UCL

Critical and Analytical Thinking

Critique and question the facts

At university you are expected to develop a critical and analytical mind. You must not only understand what you read but also pick it apart, question it, evaluate it and assess it.

What is critical and analytical thinking? The word critical has positive and negative connotations. In academia, being critical means weighing up the particular arguments and evidence for and against an idea. You need to identify others' positions and evaluate the evidence for all arguments. You should be able to see why each author has arrived and a particular conclusions and argue why one view point is preferable to another. You should be able to 'read between the lines' and recognise underlying or false assumptions; you should recognise writing techniques that are there to persuade you towards an argument. Critical and analytical thinking involves questioning and reflecting upon ideas. You must look deeper into what you are learning and think about its relation to the 'bigger picture'. You must be able to present your critique and a structured, clear, and well-reasoned and supported way.

You must:

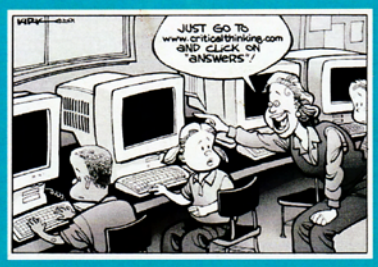
Evaluate
Probe
Assess
Examine
Investigate
Appraise
Consider
Account for
Scrutinize
Dissect
Explore
Review

Identifying the argument Critical thinking is based upon arguments. You are better able to analyse and criticise a piece of work if you have identified the main argument/s - you are also able to direct your attention to the most relevant readings. You will find smaller 'contributing arguments' which will add to 'overall' arguments; you may find a smaller study you have read contributes to a larger theory or argument that is underlying its purpose. It is important to identify these underlying ideas in order to fully understand an authors viewpoint to see how it fits in with other arguments and ideas - this way you can begin to assess the merits, drawbacks and evidence. Arguments are not generally provided separately - they are surrounded by other material, such as, introductions, descriptions, explanations, summaries and background information. It is up to you to identify these types of material to draw out the arguments. You will need to think critically and analytically when **reading, writing, and listening.**

Am I being critical enough? It is difficult to know when you first start university what is expected of you. How do you know what to write about? How you are supposed to write about it? How do you know when you've been critical enough? Generally at university you are always expected to be critical and analytical; you should analyse your question and use your word count to guide how and what you are supposed to write about (see 'Structuring Essays'). Your word count is useful; in any given number of words you will only be able to write about a number of topics/ideas whilst remaining sufficiently critical and analytical. For a standard essay you will generally need 4/500 words per topic to do this. Turn overleaf for more tips.

TRANSITION TIPS

critical thinking - analytical thinking - question bank - using evidence - reading, writing and listening - identifying arguments - barriers to C&A thinking



Barriers to critical and analytical thinking Critical and analytical thinking is not easy, and there may be a number of obstacles in the way of achieving this: **Misunderstanding of criticising** Many people will think of criticism as making negative comments; in academics the word criticism refers to and analysis of both positive and negative aspects of something. Making a critique of an idea is constructive as this can clarify a point, encourage deeper thought and drive research forward. **Your own reasoning abilities** We tend to think of ourselves as rational beings; much of what we do every day and believe in is so ingrained in our sub-conscious we do not question it. This is helpful for everyday survival - if we questioned everything we'd spend all day simply getting ready in the mornings - however, academic work requires us to develop a more objective approach to our thinking. University level work is often not about unquestionable facts but about ideas and theories that should be analysed and critiqued; you must acknowledge that there is often more than one way of looking at something. **Reluctance to critique the 'norm'** Common sense or 'normality' may be questioned by researchers. It can be hard to hear deep-rooted religious, political, ideological and scientific beliefs challenged. Being critical does not mean you have to abandon your beliefs but it may mean giving more consideration to the evidence and arguments that support them. **Reluctance to critique experts** A new student will naturally be anxious about questioning the work of those that are more experienced than them. You must remember that critical analysis is part of the way teaching works at university and is expected. By making a critique of someone's work you are not telling them they are wrong; you are challenging their ideas and encouraging deeper thought and further research - which is what study and research at university is all about! **Lack of focus on the detail** You are unlikely to be able to successfully critique an idea if you do not have sufficient detailed information to base that critique upon. If you feel that critical thinking is hard work, then you are right. You need to thoroughly understand an idea before you can critique it. **Wanting to know the answers** Students may be used to being taught facts and answers; at university you are being trained to develop the skills to enable you to challenge the experts answers and find your own through questioning. There are no right and wrong answers - only supported arguments.

