



# Critical thinking

## 1. Critical thinking: overview

### What is critical thinking?

'Critical thinking' and 'critical analysis' are terms which are consistently used by academics in explanations of what is required by students in their university work. The ability to 'think critically' is also an attribute which the University of Wollongong strives to achieve in all its graduates. But what is critical thinking? One writer has described critical thinking as a process of investigation:

... an investigation whose purpose is to explore a situation, phenomenon, question or problem to arrive at an hypothesis or conclusion about it that integrates all available information and that can therefore be convincingly justified. In critical thinking all assumptions are open to question, divergent views are actively sought, and the inquiry is not biased in favor of a particular outcome. (Kurfis 1988: .2)

Another writer has described it simply as

... reasonable, reflective thinking that is focussed on deciding what to believe or do. (Ennis, 1981, quoted in van Hooft et al., 1995:p.5)

These descriptions suggest that critical thinking is a skill that is used to make quite ordinary decisions in our life or to decide on a course of action, as well as a skill that is used in more philosophical or academic situations to determine our position on something. An example of critical thinking in an ordinary 'life' situation is that reflection you carry out when something in your life has not gone quite the way you expected it to and you look at all the elements of the situation and try to work out why it didn't work out and whether you could have done something differently.

In academic situations, critical thinking is necessary because not all the ideas and theories that you will come across are valid or 'fact'; you have to decide what to believe and what conclusions to come to about issues and how to argue the position you take when writing-up an assignment.

Critical thinking, or a critical approach, is a desirable skill in ALL aspects of university work: your reading, note making, assignment writing and, for those students whose studies involve a practical component, your professional practice. In this module we address these integral components of university study and suggest ways in which you can develop a critical approach to your work. We also will using the terms "critical thinking" and "critical analysis" as broadly synonymous.

In the general community outside the university, the word 'critical' generally has negative connotations: "*You're always criticising me!*" Making criticisms is finding faults. At university, however, 'critical' has a broader meaning beyond finding fault with something or someone: being critical involves making judgements and evaluations. At university these judgements and evaluations are usually based on evidence gained from reading widely. Your critical response to research, or an argument in an article etc. needs to be informed criticism; it needs to be well grounded in research, wide reading, and consideration of other evidence. Criticisms in this sense are based on a synthesis of a number of factors, and are not just



### 1. Critical thinking: overview



### 2. Critical reading and note-making



### 3. Critical writing

## Learning objectives

This module will help you to:

- understand the importance and function of critical thinking at university
- develop critical reading skills
- apply critical thinking to your note-making
- structure arguments and include critical analysis in your assignment writing



uninformed personal opinion. When you are engaged in the process of thinking critically about issues, you should be guided by at least the following criteria:

- never accept a statement as true merely because someone has said it is true
- never condemn a statement as false unless (a) you can produce rational evidence to support your position and (b) you have a sound reason for attempting to demonstrate its falsity.<sup>1</sup>
- always ask questions of the things you are exploring, eg. what if? why? who said?.

Critical thinking and analysis is integral to academic disciplines and to academia generally because this is the main way that knowledge is added to a field. While academics in a particular field may agree with the conclusions of a particular piece of research, these conclusions may open up other questions which need to be answered. Only through constantly questioning - *what if? how could? what does this mean for ... ?* etc - is new knowledge added to a field. In this way, academic disciplines are constantly evolving.

## Critical thinking for undergraduate students

The thought of criticising or evaluating the work of published academics, or the ideas or your lecturers is a very hard one to come to terms with for many students. Students may find this rude, unsuitable, or just plain implausible that a first year student could find anything critically constructive to say in regard to the work or ideas of an expert. Learning, however, is a process that involves understanding concepts AND, put simply, evaluating these concepts. Sometimes, just describing a theory or concept in your assignments can be very difficult; however doing this accurately is only part of what your lecturers expect. The other parts are

- evaluating or judging this concept, in other words, critically analysing it and
- taking a position on the issue and, in practice-based disciplines, coming up with solutions.

