that support the main argument.
Group similar points	Similar points should be grouped together in such a way that it makes the text easy to read.
Signposting	Good critical writing leads the reader through the argument using signpost words to help them know where they are in the sequence of the argument.



References

Cottrell, S 2005, *Critical thinking skills*, Palgrave Macmillan, New York.

Ramsden, P 2003, *Learning to teach in higher education*, 2nd edn, Routledge, New York.

Useful links *(all open in a new window)*

Visit the module [Improving your academic skills](#) for more information about:

- Reading Logs that can be used as templates for notes, summaries and critical comments (see Reading section)

There may be resources that have been created with your lecturers, addressing assignment tasks and topics specific to your courses. Follow the links below to find out:

[Business](#)

[Education, Arts and
Social Sciences](#)

[Health Sciences](#)

[IT, Engineering and the
Environment](#)