

**ACADEMIC LANGUAGE AND LEARNING SUCCESS PROGRAM**

# Critical Analysis

**Aim:**

1. Defining what 'critical analysis' means and why it is used
2. Compare examples of writing that employ critical analysis with those that do not
3. Apply your understanding in activities.

**Thinking Critically**

Although it may not seem familiar thinking critically in situations is something we do every day.

**Thinking Critically in Every Day Situations.**

In the everyday situations listed below which involve reflecting on positives and negatives, weighing up options and look at different points of view?

Everyday Situation	Thinking Critically?	
	Yes	No
Buying a car	<input type="checkbox"/>	<input type="checkbox"/>
Choosing courses at university	<input type="checkbox"/>	<input type="checkbox"/>
Brushing your teeth	<input type="checkbox"/>	<input type="checkbox"/>
Moving out of home	<input type="checkbox"/>	<input type="checkbox"/>
Deciding between several job offers	<input type="checkbox"/>	<input type="checkbox"/>
Selecting a phone/Internet plan	<input type="checkbox"/>	<input type="checkbox"/>
Jogging	<input type="checkbox"/>	<input type="checkbox"/>
Travelling from A to B with time/budget constraints	<input type="checkbox"/>	<input type="checkbox"/>

When thinking critically, we:

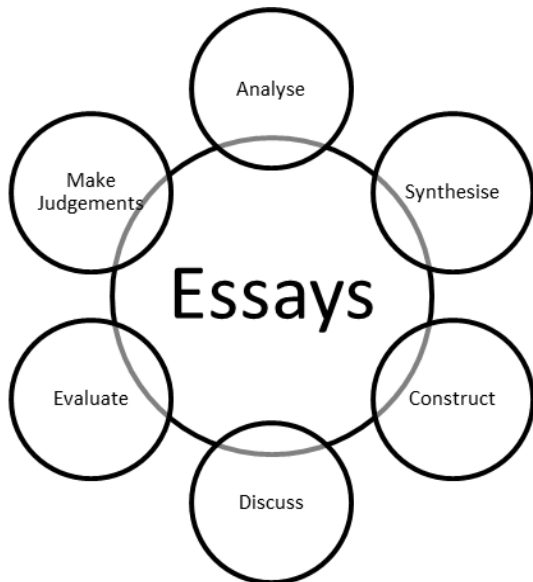
1. Find information
2. Analyse and evaluate alternatives
3. Contextualise these in terms of your aims and requirements
4. Reach some conclusion.

These are skills that are transferable to researching, reading, and writing assignments at university.

Modified from: <http://unilearning.uow.edu.au/critical/1a-2.html>

## Essay Writing

The principal form in which your skills of thinking critically will be assessed will be through essays. Rather than setting exams or other methods of assessment many courses use essays to gauge students' capacity for higher levels of thinking. While recall and understanding information is important, essays also assess your ability to do much more.



**Analyse** concepts and arguments

**Synthesise** ideas and evidence drawn from different sources

**Construct** consistent and well-supported arguments

**Discuss** an issue in a balanced way

**Evaluate** the ideas and arguments of others

**Make judgements** and express informed opinions.

To do all these things, you need to think at a high or complex level.

### Analyse, Evaluate, and Critique

Thinking critically is not the same as criticising.

Colloquially the term 'criticism' has a negative connotation in which one finds fault with the object of study. However, when thinking critically a more thorough process is engaged whereby we analyse, evaluate, and critique the content of our sources (e.g. books or journal papers) for their relevancy in our assignments.

**Analyse.** Understanding the components of an issue

**Evaluate.** Determine the value of a source (e.g. book or journal paper)

**Critique.** Examine and judge the value of something. Claiming a source is weak, flawed, inadequate or strong, credible, logical, and doing so using evidence to support it.

### Cognitive Domains

Thinking at high or complex levels is rather ambiguous and is the cause of much concern for students when asked to do so by their lecturers. Here are six 'cognitive domains' (or thought processes) from the simplest to most complex. Also in this table are possible verbs lecturers may use in essay questions or assignment instructions and where these words may fall on the scale of thinking critically.