You may have to make a judgement about which ideas or theories best describe the facts, where ideas or theories are lacking in some way or where you might be able to use ideas or theories to help explain a particular situation eg a case study or a particular event. In assignments and presentations, you can demonstrate your critical thinking by taking that next step and presenting your position on the issue with the evidence to support that position. Remember that your position or point of view need not be entirely positive or entirely negative. A valid position on an issue may be one which argues that something is both partly positive and partly negative. It is not fence-sitting to be neither for or against something when the evidence does not clearly support one side or the other; it is, instead, the only sensible judgement to make or position to take.

Another reason critical thinking is necessary in academic situations is because it allows you to reflect on what you are doing. This critical reflection is often written up in learning journals and is more common in degree programs which lead to a professional qualification like teaching or nursing or engineering. Critical reflection often takes the form of thinking about and making judgements about the things you have been doing on placements or in your field work. To critically reflect on these experiences you are often asked to think about what you have learnt, how you have learnt it and how what you did or saw links with the theories and concepts in your subject area. On the basis of this critical reflection, you can then make plans about what you want to do differently the next time you are on placement or in the field.

In assignments, analysis, or careful observation and judgement is often presented in the form of an argument. Like 'critical' the word 'argument' has a specialised meaning at university. It too in the context of the university doesn't necessarily

mean being negative or aggressive. In fact, critical judgements and the arguments that support them are often positive and affirming. But what is an argument? Whenever we have a point of view or opinion, there are always *reasons* we have which form the basis for that point of view. Sometimes our reasons are poor: they may be biased, or be derived from hearsay or from habit. But at university a golden rule applies: whenever you make a claim, assertion or state a point of view, support it with relevant evidence. The evidence may be case studies, comparisons with other authorities, statistics, examples, illustrations, analogies and so on. When you begin to combine reasons and pieces of evidence to support your point of view, you are on your way to developing an argument. Arguments are central to assignment writing and reflect the critical thinking that was engaged in prior to writing.

For students from some backgrounds, criticising and arguing are not concepts they generally imagine engaging in with people regarded as authoritative and doing so may seem to be in conflict with their own beliefs and behaviours. It may help to think of these critical processes as not directed at individuals but at things, ideas or arguments. Such criticisms are not seen then as personal criticisms but as constructive criticisms or critical comments which can lead to expansion and improvement in theoretical work.

## Critical thinking in the disciplines

One of the reasons critical thinking or critical analysis is hard to define is that critical thinking means different things in different disciplines. This does not mean that the academics in some disciplines know what critical thinking is, and others don't! Rather the concept of critical thinking in a particular discipline is intricately related to a discipline's practices, values, and to how it constructs knowledge. In purely academic disciplines, such as courses in the humanities, critical thinking/analysis involves a detailed approach to criticism of material, particularly texts. In more vocationally oriented courses, for example, critical thinking/analysis also applies to one's own professional practice. It requires critical self-reflection (James, B. et. al. 1995: p. 2). In all disciplines, students have to make links between theory and practice, and perhaps to material covered in other subjects. Most importantly, students must "situate themselves" by taking a position in relation to the material covered, and justify the position taken (James *et al* 1995: p. 3).

At the beginning of this overview on critical thinking we suggested that critical thinking or critical analysis can be best described as an approach. The critical approach is relevant to the reading phase of your work, your note making, and of course to assignment writing. The remaining two units in this module, **Critical reading and note-making**, and **Critical thinking and assignment writing**, offer some suggestions on how you can develop a critical approach to your university work.

## Bibliography

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Kurfis, J. G. (1988), *Critical Thinking: Theory, research, practice, possibilities*. ASHE-ERIC, Higher Education Report No. 2.

van Hooft, S., Gillam, L. & Byrnes, M. (1995) *Facts and Values: An introduction to Critical Thinking for Nurses* MacLennan & Petty: Sydney.

## Endnotes

1. These three criteria have been outlined by Cox, N. (1998) *The Tertiary Student's Vocabulary*, Unpublished dissertation.