



2.2 Definition of critical thinking terms

Overview

There are certain key words which are at the centre of the vocabulary of critical thinking. Many of these will be used regularly throughout the program, so it useful to become familiar with their meanings from the outset.

Some can be described as thinking and writing **tasks**, others as **concepts**.

Tasks include:

- Explanation
- Description
- Analysis
- Critique
- Argument
- Reflection

Concepts include:

- Claim
- Premise
- Conclusion
- Truth
- Validity
- Certainty

2.2.1 Key Tasks

Explanation

Explanations can identify causes or suggest reasons **WHY** something is the case. Explanations are usually **based on what is already known to be true** – they are not trying to argue or convince of a truth. Explanations often show a link between two or more things.

Example:

‘Because of the global financial crisis, the government has been forced to guarantee domestic bank deposits.’

Description

An account, outline, summary or representation of the way something is or was.

Analysis

Analysis can be defined as the process of **breaking down** any object or ‘chunk’ of information into its component parts, and looking at how those parts are **related** to each other. In other words, it involves thinking about the **connections** between bits of information.



When we analyse something, we are looking for **meaningful relations**. These relations may be described in terms of similarity, difference, opposition, repetition, anomaly and so on. Such relations may then be interpreted for their relevance in evaluating the analyses and arguments of others, and preparing to construct our own arguments.

Any object can be subjected to analysis – a political movement, a poem, a painting, an academic article, data derived from a scientific experiment or from surveying a group of people.

Critique

The word ‘critique’ can be used as either a **verb** or a **noun**.

As a verb, it can be defined as the systematic analysis and evaluation of any object – often a piece of writing. The process of critique can also be applied to a poem, a painting, a musical composition or an architectural design.

As a noun, it usually refers to an actual piece of critical writing in the form of an essay, academic paper, or book.

Critique should not be seen merely as a negative process. It is not just about finding fault with something. Rather, effective critique involves developing a balanced appraisal, which will often lead the critic to articulate a particular claim or set of claims about the object under scrutiny. As the evaluation of the writing or works of others, critique is usually preliminary to the development of one’s own argument.

Argument

In popular usage, the term argument may refer to a ‘disagreement’ or ‘dispute’. However, in academic contexts, an argument can be described as

A claim or set of claims which is supported by evidence.

Here are some other useful definitions:

“A unit of discourse which states a proposition and supports that proposition with reasons.”
(Ruby, 1970, p.1)

“Reasoning that seeks to establish the truth of a doubtful claim.” (Allen, 2004, p.175)

In the first definition the term ‘reasons’ refers to specific pieces of evidence which justify reaching a certain conclusion. In the language of critical thinking, a reason is sometimes known as a **premise**.

In the second definition, ‘reasoning’ refers to the process of moving through the stages of an argument according to certain logical rules of thinking. In many cases, such thinking can be



described as **deduction, induction** or a combination of the two. These terms will be explained in detail, later in the program

Arguments may be comprised of just a few sentences, or extend over hundreds or thousands of words. There are various forms of argumentation. The following is an example of an argument wherein, if the supporting claims are true, the conclusion **MUST** be accepted as true. It is known as a deductive argument.

Claim 1	“All Australian citizens have the right to vote.”
Claim 2	“Mary is an Australia citizen.”
Claim 3 (Conclusion)	“Therefore, Mary has the right to vote.”

Not all extended uses of language take the form of an argument. Some groups of sentences are often best characterised as ‘descriptions’ or ‘explanations’. A group of sentences may simply be making claims which are not supported by reasons or evidence, and is therefore more accurately described as an opinion, observation or comment.

Reflection

Thinking and writing which examines one’s own learning processes related to an event, process or experience. It often relates theory to practice, and personal responses to claims made in academic sources. It usually employs the first person ‘I’ in sentences.

2.2.2 Key Concepts

Claim

A claim can be described as any sentence which **asserts that something is true**. This assertion could be about a thing, an idea, a relation, an event or a state of affairs. A claim can be described as **either true or false**. Therefore, to decide whether or not a sentence can be described as a claim, we can apply the following simple test:

“Can this sentence be described as being either true or false?”

In other words, we ask:

“Does this sentence accurately represent the way something is, ‘in the world’?”



Examples of sentences which are claims:

'Effective patient care requires active family participation.'

'Dolphins are mammals.'

'Motorcyclists have a greater risk of fatal traffic accident than all other motorists.'

'Pablo Picasso revolutionized portrait painting.'

Some sentences which are observations reflecting personal values **cannot** be described as claims, but are best described as beliefs or opinions:

'I don't believe in God.'

'Vegetarians are misguided.'

'Politics is not for the faint-hearted.'

Premise

A **premise** is a claim which **provides supporting evidence** for another claim.

A premise can also be described as a kind of 'mini-claim', which, along with other premises, supports and leads to the main claim. The main claim is known as the conclusion.

A premise is a claim which is usually explicitly stated. However, sometimes a premise is merely assumed, and is not clearly stated by the writer or speaker. Effective critical thinking requires the skill of being able to detect a missing or 'hidden' premise, so as to identify a weakness in the writer's argument.

Conclusion

A conclusion can be described as the **main or central claim in an argument**. It is what the writer or speaker is aiming to demonstrate as being true. Any conclusion may also become a premise to further argumentation.



Argument 1

- Premise 1 All citizens have the right to vote.
- Premise 2 John is a citizen.
- Conclusion** Therefore, John has the right to vote.

Argument 2

- Premise 1 John has the right to vote.
- Premise 2 All those who have the right to vote must vote, or will be fined.
- Premise 3 John did not vote.
- Conclusion** Therefore, John will be fined.

Truth

Truth can be a very problematic term. In one way or other, we all want to arrive at ‘the’ truth. Unfortunately, it is not as simple as that. Whose truth are we seeking? Under what or whose conditions? Is truth a universal quality, or does it depend more on specific circumstances? Is truth a quality which belongs to an object? Or, does it reside in our minds or judgments. Is it relative or absolute, certain or contingent? Does it exist ‘inside’ words, or is it external to language? These are just some of the many questions which arise when we think about the slippery term ‘truth’.

Because of these issues, in academic writing, we need to be very careful about how we use the term truth. There are various theories of truth. However, generally speaking, we can say that a proposition is said to be true if it accurately represents a certain state of affairs. Only a proposition (claim or statement) can be described as being true or untrue. On the other hand, an argument is described as being valid or invalid.

In ‘formal’ logic, truth is a function only of formal relations in an argument. In informal logic, the truth of a statement depends on meanings attributed to words in a natural language (such as English or Chinese). Because of the problems of ambiguity and interpretation, it is sometimes difficult to decide about the truth of a statement given in a natural language.

The terms ‘formal logic’ and ‘informal logic’ will be defined in a subsequent lesson.



Validity

An argument is described as being valid, if its conclusion follows necessarily from supporting evidence which is true. A statement is usually described as being true or false, but ***only an argument can be described as being valid or invalid.*** Validity also depends on the overall coherence among the supporting statements, and the extent to which such coherence supports the conclusion.

Certainty

Certainty is a term which can best be defined negatively. ***Complete certainty exists only in the complete absence of doubt.*** The idea of certainty relates to the extent to which we consider something to be true; it suggests a probability that something is true. In an argument, absolute certainty may not be achievable – or even desirable. Often, an argument will be convincing if it demonstrates that there is a high degree of probability (rather than absolute certainty) that the conclusion or conclusions are supported by the available evidence.