Adapted from Greenham, B 2001, How to write better essays, Palgrave, Houndmills, pp. 63-64.  
Modified from: <http://www.monash.edu.au/lis/llonline/writing/general/academic/5.xml>

Verbs you may see in your assessment tasks

	1	2	3	4	5	6
	Recall	Comprehension	Application	Analysis	Synthesis	Evaluation
Simplest						Most Complex
	Depth of knowledge	Comprehension of the issues(s)	Application of your knowledge – in real life situations	Analysis of issues drawing on literature.	Synthesis of ideas about issues from a range of sources.	Evaluate a number of opinions - make a value judgement
Verbs	Know	Restate	Translate	Distinguish	Compose	Judge
	Define	Discuss	Interpret	Analyse	Plan	Appraise
	Memorise	Describe	Apply	Differentiate	Propose	Evaluate
	Repeat	Recognise	Use	Appraise	Design	Rate
	Record	Explain	Demonstrate	Compare/Contrast	Construct	Compare
	List	Express	Illustrate	Create	Choose	Value
	Recall	Identify	Criticise	Design	Assess	Revise
	Name	Locate	Examine	Prepare	Estimate	Score
	Relate	Report	Reflect	Organise	Synthesise	Select
	Review	Operate		Research		
		Schedule				
		Sketch				
Simplest						Most Complex

Modified from Isaacs 1996

## How do we think critically?

Thinking critically requires **more than** describing or reproducing key facts, or outlining the perspectives of various writers

When we think critically **we are being active**. That is, rather than passively accepting everything we read and hear thinking critically requires us to:

1. Question
2. Evaluate
3. Making judgement
4. Find connections and
5. Categorise

By thinking critically we accept that there is no one or correct point of view. A technique that is invaluable in:

1. Lectures and tutorials
2. Reading and writing assignments
3. Making decisions
4. Developing arguments.

## Which discipline are you in?

Academic disciplines may approach thinking critically differently.

Science & Technology	Arts, Social Sciences, & Commerce
Asking Questions Identifying Problems Describing, Predicting, and Analysing Categorising Establishing Cause and Effect.	Asking Questions Identifying Problems and Solutions Relating Theory to Practice Stating an Argument and Supporting it with Evidence Making Comparisons and Evaluating.

## Be an active reader

At university you will be asked to perform a lot of reading. This will include readings set by the lecturer which are directly related to the weekly topics and reading that you will discover during the process of research for your assignments.

This will require you to take notes during the reading process and start asking questions and then answering them. Doing this while focusing on two areas:

1. **The Big Picture**
2. **Zoom in for more detail.**

That is, you will ask questions of the context of the source and its content. Both are central skills for critical analysis.

<b>Big picture</b>	Author	Who is the author? When/where was it written?
	Main Points	What is the main argument being put forward? Try writing it in your own words
	Discipline	What significance does it have for its field? Does it make a specific contribution to the literature?
<b>Zoom in</b>	Quality/Relevance	What is the quality of the evidence? Does the conclusion follow from the points being made?
	Agree/Disagree	Do you agree or disagree? Why?
	Strengths/Weaknesses	What are the strengths and weaknesses? Does the author make unwarranted assumptions?

Modified from: <http://www.deakin.edu.au/current-students/study-support/study-skills/handouts/critical-analysis.php>



### Thinking Critically in an academic context.

Following on from the Activity on Everyday Situations which of the following activities would count as critical analysis in an academic context?

Academic Context	Thinking Critically?	
	Yes	No
Providing a description of something	<input type="checkbox"/>	<input type="checkbox"/>
Reproducing information from a number of sources	<input type="checkbox"/>	<input type="checkbox"/>
Organising and synthesising information so as to facilitate better or new understandings	<input type="checkbox"/>	<input type="checkbox"/>
Identifying persuasive evidence or proof for claims in a particular context	<input type="checkbox"/>	<input type="checkbox"/>
Identifying opinion, bias and distortion in texts and representations	<input type="checkbox"/>	<input type="checkbox"/>