Critical reading, writing and listening tips:

- Try to find the conclusions first - it is easier to understand the detail of something if you have an idea of the basics first
- Keywords will indicate where a conclusion is
- Read the first and last passages to get an overview of the arguments
- Look out for recommendations from the author
- Look for a review of any critique - most writers will outline this and try to challenge it
- Read whole paragraphs before you take any notes - we want ideas not quotations
- Think of 5 questions you want to answer before you read a piece of work - let your brain know what you want to find out.
- Look for the evidence supporting an argument - does it actually do its job; is it credible; is it biased?
- Use tentative language when writing academically and do not generalise from a single study
- Question your own assumptions as much as those of other authors - why do you agree, not agree with something?
- Plan your argument before you start writing (Mind Map); apply questions at this stage to help you develop ideas and explore relationships
- Do a Mind Map before you've done any reading - this allows you the freedom to explore your own ideas without being restricted by what you've read already
- Use more imaginative note-taking tips in lectures and when reading to help the flow of ideas (see 'How Do I Learn?')
- Read widely around a subject - use reading lists, bibliographies, online database searches, Google Scholar - the more you read the easier it will be to be successfully analytical and critical (see 'Reading and Research').

Using evidence You must support all of your ideas with evidence. It is not enough to simply criticise an argument/ idea - you must give the reasoning behind why you are critiquing it and detail the research to support what you are saying. When you have something interesting to say, you must research the previous and current research surround that topic and provide references within your work.

For example: A) *'In my experience I have found that girls are more obedient and attentive, whilst boys are more challenging and disobedient' – not credible*

B) 'It can be suggested that girls are more obedient and attentive, whilst boys are more challenging and disobedient; this idea is supported by arguments put forward by Bleach (1992).' - credible

Am I being critical enough? The 3 simplified passages below are each versions of either a description, explanation or critical analysis; they illustrate that each way of writing requires a different word count. Make sure you analyse your question to understand **how** you are to write about a subject; remember in academia it is rarely acceptable to simply describe:

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Attachment theory postulates that children become attached to adults who remain as consistent caregivers for some months during the period from about 6 months to two years of age. and it is suggested that this is due to the trusting bond developed from the repeated interactions with certain primary carers (ref) However, there are many cases of abused children who form strong attachments to their abusers despite being subjected to severe neglect (ref) suggesting that there are problems with generalising on the basis of this theory

Question bank You need to encourage a questioning ethos when studying to ensure you can be sufficiently analytical and critical; you can help achieve this by creating a 'question bank'. This is a set of questions that you can constantly add to throughout your degree which you can apply to ideas, theories, essay questions and arguments. The idea is to encourage you to never take anything as 'given' - to always be picking apart what you are learning and thinking deeply about it. You can attempt to apply many of the questions you have collected to different assignments and at different stages - simply modify them slightly to match your subject area. General questions can be applied at the initial planning stages of an assignment (mind mapping/question analysis), as you learn more you can develop these into more specific questions that will help you critique ideas.

Some example questions Why? Does the evidence support the argument? Are there any alternative theories? Is there any supporting evidence? What is the underlying argument? Does this match what I know about the subject already? Does it fit in with what other people have said on the subject? s this relevant and useful to my current purpose? How does this add to previous research on the subject? Are there any flaws in this? What is the author trying to 'sell' me?