

# Being Critical - transcript

**Slide 1:** Most of our life we are told what is right and wrong and most of the time we accept this. When we start to think and read critically we don't just accept what we have been told, we start to think why, when and what context. This presentation has been developed to give you an overview of how to be critical, you can pause, rewind and fast forward or stop at any point. It is recommended that you take notes whilst watching in order to be active in your learning.

**Slide 2:** Being critical allows you to step into the academic debate. No matter how scientific something appears, the author will have made decisions during their research and writing, each of these decisions are potential areas for debate. A good place to start is to not consider everything you read as an absolute fact but more as an idea or argument that the author is proposing.

**Slide 3:** To a non-critical reader any text they read is fact and they can gain knowledge and understanding by regurgitating these facts. This is often referred to as 'surface-level' learning and will not support the depth of understanding required for effective research. A critical reader on the other hand sees texts as providing an account of the facts, recognising what a text says and how it puts forward its subject matter.

**Slide 4:** So what is critical reading? First you must examine all the evidence you have gathered and look at the arguments and interpretations. It is important that you recognise the limitations of any of the studies you are reading, from this you can decide what you are willing to accept. The aims of critical reading are to recognise an author's purpose, understand tone by analysing choice of language and any elements of persuasion and identify bias. Critical reading is not all about being negative though, its aims are to assess the strength of the evidence, allowing you to also identify evidence that is robust and well-reasoned.

**Slide 5:** So how can you think critically? Critical reading is a way of discovering information and ideas, where critical thinking is a way of evaluating this information and ideas. Critical thinking involves you making decisions based on your critical reading, evaluating evidence to draw your own conclusions. You can then decide whether you support this and if it supports your ideas and hypotheses.

In reality these two processes are symbiotic, critical thinking which allows you to keep track of your understanding as you read, identifying anything that seems unreasonable and critical reading where after identifying anything that seems unreasonable, you would read the evidence more closely to check your understanding. You can only think critically about a piece of evidence if you have understood it through critical reading.

**Slide 6:** Some things you may want to consider when being critical about scientific articles are; the type of data, the size of the sample, the methods used, the intended audience, the statistical analyses performed, the style of writing and if there are any sources of bias. Pause the presentation now so you can make a note of these considerations.

**Slide 7:** There are of course warnings signs to look out for when being critical. One warning sign for the introduction section may be that the introduction leaves out key points. This is often a section written by the author which is designed to be 'highlights' of their findings or arguments. You need to be careful and spot any overstatements here.

**Slide 8:** Looking for the warnings in the materials and methods sections. You may want to ask yourself the following; have they used multiple research angles? Did they use proper controls? And are there any assumptions made by the author?

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**Slide 9:** In the results section you will need to analyse all graphs and tables, are there any errors or omissions? Do the results show all the work that has been previously described? Is there a discussion in the results section? This can sometimes indicate a lack of confidence in the results or on the other hand suggests over confidence as the author feels the need to describe the results straight away.

**Slide 10:** The main things to look out for in a discussion section are speculations and generalisations, remember, just like you are required to do, the author must support their opinions and arguments with correctly referenced evidence and a robust set of results or findings.

**Slide 11:** Most of the evidence you will come across will have gone through the peer review process. When using Summon to look for evidence, there is a checkbox that you can click to ensure that the sources that are presented to you have all been peer reviewed. The peer review process usually involves three stages. Initial editorial review, this eliminates a large majority of submitted manuscripts, this means that the encouraging ones are then sent on to peers of the author in order to be reviewed. These peers will then send their comments to the author who then has the opportunity to make any amendments required. Remember, not all articles are peer reviewed, these may include opinion pieces, editorials and letters to the editor.

**Slide 12:** So now let's look at sources of bias. It is important to bear in mind that, just like you, the authors have backgrounds, cultures and points of view that can have an influence on their writing. Funding can also cause a source of bias, grant givers need to know that their money is being put to good use and will expect publications from the research that they have financed. This source of funding can then go on to influence the way in which work is written and published. Another source of bias can come from being required to publish lots of papers due to pressures from funding organisations or through personal ambitions. This can cause MPUs or minimum publishable units, meaning that the work meant for one journal can be sliced into works for two journals and they can even cite each other in order to boost the reference list numbers. Finally, authors may overstate the importance of their work and exaggerate claims and findings.

**Slide 13:** Here is a list of questions you may want to ask yourself when being critical, feel free to pause the presentation here and make some notes.

**Slide 14:** And finally, remember your goals for being critical. Recognise the purpose of what you are reading, understand tone and persuasions, identify any source of bias and be active in recognising and analysing sources of evidence. If you would like more information on being critical or help with putting a piece of critical writing together, then contact your Academic Skills Tutors for more information. Remember, you will be asked what you have already tried so have a go first, you may surprise yourself.