Identifying unfounded claims or assumptions being made about a topic	<input type="checkbox"/>	<input type="checkbox"/>
Providing an informed opinion supported by reasons, evidence and/or examples	<input type="checkbox"/>	<input type="checkbox"/>
Making connections between points so as to build a theme or argument	<input type="checkbox"/>	<input type="checkbox"/>
Explaining the significance, consequences, or implications of particular information or approaches.	<input type="checkbox"/>	<input type="checkbox"/>
Offering a personal opinion uninformed by research or reflection	<input type="checkbox"/>	<input type="checkbox"/>
Assessing whether an author's conclusions are justified by his/her reasons and evidence	<input type="checkbox"/>	<input type="checkbox"/>
Accepting information without questioning it	<input type="checkbox"/>	<input type="checkbox"/>

Modified from: <https://airport.unimelb.edu.au/gate1/writing/analysis.php>

## Descriptive Writing v. Analytical Text

While there is an emphasis on thinking critically essays will invariably have both descriptive and analytical aspects to them.

Analytical writing shows relationships between pieces of information. These pieces are used to *compare and contrast*, *assess* or *evaluate* evidence from various sources. You might be focusing on a number of approaches, theories, methodologies or outcomes.

## Descriptive Writing

You are asked to **describe** or **outline** the way things are. This may include outlining the features of a particular theory or the way things happened - that is, as a series of historical events.

Descriptive writing simply lists or catalogues information. It does not establish relationships between the pieces of information and does not make a claim to be proven.

## Descriptive Writing

### An Example

Read the following short excerpt from a sample text written in response to the question. Look at the beginnings of all the sentences. What do you notice?

**Essay Question:** “Questionnaires and face-to-face interviews are two equally effective data collection methods in the social sciences.” Analyse this statement.

Questionnaires and face-to-face interviews are two methods of data collection in the social sciences. Questionnaires can be used to sample a large number of people over a wide geographical area. They also only require a single person to co-ordinate them and the only costs involved are stationery and postage. They ensure that everybody gets asked exactly the same questions and also that the response is not affected by interviewer bias. Questionnaires do not allow the researcher to clarify questions or pursue interesting points with the respondents. They also often result in partial responses and a poor response rate overall.

Face-to-face interviews are quite small scale. They are labour-intensive and time-consuming and cost a great deal to conduct. They are also open to bias because the respondent may simply say what the interviewer wants to hear and the questions may not always be the same for each interviewee. They are difficult to carry out over a wide geographical area. But interviews often yield information of a high quality. They also allow the interviewer to clarify questions and to get additional information from respondents.

You will note that in Paragraph 1 the words ‘questionnaires’ and ‘they’ begin every sentence. Similarly in Paragraph 2 the words ‘interviews’ and ‘they’ are also frequently used to begin a sentence.

This indicates that the writer is **describing something**.

Note the number of simple conjunctions (e.g. ‘and’, ‘also’) in descriptive writing. The overuse of these simple conjunctions makes the writing appear un-academic - like a list. It is not a critical analysis. And although you may use some descriptive writing in your academic essays, you will need to principally make them analytical.

**Being descriptive is not enough at university level.**

**Analytical Text**

**An Example** Following is another sample text, written in response to the same data collection question above. This one is primarily a critical analysis of the two methods.

Essay Question: "Questionnaires and face-to-face interviews are two equally effective data collection methods in the social sciences." Analyse this statement.

The two most common methods of data collection in the social sciences are questionnaires and face-to-face interviews. Whereas the sample size in face-to-face interviews is normally limited, questionnaires can be sent out to large numbers of people over a wide geographical area. Costs, both in labour and money are high with face-to-face interviews, while questionnaires can be distributed quickly at a relatively low cost involving stationery and postage only.

The possibility of interviewer bias is also clearly higher with interviews; whereas, questionnaires ensure both greater uniformity of response and less interference from the researcher. However, in terms of quality of information, interviews are often superior to questionnaires as the researcher has greater opportunities to clarify what the questions mean when necessary, and to seek additional information or to pursue interesting points with the respondent. This is not possible with questionnaires.

The first sentence signals immediately that two data collection methods are going to be discussed. There is a greater use of contrastive conjunctions (e.g. 'whereas', 'both', 'while', 'however') which establishes **relationships between** the two data collection methods.

You will note that in Paragraph 2 the words 'higher' and 'greater' have been used to establish comparisons and contrasts between the two data collection methods.



Underline the words:

'Sample size' and 'costs' in Paragraph 1

'Interviewer bias' and 'quality of information' in Paragraph 2

This is how the writer decided to **group** their information. This is what we do in analytical essays.





Following are excerpts from two responses to an assignment task.  
For both decide if it is *mainly* descriptive or mainly critical analysis.

**Essay Question:** “Whether we find it easy to accept or not, it is lifestyle factors which are the major contributors to increased risk of serious heart disease” (Smith, 2001). Discuss this claim.

**Excerpt 1.**

Heart disease can be caused by many things. Cigarette smoking is a major risk factor. Sudden death from heart attack is five times more likely in smokers than non-smokers. High blood pressure is another factor which can cause the risk of heart disease to quadruple. High blood cholesterol levels, which are influenced by diet, also result in higher risk of heart disease. Obesity contributes to high blood pressure and high cholesterol levels too. High blood pressure is also more common in people with diabetes. Diabetes can be related to poor diet and obesity. Heredity, age and gender are other factors which can contribute to the risk of heart disease. People who are stressed and easily agitated or who have prolonged periods of anxiety and depression may also be susceptible to heart disease. Lack of regular exercise has a negative effect on the circulatory system and can increase the risk of heart disease by up to three times. These factors together do not have a simple additive relationship. They multiply one another so that any three of these factors taken together increase the risk of heart disease by ten times.

**Excerpt 2.**

There are three main categories of risk factor associated with heart disease. Firstly, there are those factors over which we have little control or no control at all. These factors include a family background of heart disease or high blood pressure (Sanders, 2002), age with its increased risk of heart disease for both sexes, and gender with its particular risks for post-menopausal women (Ellis, 2003; Simons, 2001). Secondly, there are the so-called lifestyle factors. These are the factors that are within our control but which we often fail to act upon. A sedentary lifestyle without regular exercise increases the risk of heart disease by three times, especially in inactive males. Obesity resulting from inactivity can also contribute to increased risk of heart disease (Bonushek, 1981). A stressed or 'full speed ahead' lifestyle greatly raises the risk of heart disease as do prolonged periods of anxiety or depression (Briggs, 2002; Erskine, 2000). Cigarette smoking increases the risk of sudden death from heart attack by five times and doubles the risk of a heart attack occurring in the first place. Thirdly, medical conditions such as high blood pressure, high cholesterol levels and diabetes are also significant factors in causing heart attacks at a younger age, with high blood pressure increasing the risk by four times (Simons, 2001).

Finally, although these factors are threats in their own right, when combined with each other they multiply the risk rather than simply adding to it. Any three of these factors taken together can increase the risk of heart disease by up to ten times.

**Excerpt 1.**

Primarily descriptive.

Items of information are simply listed in what appears to be a fairly random order (e.g.

‘cigarette smoking’, ‘high blood pressure’, ‘high blood cholesterol levels’, ‘obesity’

‘diabetes’, ‘heredity, age and gender’, ‘stressed’ ‘anxiety’, ‘depression’, ‘lack of regular exercise’).

Simple additive language is used to provide more information (e.g. ‘another’, ‘also’, ‘too’).

Does not bring discrete items of information into relationships with each other.

Does not use comparative, contrastive, or evaluative language.

**Excerpt 2.**

Primarily analytical

The writer has identified conceptual headings and used these conceptual headings to bring discrete items of information about risk factors in heart disease into relationships with each other (e.g. ‘factors over which we have little control or no control at all’, ‘lifestyle factors’, ‘medical conditions’)

The writer has also sequenced groups of information clearly (e.g. ‘firstly’, ‘secondly’, ‘thirdly’, ‘finally’).

Modified from: [http://writesite.elearn.usyd.edu.au/m3/m3u4/m3u4s1/m3u4s1\\_1.htm](http://writesite.elearn.usyd.edu.au/m3/m3u4/m3u4s1/m3u4s1_1.htm)

Discerning the differences between descriptive writing and analytical writing is learning how to write critically.